



**Developing a Pedagogy of Creative Learning
to Support Saudi Pre-Service Teachers in their Teaching for Creativity**

Dalal Abdullatif Ibrahim Alhussein

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Faculty of Humanities and Social Sciences

School of Education, Communication and Language Sciences

Newcastle University

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Abstract

This research aims to establish a pedagogy of creative learning for pre-service teachers, focusing on promoting creative learning and teaching, aligning with Saudi Vision 2030 goals. Consequently, this thesis investigates the development of Saudi female pre-service teachers' perspectives on teaching for creativity through the sessions of creative learning. The study also explores the viewpoints of teacher educators on creative learning in the Saudi educational context and examines the factors influencing the preparation of creative teaching practices for pre-service teachers.

The sessions of creative learning implemented in this study are grounded in Lucas et al.'s (2013) five-dimensional model of creative habits of mind. These sessions are designed to enhance the experiences of Saudi pre-service teachers in terms of creative learning and teaching.

This study adopts a qualitative research methodology from an interpretive and social constructivist perspective. The research design follows an action research approach. The participants in the study comprised fifteen elementary female pre-service teachers and twelve teacher educators from an education college located in eastern Saudi Arabia. To gather data from the pre-service teachers, two methods were employed: reflective written journals and a focus group. Semi-structured interviews were conducted with the teacher educators. The data analysis process employed the reflexive thematic analysis model proposed by Braun and Clarke (2020), utilising NVivo as the software program for analysis.

The study's findings underscored the need to integrate creative learning and teaching in teacher education and higher education, emphasising its value for advancing the Saudi education system by preparing creative pre-service teachers, which could potentially reduce the current Saudi gap. The findings also show a significant relationship between discussion, reflection, and collaboration, which play a vital role in the pedagogical and professional development of pre-service teachers in their views and teaching experiences. Moreover, this research found some affective factors under three categories: (1) factors related to educational setting, (2) factors related to teacher educators and lecturers in the college, and (3) factors related to pre-service teacher in the placement. Building on these findings, the research suggests a framework to support the development of creative learning and teaching among pre-service teachers and their educators in Saudi Arabia.

Highlighting the significance of engaging with theory, practice, and research. This framework also emphasises the need to provide opportunities for discussion, reflection, and collaboration. These elements are central to the pedagogical approach of creative learning and teaching for both pre-service teachers and their educators. The framework also advocates for the incorporation of key creative dimensions (habits) into existing courses and placement practice. Lastly, it acknowledges the importance of considering the sociocultural factors in teacher education programmes. The research conclusion highlights the implications and provides some recommendations for policy and for future research.

Keywords: action research, creative learning, creative pedagogy, pre-service teachers, initial teacher education programmes.

Dedication

To my parents, who have guided me on the road to a lifelong love of learning.

To my beloved, whose constant encouragement and support have been sources of strength throughout this journey in Newcastle.

To the sunshine of my life, Tala, a lovely and creative girl whose behaviour continues to inspire and motivate me. May her creativity flourish and illuminate her path toward the future.

And to all the creative kids and teachers who pursue curiosity and explore the world. “It has been found that when the individual is open to all of his experience, then his behaviour will be creative”
(Rogers, 1954, p.5)

With all my love,

Dalal

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(وَقَالُوا احْمَدُ اللَّهُ الَّذِي هَدَانَا هُدًى وَمَا كُنَّا لِنَهْتَدِي لَوْلَا أَنْ هَدَانَا اللَّهُ)

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Chapter One: Introduction

1.1 Introduction

This introductory chapter aims to highlight the rationale for the current research by emphasising the importance of exploring pre-service teachers' creative learning and teaching approaches in fostering creativity and identifying gaps in existing literature, outlining the research objectives, posing research questions, and emphasising the significance of the research. It concludes with a brief outline of the thesis chapters.

1.2 The Rationale

Initial teacher education (ITE) has received growing global attention regarding effective policies and preparation programs (Floden et al., 2017; Jao et al., 2020; Wallace et al., 2021). However, challenges remain, even in nations with established systems. For instance, Darling-Hammond (2006) and Darling-Hammond et al., (2017) highlight inadequate support for developing adaptive expertise in the United States. In the Saudi context specifically, research on initial teacher preparation is still emerging. Alghamdi (2020) and Alyaeesh (2022) have noted the limited availability of both local and international studies in teacher education that examine Saudi pre-service teachers. This aligns with Al-Abdulkarim's (2009) statement that professional preparation in Saudi Arabia remains in developmental phases, signalling the need for further enhancements.

Allmnakrah and Evers (2020) emphasise teacher education reform is integral to achieving Saudi education goals, though suboptimal experiences hinder progress. In essence, initial teacher education in Saudi Arabia warrants extensive research to guide ongoing advancement, particularly regarding contemporary skills like creativity development (Quamar, 2021). Specifically, the Saudi Ministry of Education is recently focusing on nurturing creativity in education, aligning with the broader goals of Saudi Vision 2030. This national vision emphasises transforming Saudi education into a knowledge-based economy, which includes reforming the national education system to emphasise creative thinking and innovative approaches in teaching and learning (Saudi Vision 2030, 2016). Key ambitions under Saudi Vision 2030 for the education sector involve not only enhancing educational outcomes but also equipping students and teachers with the skills to drive innovation and creativity needed for economic diversification (Allmnakrah & Evers, 2020; Quamar, 2021).

As part of these efforts, the Ministry of Education aims to prepare teachers to foster a creative mindset in educational settings, thereby contributing to the production of a generation that can thrive in and contribute to a rapidly changing global economy (Ministry of Education, 2019).

The current state of creativity in Saudi education, as described by policy documents and other official sources, highlights the need for strengthening teacher education. This will be further explored in section 1.4 and Chapter Two (see section 2.3.3). Research is needed to provide insights on cultivating creative education and enhancing the creative capacities of pre-service teachers in their pedagogical practices, aligning them with 21st-century needs. Specifically, there is a pressing issue concerning Initial Teacher Education (ITE) that requires attention and further investigation in the Saudi context (Almalki, 2020; Alghamdi, 2020; Maash, 2021). For example, recent studies conducted by Saudi researchers have highlighted a significant gap between theoretical knowledge and practical skills in pre-service teachers (Hamdan, 2015; Alblaihed, 2016; Alsharari, 2016; Albaqami, 2019; Alsaleh, 2019; Binmahfooz, 2019; Alghamdi, 2020). This encompasses the key elements of content knowledge, general pedagogical knowledge, and pedagogical content knowledge.

Cultivating creativity is increasingly recognised as an imperative for 21st century teacher preparation (Watson, 2018; Schreiber, 2018; Crawford & Jenkins, 2018; Levanon, 2021; Deehan et al., 2022; Brannon, 2022; Marangio et al., 2023). As scholars such as Livingston (2010), and Beghetto (2021) advocate, knowledge can be co-constructed through creative processes that benefit both teachers and learners. In this regard, several researchers have highlighted the demand for teacher education programs that encourage pre-service teachers to engage in creative opportunities and reflective experiences, thereby enhancing their professional knowledge of teaching (Ludhra, 2008; Razdorskaya, 2015; Watson, 2018; Crawford & Jenkins, 2018). Beghetto and Kaufman (2014) highlight the inherent creativity in teaching, essential for navigating the dynamic classroom environment. Despite this, teacher education programs often neglect creativity, a gap underscored by Cremin (2017). This oversight indicates a disconnect between the practical demands of teaching and the curricula of teacher training programs. Therefore, it is essential to prioritise creativity development in teacher preparation to empower future educators. Specifically, prospective teachers must acquire the skills and qualifications necessary to navigate uncertain situations and develop innovative solutions (Henriksen et al., 2017; Beghetto & Jaeger, 2022). As

Grainger et al. (2004) emphasise that training creative teachers in complex classrooms involves more than merely observing creative teaching methods within teacher education. It also requires active participation in creative learning experiences. Teachers who incorporate these practices into their own pedagogical approach can effectively inspire and nurture creativity in their students. However, several Saudi studies have consistently asserted that Saudi teachers face challenges in implementing creativity in their teaching practice (Al-Qahtani, 2016; Al-Zahrani & Rajab, 2017; Aldujayn & Alsubhi, 2020). This could be attributed to insufficient preparation and training during their initial teacher education programs (Al-Qahtani, 2016).

In recent years, interest in creativity in education has surged globally, notably among Organisation for Economic Co-operation and Development (OECD) countries (Grey & Morris, 2024), including Saudi Arabia. This trend is evident in the growing emphasis on the creativity of educators and the development of creative pedagogies worldwide. For examples: (Cremin & Chappell, 2019, in Western contexts; Allmnakrah & Evers, 2020, in Saudi Arabia; Deehan et al., 2022, in Australia; Beghetto & Jaeger, 2022, in the USA and Denmark; Tromp & Baer, 2022, in the USA; Dumas et al., 2024, in the USA and Germany). Additionally, The UNESCO Regional Centre for Quality and Excellence in Education (2023) proposed a framework for integrating 21st-century skills, including creativity, into general education curricula in Arab countries, including Saudi Arabia. This initiative underscores the central role of creativity in modern education.

While such frameworks demonstrate an international commitment to integrating creativity into educational systems, their implementation faces challenges. Foster (2023) reviewed several “21st Century competencies” frameworks, examining their key concepts and educational visions. His analysis revealed that although most countries recognise these competencies to some extent, fewer have explicitly integrated them into their curricula or provided clear developmental progressions for these skills.

This gap between recognition and implementation poses a significant problem. The lack of practical integration offers minimal guidance to educators on designing and implementing effective strategies for teaching, learning, and assessing these competencies. Consequently, this situation highlights a critical need to focus on teacher preparation to ensure educators are well-equipped and informed to implement these educational approaches effectively. In response to this

need, I hope my findings will contribute to understanding how creative pedagogies can be effectively integrated into Saudi classrooms, thereby supporting ongoing policy initiatives. I believe my study may provide valuable insights into the challenges and opportunities of fostering creativity in Saudi education. By addressing the specific needs and contextual factors of Saudi educators, my research can offer practical recommendations for bridging the gap between policy and practice, aligning with global trends and the goals of the Saudi education system (see Chapter Six, Section 6.3).

In terms of creativity for pre-service teachers, according to Beghetto (2013), teachers' views and attitudes regarding creativity significantly impact their presence in the classroom. Numerous studies have explored both the conceptual and empirical dimensions of creativity in teaching, with a particular focus on the perspectives and approaches of teachers, including pre-service teachers (Ludhra, 2008; Lin, 2011; Sefton-Green et al., 2011; Newton & Beverton, 2012; Craft et al., 2014; Elton-Chalcraft & Mills, 2015; Selkirk & Keamy, 2017). While there is a widespread acknowledgment of the importance of fostering creativity in both teachers and students, there remains a lack of consensus on how to effectively integrate creativity into initial teacher education programs (Ludhra, 2008), and there is a noticeable absence of a comprehensive and evidence-based model for teaching creativity (Cremin, 2017). Furthermore, the lack of studies exploring the attitudes and approaches of female Saudi teachers specifically emphasises the need for further research in this area (Aldujayn & Alsubhi, 2020).

Particularly, the current situation necessitates critical examination regarding how creativity is integrated within pre-service teacher preparation. As scholars have noted, substantial gaps persist in research and practice on fostering creative teaching capacities, it is crucial to address these gaps and conduct in-depth investigations which can significantly enhance our understanding and strengthen the incorporation of creativity development in initial teacher education.

As Jackson (2006) discussed, creativity is a complex, multifaceted phenomenon that requires contextualised analysis. Therefore, in my research, based on qualitative action research, I developed an intervention called 'sessions of creative learning'. This intervention aims to provide a pedagogy for discussions and collaboration that enhances pre-service teachers' perspectives on creative learning and teaching. Additionally, it explores the views of teacher educators on this

subject and identifies critical factors contributing to the development of creative teachers (For details on the intervention model and research methods, see Sections 3.7,8,9 in Chapter Three).

1.3 Personal Motivation

My personal desire to promote creativity in education is drove by my academic background in special education and my professional experience as a teacher educator. This passion has guided me to develop a pedagogy of creative learning, specifically focused on teaching for creativity. I have articulated this choice through three key points, including:

Firstly, as a teacher educator I strongly believe that developing and integrating creative learning into teaching practices could significantly enhance the value and effectiveness of the teaching experience. Moreover, prioritising the development of student creativity should be a central focus for pre-service, newly qualified, and experienced teachers in Saudi Arabia. According to Craft (2011), creativity is a vital skill that equips students to handle uncertain futures. Therefore, I believe it is crucial to update the approach of ITE and provide teachers with the necessary knowledge and skills to promote creativity among students. Although fostering creativity in education should begin with preparing teachers' programmes (Ludhra, 2008; Rinkevich, 2011; Turner, 2013), it is not a part of most pre-service education and training in the Saudi ITE (Al-Qahtani, 2016). When I was a pre-service teacher in a primary school, I initially did not have a clear understanding of creative learning and teaching, as it was not emphasised in my training. However, at that time I found using play-based learning strategies enhanced the students' engagement and enjoyment of my teaching which is part of creative learning and teaching. Then, during my five-year tenure as a teacher educator at Imam Muhammad ibn Saud Islamic University in Saudi Arabia, I had the opportunity to observe and mentor the importance of integrating creativity in pre-service teacher education. It became evident to me that addressing this aspect is crucial for enhancing the teaching capabilities of aspiring future teachers. Through my interactions with pre-service teachers, I noticed a significant impact when they were provided with opportunities to explore and develop their creative skills in the classroom. This personal experience further motivated me to delve deeper into the topic of creative teaching and teaching for creativity in this PhD thesis.

I also observed a lack of creativity courses and background knowledge among pre-service teachers, which highlights the need for an enhanced focus on creativity in teacher education. Furthermore,

many of these pre-service teachers tend to associate creativity primarily with the arts or gifted education, which may lead them to neglect creative performance in the curriculum (Howell, 2008). This narrow perspective of creativity limits its application across other subjects and educational contexts, reducing opportunities for all students to engage in creative thinking and problem-solving. This limited view of creativity will be discussed further in Section 5.3.1.3. Another important observation is the variation in teaching practices among pre-service teachers during their placements. For instance, some plan lessons that focus on higher-order thinking skills, such as creating and evaluating based on Bloom's Taxonomy (Wilson, 2016). This approach adds elements of challenge and enjoyment to learning. While the majority focus on lower-order thinking skills, such as remembering information. It is crucial to move beyond traditional strategies and encourage students to engage in practical understanding and problem-solving (Wenglinsky, 2002; Beghetto, 2021). Therefore, if teachers rely solely on traditional instructional strategies, they limit students' opportunities to enhance their creative learning process (Saebo et al., 2007; Almahmudi, 2017). These observations reinforced the need for interventions, such as 'the sessions of creative learning', to provide pre-service teachers with the necessary understanding and guidance to foster creativity in their future classrooms. As a result of these sessions, my understanding of the research participants' (general, possibly pre-existing) views on creativity, the factors relating to creative learning and teaching, and the insights from the creative learning sessions have all enriched my understanding of the concepts of creative learning and teaching, which will be elaborated at the end of Chapter Five (see 5.6). These insights likely contribute to policy and practice in Saudi Arabia, as explored in Chapter Six, sections 6.3 and 6.4.

Secondly, as a teacher educator I believe that teaching for creativity could improve students' outcomes at any stage (Lucas & Anderson, 2015; Tang, 2020). Students' academic achievement garners significant attention within the Saudi education system. However, the results of the Programme for International Student Assessment (PISA) 2018 indicate that Saudi students rank lower compared to their counterparts in OECD countries, particularly in foundational skills such as reading (OECD, 2018). The outcomes are not as the experts expected, and this confirms the importance of developing a learning environment with effective teaching practices. Many studies have determined the role that teaching methods play in the learning process and students' academic achievement, specifically the creative approach in teaching. For example, creativity and high thinking skills improve academic achievement (Ai, 1999; Rinkevich, 2011; Schacter et al., 2006;

Saebo et al., 2007; Boden, 2001; Beghetto, 2016; Sternberg, 2003b; Sternberg et al., 1998; Schacter et al., 2006). Today, the ability to be creative is highly prized in the business world (Essa & Harvey, 2022). Success is more likely for those who can think creatively, create new things, and adjust to new situations (Craft et al., 2001). This focus on creativity not only addresses immediate academic needs but also prepares students, whether kids or youth, for future success, ensuring they are able to think creatively, generate new ideas, and adapt to new situations (Robinson & Aronica, 2016). This approach aligns with global educational trends and the strategic educational goals outlined in Saudi Vision 2030, aiming to enhance both personal development and national competitiveness, further exploration of this topic is provided in Chapter Two, see p.46.

Thirdly, As a female researcher, I believe creativity supports female pre-service teachers and their pupils as there is a link between empowerment and creativity (Craft et al., 2001; Ludhra, 2008). Empowering women in education is a current trend in Saudi Arabia (Alotaibi, 2020; Alghamdi, 2023; Aldegether, 2023). According to the Global Gender Gap Report (2018), Saudi Arabia increasingly supports women's employment, as well as reducing the gender gap in education (World Economic Forum, 2018). In terms of the work environment in the Saudi context, people need creativity to succeed in the 21st century (Iqbal, 2011; Allmnakrah & Evers, 2020; Essa & Harvey, 2022; Almazroa & Alotaibi, 2023; Aldegether, 2023). From this perspective, educators could establish significant progress through curricula and teacher education by creative teaching practices among female teachers or students in the shadow of the equality of gender principle (Aldujayn & Alsubhi, 2020; Aldegether, 2023).

Due to cultural, social, and traditional values, education in Saudi Arabia is gender-segregated (Hamdan, 2005). As the career opportunities for females are expanding, there is a growing need for them to possess high-level skills and creativity in order to secure emerging jobs and overcome societal challenges (Sani, 2018). For example, although the Saudi educational policy enforces gender segregation, in 2019/2020 the education department will begin assigning Saudi female teachers to teach boys in primary schools (Ministry of Education, 2019). The next section will explain the research gap, followed by the significance of the research.

1.4 Exploring the Gaps

There are several important gaps that need to be addressed in the current research context of the pedagogy of creative learning in education in Saudi Arabia. These gaps include the contextual gap

and empirical gap as identified by Miles (2017). The current research in this study specifically addresses the contextual gap by integrating creativity teaching with Saudi Arabia's Vision 2030 education goals and the empirical gap related to the scarcity of research on creativity in teacher education. These gaps are addressed below and are further explored at the end of the second chapter of the literature review.

1.4.1 Addressing the Creativity Teaching Gap and Saudi Arabia's Vision 2030 Education Goals

In this section, I have addressed the gaps identified between policy and practice by referencing several recent formal documents, national frameworks, reports, and conference papers. These include the Saudi Vision documents (2016 and 2019), the Saudi the National Advisory Committee on Creative and Cultural Education (NACCC, 2013), OECD reports on Saudi Arabia (2019, 2020), UNESCO papers (2022), and information from the Saudi Education Ministry's formal website.

In recent years, Saudi Arabia's educational landscape has been undergoing transformative changes, prominently featured in the objectives of Saudi Vision 2030 (Ministry of Education, 2019). This strategic framework aims not only to diversify the Saudi economy but also to revolutionise its educational system by promoting an environment ripe for creativity and innovation. Further discussion on the rationale behind this significant focus on creativity will be presented in Chapter Two (see section 2.3.2).

The integration of creativity into the Saudi educational system aligns with the overarching goals of the Saudi government, the Ministry of Education, and Saudi educators and researchers, all committed to the Saudi Vision 2030 (Alenezi, 2024). While there are unclear lines between these entities, their collective endeavour towards supporting creativity and educational reform is crucial. There are several significant reasons for and results of fostering creativity in Saudi Arabia, extending beyond economic considerations:

First, enhancing teaching practices as stated in Saudi Vision 2030 (2016). Developing and integrating creative learning into teaching practices can significantly enhance the teaching experience, making learning more meaningful and impactful. Creative approaches engage students more deeply, fostering critical thinking, problem-solving, and innovation, leading to better

academic performance and overall development at any stage of education. According to Mohammed et al. (2024), creativity as a skill for Saudi university students is needed to equip them to handle uncertain futures, adapt to new challenges, and meet the demands of future jobs.

Additionally, the benefits extend to economic and societal development. While the development of creativity is linked to tourism and the economy, it also plays a crucial role in societal growth (OECD, 2020; Alenezi, 2024). The Saudi Arabian government aims to improve learning outcomes to be competitive with other countries, recognising the societal and political imperatives for such changes (OECD, 2020). Lastly, empowering female pre-service teachers, teachers, and pupils is a significant aspect, as stated by the Saudi Ministry of Education on their website (2022). Encouraging creative thinking can lead to greater empowerment and opportunities for women in education and beyond, aligning with Saudi Arabia's recent goals (Alotaibi, 2020; Alghamdi, 2023; Aldegether, 2023).

Despite ambitious policy aspirations and significant reasons, a noticeable gap remains between these goals and current teaching practices, particularly in cultivating creativity. Saudi Vision 2030 articulates clear educational goals, emphasising creativity and the need for continuous adaptation to keep up with rapid national developments aimed at improving teaching methodologies and learning outcomes:

Making education available to all and raising the quality of its processes and outcomes; developing an educational environment that stimulates creativity and innovation to meet development requirements. The Vision also aims to improve the governance of the education system, develop the skills and capabilities of its employees, and provide learners with the values and skills necessary to become good citizens, aware of their responsibilities towards the family, society, and nation (Ministry of Education, 2021).

This vision directly underscores the importance of “fostering a creative mindset and creative approaches among educators and future educators” (Saudi Vision, 2016, p.3), who are crucial in shaping an innovative educational culture that aligns with the nation’s strategic objectives. As stated in the mission of the Ministry of Education, “Developing an educational environment that stimulates creativity and innovation to meet the requirements of development, improving the education system, and developing the skills and capabilities of its employees” (Ministry of Education: Vision, Mission, and Goals, 2021).

The priority on creativity in Saudi education comes from both high-level stakeholders as well as educators and researchers. Various formal documents highlight the importance of integrating 21st century skills, including creativity, into the Saudi educational framework (NCAAA, 2013; OECD, 2020; Education and Training Evaluation Commission, 2023; UNESCO Regional Centre for Quality and Excellence in Education, 2023). The framework for integrating 21st-century skills into general education curricula in Arab countries, including Saudi Arabia, highlights the central role of creativity in education. This framework emphasises developing skills to access, evaluate, and share information, enhancing the creative process by incorporating diverse perspectives. Assessment methods and teaching strategies are designed to evaluate and nurture students' creativity through project-based assessments, portfolios, and peer reviews, ensuring educational environments support creative thinking and problem-solving (UNESCO Regional Centre for Quality and Excellence in Education, 2023).

Although there is no doubt about the importance and impact of these initiatives, a gap remains between policy aspirations and classroom implementation (Foster, 2023). This gap is particularly evident for Saudi in-service and pre-service teachers. Researchers like Alghamdi (2020) and Alharbi (2022) emphasise the constant evolution in the education sector driven by Saudi Vision 2030. They highlight the need for ongoing research to ensure teachers' educational strategies remain aligned with new policies and initiatives. Moreover, prior to the implementation of Saudi Vision 2030, there often existed a significant disconnect between policy goals, teacher preparation views, and classroom practices in the Saudi context (Alzaydi, 2010; Al-Qahtani, 2016; Alsaleh, 2019; Alghamdi, 2020). Specifically related to creative education, there is a persistent disconnect between the ambitious expectations outlined in educational policies and the actual implementation of creative practices in classrooms (Salamah et al., 2023a). This discrepancy underscores the urgent need for research into understanding and implementing creativity among teachers to bridge this gap, making creativity not just a stated goal but a reality in classrooms across Saudi Arabia.

This gap indicates a need for more targeted research and training to effectively translate these policies into practical teaching strategies that educators can readily apply in their classrooms within the context of Saudi education.

Given the interpretivist nature of this research, this thesis aims to explore Saudi pre-service teachers' perspectives on creative learning and their teacher educators' perspectives, as well as the factors shaping the preparation of creative pre-service teachers in higher education, as explained in Section 1.5. The goal is to develop a framework for a pedagogy of creative learning that supports the development of Saudi pre-service teachers' understanding of teaching for creativity, which will be presented in Section 5.5. Together, these aims support the enhancement of creativity in pre-service teacher education and may contribute to improving the quality of teacher education in Saudi Arabia. While the research aligns with the goals of Saudi Vision 2030, it should be noted that this thesis does not aim to explore how Saudi educational policies explicitly address creativity, as that is beyond the research aims.

1.4.2 Addressing the Contextual Gap in Empirical Research on Creativity in Education

Despite widespread acknowledgment of the importance of fostering creativity in education, there remains a significant lack of comprehensive, evidence-based models for teaching creativity, particularly noted by Cremin (2017). Both within and beyond Saudi Arabia, researchers have identified the divide between theoretical aspirations and practical implementation as a substantial challenge to the professional development of teachers.

The gap in the Saudi educational context is notably pronounced in the integration of creativity into teacher education programs and aligning these with policy goals to influence effective classroom practices. The interplay between the learner, teacher, and context in creative teaching has been the subject of numerous studies (Beetlestone, 1998; Jeffrey, 2006; Craft, 2009; Rinkevich, 2011; Cremin, 2017). There is an ongoing international debate regarding creative teaching and teaching for creativity, and recent research has shown a growing interest in exploring the relationship between these two concepts for future teaching practice (Cremin & Chappell, 2019; Kaplan, 2019; Grigorenko, 2019; Paek & Sumners, 2019; Deehan et al., 2022; Beghetto & Jaeger, 2022). However, the existing literature reveals a notable scarcity of studies focusing on creativity within Arab countries (Alsaouh, 2015; Aljashaam, 2017). This lack of research leads to ambiguity and a limited understanding in Arabic academic research regarding distinct concepts such as creative pedagogy, creative learning, and teaching for creativity. This gap was particularly evident during my work on the literature review, where I encountered significant challenges in finding reliable research in this area.

Furthermore, empirical research on fostering creativity and teaching for creativity is lacking among pre-service teachers and teachers in the Saudi context. For example, the absence of creativity topics in Saudi published research is evident when searching databases like ERIC or Google Scholar for terms related to creativity such as “creative pedagogy in initial teacher education” or “pre-service teachers’ creativity in Saudi Arabia” in Saudi teacher education—results are minimal and lack depth. Additionally, no studies have explored the pedagogy of creative learning or the approach of teaching for creativity among female pre-service teachers in particular. Therefore, there is a need to investigate this topic further.

Several studies have addressed related areas of inquiry. Some explore teachers’ creativity in English as a foreign language, with Al-Qahtani (2016) focusing on Saudi EFL male teachers and Aldujayn and Alsubhi (2020) examining Saudi female teachers’ practice. Another group of studies examines creativity and innovation among gifted Saudi students, including Aichouni et al. (2015), and Salamah et al. (2023). As well Aljughaiman and Ayoub (2012), who explore the effects of enrichment programs on the analytical, creative, and practical abilities of Saudi gifted students.

Other studies shed light on various aspects of creativity and teaching from different perspectives, including obstacles to creative teaching, teachers’ perspectives in specific settings, and the understanding of creativity among teachers who employ an approach to learning and development that integrates the areas of Science, Technology, Engineering, and Mathematics (STEM), such as (Aljashaam, 2017; Almahmudi, 2017; Aboud, 2020; Bojulaia & Pleasants, 2021).

Additionally, studies from neighbouring Gulf countries from Kuwait, including Alyaseen (2015), investigates the role of creative thinking in student teacher education colleges, while Alsahou (2015) explores science teachers’ pedagogical beliefs and practices in fostering creativity in science classrooms.

Overall, these studies have revealed generally positive attitudes toward creativity but also highlighted a significant lack of clarity in its definition and the effectiveness of teaching approaches. Consequently, the pedagogy of creative learning, particularly in fostering pre-service teachers’ capabilities for teaching creativity, remains an underexplored area within the Saudi educational research context.

The current research in this study addresses these critical gaps by employing qualitative methods to explore the unique contributions of female teachers in promoting creativity, a pivotal component in the preparation programs for pre-service teachers in Saudi Arabia. By elucidating these aspects, this research aims to deepen our understanding of the current state of creativity in education and provide actionable insights for policy decisions, curriculum development, and enhancements in teacher education programs. This research holds significant potential for enhancing creativity within the Saudi Arabian education system, as will be discussed further in (1.6). The following section addresses the research objectives and questions.

1.5 Research Objectives and Questions

This research contributes to our knowledge of a complex phenomenon relating to developing creative learning and teaching of pre-service teachers in a certain setting. The major objectives, as with many qualitative studies, were to gain a depth understanding. Therefore, the objectives were:

- To investigate the progression of Saudi pre-service teachers' understanding of creative learning and teaching throughout the creative learning sessions.
- To explore Saudi teacher educators' perspectives on creative learning and the factors shaping the preparation of creative pre-service teachers in higher education.
- To develop a framework for a pedagogy of creative learning that supports the development of Saudi pre-service teachers' understanding of teaching for creativity.
- To contribute to the professional development of student teachers in Saudi Arabia and the international education context by enhancing their understanding of creative pedagogy.

To tackle the tension between these aims and provide more explanation, this research starts with investigating Saudi pre-service teachers' understanding of creative learning and teaching throughout the sessions of creative learning and explores Saudi teacher educators' perspectives on creative learning and the factors shaping the preparation of creative pre-service teachers in higher education. The goal is twofold: firstly, to discover the existing views of both teacher educators and pre-service teachers on creativity; and secondly, to develop a framework for a pedagogy of creative learning that can support and potentially transform these perspectives, enhancing pre-service teachers' understanding of teaching for creativity. This dual approach supports the enhancement

of creativity in pre-service teacher education and aims to integrate creativity within teacher education in Saudi Arabia.

Therefore, the main aim was not to make changes to both groups, but to explore and understand their perspectives. Although action research, as will be explained in Section 3.3, inherently involves making changes and improvements, I found that these changes occurred during the sessions. For example, reflection after each session supported the planning and delivery of the creative learning sessions, which will be detailed in Section 3.9. Additionally, changes occurred in my understanding of creative learning and teaching as a researcher during and after this study, as will be explored in Sections 5.6 and 6.7. By addressing both the discovery and transformation of views, this research acknowledges the inherent tension between understanding current perspectives and fostering change.

To achieve these aims, a primary research question was generated: *What are the fundamental components of a pedagogy of creative learning that can enhance the understanding of teaching for creativity among Saudi female pre-service teachers?*

This main research question was operationalised by the following two sub questions:

- RSQ1: How did the views of creative learning and teaching evolve among Saudi pre-service teachers during creative learning sessions?
- RSQ2: How do Saudi teacher educators perceive creative learning and what factors influence the preparation of creative pre-service teachers in higher education?

By addressing both the discovery and transformation of views, this research acknowledges the inherent tension between understanding current perspectives and fostering change. This will help to frame the context and set the stage for the Methodology Chapter. Additionally, this research seeks to gain a deeper understanding of the complex phenomenon studied, specifically focusing on creative learning and teaching among Saudi pre-service teachers and their teacher educators. While this research does not aim to yield broadly generalisable findings from the entire study, it seeks to provide valuable insights and contribute to the educational context in Saudi Arabia (see section 3.11).

1.6 Significance of the Research

The findings of this research have the potential to significantly impact the quality of teacher education in Saudi Arabia, particularly in terms of fostering creativity among pre-service teachers. The anticipated significance of this study can be categorised into two main domains: teacher education and educational research.

Firstly, the research sheds light on the pedagogy of creative learning and the perspectives of pre-service teachers regarding creativity in the classroom. These findings can inform teacher education programs and help future educators develop reflective approaches, teaching methods, and professional development that foster creativity in teaching. Additionally, the research examines teacher educators' views on the creativity of pre-service teachers and the influence of various factors, such as learning environments, mentors, and placements. This understanding can contribute to the development of a stronger pedagogy of creative learning and support the implementation of creativity in the classroom.

Furthermore, in light of the 2030 Saudi Vision, as previously explored, the research addresses gaps in the existing literature by exploring the views of teacher educators and identifying factors that promote creativity among pre-service teachers. These insights can guide policymakers in creating supportive and conducive environments for creativity in initial teacher preparation programs. The study also provides a suggested framework that deepens our understanding of the interplay between creative learning sessions and contextual factors, offering valuable insights into the topic.

In terms of educational research, this qualitative action research contributes to existing knowledge by filling gaps and providing a foundation for future studies. It provides ideas for future studies that might add to the body of knowledge. It also offers a practical framework that enhances our understanding of the contextual elements influencing pre-service teachers' attitudes and views, contributing to the field of teacher education and the relationship between theory and practice.

Overall, the implications of this research are far-reaching and multifaceted, particularly within the Saudi and Gulf region contexts while also offering potentially valuable insights across wider educational settings. This research has the potential to significantly integrate creativity into teacher preparation programs, inform educational policies, and inspire future scholarship around creative pedagogies. By promoting creative learning and teaching within Saudi teacher education, it can

meaningfully enhance the quality of the education system, benefiting both educators and students. The research findings may also provide applicable lessons for advancing creative capacity-building in teacher education and higher education throughout Gulf and Arab nations, highlighting possibilities for regional educational transformation. More broadly, the research framework and qualitative approach adopted here in this thesis could have relevance for teacher educators in diverse global contexts seeking to integrate creativity into their practice. The potential reach of this research findings underscores the valuable contributions this work offers across various boundaries. Specific implementation will be further elaborated upon in the last chapter.

1.7 Defining The Key Terms Used in this Thesis

- **Creative learning:** This term consists of two elements, and the definition adopted in this research is based on Jeffery (2006):

The creative in 'creative learning' means being innovative, experimental and inventive, but the learning means that young participants engage in aspects of knowledge enquiry. In particular, we observed a significant amount of intellectual enquiry around possibility thinking and engagement with problems (p.410)

Although this definition stated 'young participants', this research believes creative learning is valuable and developable for kids, young learners, pre-service teachers, and adults, both inside and outside the classroom.

- **The sessions of creative learning:** refer to interactive sessions designed based on a model proposed by British researchers Bill Lucas, Guy Claxton, and Ellen Spencer at the Centre for Real-World Learning (CRL) in 2013, as it will be explored in Section 2.3.8.

Lucas et al. (2013) proposed a model, known as the five-dimensional model of creative habits of mind, which includes five dimensions: being inquisitive, persistent, imaginative, collaborative, and disciplined. It is crucial to emphasise that the model used here is an adaptation of Lucas' original framework, not a direct application. This adaptation has been specifically customised to align with the unique context and requirements of this research.

- **Teaching for creativity:** it is defined as "forms of teaching that are intended to develop young people's own creative thinking or behaviour" (NACCCE, 1999, p.165). The differentiation between teaching for creativity and creatively teaching is the focus on the teacher only, or on behaviour of both teacher and learners (Jeffrey & Craft, 2004; Grigorenko, 2019), as it will be explored in Section 2.3.5.

- **Pre-service teachers:** refers to the students in their final semester of the fourth academic year who are preparing to graduate as teachers with a bachelor's degree upon fulfilling the teaching placement requirement (Almalki, 2020). Although the term “pre-service teachers” is used throughout the thesis, the terms “trainee teachers”, “student teachers”, and “future/beginning teachers” are used interchangeably and carry the same meaning.
- **Placement:** refers to the practical period where pre-service teachers gain hands-on experience by assuming the role of teachers in real classroom settings. It is a crucial component of Initial Teacher Education (ITE) programs. In this research, pre-service teachers take on multiple roles, acting as teachers in school placement during two days of the week, as students in the college for the remaining week as well as participants in the sessions of creative learning.
- **Initial teacher education:** it refers to the process of preparing individuals to become teachers by providing them with the necessary knowledge, skills, and experiences to effectively teach in a classroom setting. The primary objective of initial teacher education is to produce educators who can effectively facilitate high-quality learning outcomes (Kane, 2005).
- **Teacher educators:** are qualified professionals who teach, design and deliver teacher education programs, mentor pre-service teachers, conduct research, and have a significant role in preparing future teachers. Also, they known as academic educators or supervisors in the Saudi ITE context. In this study, they refer to college members authorised to supervise pre-service teachers during their practicum. Their responsibilities include guiding the development of teaching skills, providing instructions, and assessing pre-service teachers' performance.
- **Mentors/ School teacher/class teachers:** Although the role of mentors is mentioned briefly in this study, it is important to highlight their significance to avoid any confusion. Mentors or a ‘school-based mentors’ refer to any teachers in the participants’ school placements who interact with pre-service teachers to discuss their issues and provide support. Additionally, mentors are responsible for monitoring and assisting pre-service teachers during their school placement.

1.8 Outline of the Thesis

This study consists of six chapters. Chapter One establishes the context and rationale for the study, highlighting the importance of fostering creative learning in teacher education programs. It outlines the research objectives, questions, and significance of the study.

Chapter Two provides a comprehensive literature review, exploring initial teacher education and creative learning, with a specific focus on the educational context in Saudi Arabia. Chapter Three discusses the research design, including the philosophical underpinnings, methodology, case selection, ethical considerations, and data collection and analysis procedures.

Chapter Four presents the key findings obtained from data analysis, highlighting pre-service teachers' understanding of creative learning and the views of teacher educators. Chapter Five critically analyses the relevance of the findings within empirical research and theoretical perspectives, discussing implications for the education field.

The final chapter synthesises the research findings and discusses their implications for preparing pre-service teachers, highlighting the contributions of the study and suggesting future research directions.

In conclusion, this thesis offers a comprehensive examination of the pedagogy of creative learning in pre-service teacher education, contributing to existing knowledge and guiding educational practices and future research.

Chapter Two: Literature Review

2.1 Introduction

This chapter is a review of the literature and the fundamental theoretical framework that underpin the development of creative learning and teaching among Saudi pre-service teachers, which is the overarching focus of this research. This chapter consists of two important sections, both of which provide the groundwork for the aim of this research.

The first section (2.2) focuses on initial teacher preparation programs in Saudi Arabia, examining their quality and structure. It includes a comprehensive exploration of the dominant approaches and ongoing challenges associated with initial teacher preparation in the country. This exploration aims to provide a comprehensive overview of the current landscape in Saudi teacher education.

The second section (2.3) is dedicated to defining and discussing creativity, with a particular focus on exploring creative learning and teaching within the realm of teacher education. It addresses key issues related to conceptualising creativity within educational settings, specifically within the Saudi education system. This section also highlights the place of creative learning as the core of creative pedagogies, explaining its connection to both creative teaching and teaching for creativity. It addresses how these concepts are integrated into this research. Furthermore, the section examines relevant creativity models and studies, aiming to construct a comprehensive pedagogy of creative learning. Finally, this chapter presents the five-dimensional model of creative habits of mind that are employed to guide research intervention. The five-dimensional model was selected as an initial conceptual map as it encompasses multiple facets of creativity in learning.

However, due to the broad and overwhelming number of studies on both teacher preparation and creativity, the scope of this research was grounded in the objectives and limited to the most relevant literature. Additionally, It is important to note that this research, based on a socio constructivist perspective, adopts the term 'teacher education' instead of 'teacher training'. Further discussion on the distinction between these terms will be provided within the context (in section 2.1.2).

In summary, the two sections included here work symbiotically to synthesise key research on teacher education and creative pedagogy, in order to set the stage for the subsequent research methodology.

2.2 Initial Teacher Education Programmes

This section offers an overview of initial teacher education programs, with a particular focus on the context of Saudi education. This section is structured into several sub-sections. Section (2.1.1) offers a background of teacher education and its structure and aims, then focuses specifically on the Saudi context exploring current reforms and challenges. Section (2.1.2) identifies the terms teacher training and teacher education, the two common and often conflicting directions that have shaped teacher preparation. Then section (2.1.3) explores the most common approaches in teacher education, divided into two parts: (2.1.3.1) technicism and (2.1.3.2) reflective practice. Definitions and key features of teacher technicism and reflective practice are discussed, along with an analysis of how these approaches interrelate and influence teacher education. The discussion in this section is fundamental to the overarching aims of the current research and provides insight into creative learning and teaching within initial teacher education.

2.2.1 Background of Initial Teacher Education Programmes

In recent times, the body of literature surrounding initial teacher programmes has come to a general consensus that initial teacher programmes elicit significant improvements in teaching quality and professional development (Shulman, 1987; Cochran-Smith & Lytle, 1999; Darling-Hammond, 2000, 2006; Valencia et al. 2009; Livingston, 2016; Livingston & Flores, 2017). Initial teacher education marks the point of entry into the teaching profession. The organisational structure surrounding this point of entry into the teaching profession is crucial and has been shown to have a significant influence over both the quantity and quality of educators (Musset, 2010). These findings provide evidence that there is an urgent need for significant reforms and approaches that ensure teachers are adequately prepared for the evolving role and demands of teaching in the 21st century (Darling-Hammond, 2006; McDonald & Grossman, 2008; Zeichner, 2014; Livingston, 2016).

In recent years, Saudi Arabia's education system has prioritised reforms aimed at strengthening initial teacher preparation programs and pedagogical training for pre-service teachers (OECD, 2020; Allmnakrah & Evers, 2020; Quamar, 2021b; Almazroa & Alotaibi, 2023). In 2013, the National Commission for Academic Accreditation and Assessment (NCAAA) introduced the initial teacher programme framework, identifying important standards and dimensions for

professional and effective teachers in light of international best practices (NCAAA, 2013). The approach of the NCAAA aligns with the Saudi Vision 2030 goal, which is to develop a highly skilled teaching workforce equipped to provide students with a globally competitive education (KSA Government, 2016). Notably, these recent efforts have centred on enhancing the teacher preparation curriculum, integrating technology, improving practicum experiences, and fostering more robust university-school partnerships (Allmnakrah & Evers, 2020; Quamar, 2021a). Moreover, these educational reforms extend to broader societal goals related to gender equality and women's empowerment, which align with the Sustainable Development Goals (Okonofua & Omonkhuwa, 2021; Aldegether, 2023).

These reforms within Saudi Arabia parallel similar policy efforts internationally to strengthen initial teacher preparation, as highlighted by Musset (2010), in a comparative analysis of Organisation for Economic Cooperation and Development (OECD) countries. In this analysis, Musset identified several key reforms focused on improving initial teacher preparation policies and programs, reflecting the shared belief that pre-service training and education play a fundamental role in shaping the capabilities and quality of educators. This belief is substantiated by research, indicating that providing structured training to prepare teachers for their future roles through effective pre-service training and education has been shown to be a pivotal factor directly impacting student learning outcomes and the overall quality of education systems (Darling-Hammond, 2006; Levine, 2006; Livingston, 2016; Cochran-Smith & Zeichner, 2009; Livingston & Flores, 2017).

While there appears to be growing evidence surrounding the benefits of effective pre-service training and education, the process of improving the quality of teachers is complex (Valencia et al., 2009; Musset, 2010; Livingston, 2014; Cakcak, 2016; Jao et al., 2020). Despite its subjective nature, several researchers have attempted to define what qualities and knowledge high-quality teachers should possess. Some of the qualities and knowledge include, a deep understanding of learning process and child development, knowledge in specific subject areas, expertise in teaching methods, a strong sense of ethics, and the attitudes required for efficient teaching and continuous educational growth (Darling-Hammond, & Murangi, 1995; Grossman et al., 2009 in Jao et al., 2020). The qualities and knowledge identified represent key competencies that pre-service

teachers should develop during their initial teacher preparation programs at universities or colleges (Darling-Hammond, 2000; Levine, 2006).

Teacher education programs, which prepare candidates before they enter in-service teaching, are often referred to as teacher preparation programs (Musset, 2010). Darling-Hammond (2000) found that teachers who graduated from such teacher education programs were generally better equipped to teach in classrooms than those who did not receive this form of pre-service and initial teacher education. However, it is important to note that in the pursuit of quality teaching, differences in the effectiveness of how teachers are taught to begin with can be related to differences among initial teacher preparation (Darling-Hammond et al., 2002; Henry et al., 2012; Cochran-Smith et al., 2008; McDonald & Grossman, 2008). Hence, these associations between initial teacher training and overall teacher quality warrant further investigation into the primary sources shaping pre-service teachers.

While exploring the factors that shape pre-service teachers, it is important to note that according to Musset (2010), Shulman's model (1986) is the most common approach utilised for initial teacher education among OECD countries, which is also described as knowledge for practice (Loughran, 2019). Despite being the dominant approach utilised for initial teacher education, there is no clear consensus relating to the optimal content of Shulman's model for initial teacher education focus. The Shulman (1986) model suggests that teaching should be viewed based on three different kinds of knowledge:

- 1) Content knowledge, also referred to as subject matter knowledge, refers to "the amount of knowledge present, and how an individual is able to organise this knowledge in the mind of the teacher" (Shulman, 1986, p.9). This form of knowledge implies that teachers must understand the structure and organisation of knowledge, rather than just developing knowledge based on verbatim in relation to a specific domain (Tamir, 1988).
- 2) Pedagogical content knowledge is that which "goes beyond the knowledge of the subject matter per se to the dimension of subject matter knowledge for teaching" (Shulman, 1986, p.9). This form of knowledge is important in ensuring teachers are not only able to understand the subject matter but are also able to understand the most appropriate methods and practices to teach the subject matter (Auseon, 1995).

3) General pedagogical knowledge consists of “broad principles and strategies of classroom management and organisation that appear to transcend the subject matter” (Shulman, 1987, p. 8). Although all components of teacher preparation are viewed as crucial for teacher development, initial teacher education is viewed through a variety of different lenses and demands (Kraut, 2013). Taken together, we are able to conclude that currently, no singular approach or model for initial teacher education can be applied to all contexts (Auseon, 1995; Mutton et al., 2018).

2.2.2 Initial Teacher Preparation between Training and Education

The foundation of effective teaching lies in the preparation of teachers. In the literature there is common use of the terms ‘training’ and ‘education’ in the context of teacher preparation, however, a lack of understanding and an ability to distinguish between the two terms is a barrier to current programmes relating to preparing pre-service teachers. The distinction between ‘training’ and ‘education’ conceals intricate matters related to the development of the curriculum, knowledge integration, and the methodologies shaping teacher preparation programmes (Cakcak, 2016), both within Saudi Arabia and beyond. In the following section, I will briefly explore the philosophical assumptions and instructional methodologies that underpin these programmes, with a specific focus on initial teacher education in Saudi Arabia.

The ability to distinguish between the term ‘training’ and ‘education’ is important to understand and develop optimal approaches to pre-service for teachers. Although the specifics relating pre-service teacher preparation programmes may vary across countries, literature relating to initial teacher preparation highlights the importance of preparing pre-service teachers for professional teaching and describes two opposing approaches: initial teacher training and initial teacher education (Richards, 1989; Wallace, 1991; Richards & Nunan, 1993; Richards & Farrell, 2005; Cakcak, 2016). The approach that dominates initial teacher preparation programmes has been suggested to significantly influence the quality of teachers (Musset, 2010).

First approach, teacher training refers to a short and traditional preparation that provides pre-service teachers with the basic and domain specific knowledge that relates to the primary educational goals. Under the behaviourist paradigm (Wallace, 1991), this training envisions effective teaching as synonymous with proficiently executing predetermined mechanical tasks (Stephens et al., 2004).

Teacher training typically involves practicum under close supervision and monitoring in an attempt to demonstrate that a student teacher has the ability to teach whilst applying principles and teaching methods in the classroom (Richards & Farrell, 2005). For example, the purpose of training is to “expand the teacher’s repertoire of tasks, while trying to improve their effectiveness with which the tasks are used” (Richards, 1989, p.3). Wallace (1991) identified that a common term used in teacher training was ‘efficiency by imitation’, where teachers become more efficient by watching and then repeating as part of their approach for training teachers in their teaching practice.

A second approach, teacher education considers teaching to be a broad and long process of growth for teachers (Richards, 1989). Interestingly, there has been a significant paradigm transformation across a myriad of countries, shifting from teacher training to teacher education (Livingston & Flores, 2017). Rather than teaching future teachers using a practical hands-on approach, education focuses on the theory relating to teaching, which can often be abstract in nature. This approach is emphasised by the increased demand for student teachers to be able to reflect on their skills, abilities and understanding of themselves (Richards & Farrell, 2005). For example, the student’s observation, demonstration, and teaching of a lesson is not only to be able to teach, but to also to develop an experience. This approach allows teachers to ask themselves, what worked well? what didn’t work so well?, which will in-turn allow them to develop as teachers (Wallace, 1991). Furthermore, teacher education is a dynamic process for student teachers to acquire comprehensive knowledge and strategies to teach, and provide opportunities for student teachers to reflect in the context of practice (Darling-Hammond, 2006; Korthagen et al. 2006).

John Dewey, an American philosopher, psychologist, and reformer, is regarded as one of the forefathers of progressive education. He argued in 1930 that the fundamental aim of teacher education should be to nurture student teachers into becoming “thoughtful and alert students of education” (in Greenwalt, 2016, p. 2). His advocacy for experiential learning underscores the importance of an immersive, experience-based approach in the formation of educators. Teacher education can therefore be viewed as an approach that focuses on developing professional knowledge, teacher identities, and pedagogical reasoning, whilst following a constructivist approach with a focus on teacher decision-making and practicum experiences (Korthagen et al., 2006).

In relation to education in Saudi Arabia, the challenges in teacher education have been persistent over the years. Al-Abdulkarim (2009) argued that the preparation of teachers for professionalism in Saudi Arabia was still in its early stages, lacking a comprehensive approach to qualitative teacher education. This concern was echoed more than a decade later by Alghamdi (2020), who pointed out a definitive lack of research in addressing teacher education comprehensively in the Saudi context. Further underlining this ongoing issue, Almazroa and Alotaibi (2023) highlighted that despite the recognised importance of teacher education for developing 21st-century skills in students, there is a limited focus on various aspects of teachers' professional development and training in this regard. This continuous shortfall in research and development in teacher education implies significant deficiencies in creating effective teacher education programs. The lack of progression over such an extended period underscores an urgent need for focused and actionable research to bridge these critical gaps in teacher education in Saudi Arabia.

The lack of an established research base in teacher education in Saudi Arabia means that obstacles relating to the effective implementation of pedagogy and development have not been considered in sufficient depth. This challenge is further compounded by the absence of formal documentation outlining comprehensive policies and strategies related to teacher education, particularly in English (Alghamdi, 2020). Consequently, a significant proportion of teacher education programmes in Saudi Arabia are inherently affected by the absence of a clear vision and coherent philosophy (Almazroa & Al-Shamrani, 2015; Al-Yami, 2018; Al-Arfaj et al., 2018). This lack of clear and accessible resources among educators and researchers makes the identification and understanding of the teacher education model in Saudi Arabia complex and challenging.

Despite the Ministry of Education in Saudi Arabia having a clear vision and coherent aims relating to learning and values, a recent study by Alghamdi (2020) reviewed the facets of teacher preparation programmes currently in place in Saudi Arabia, revealing that much of the education system is behaviourist in nature. This dichotomy suggests that while the Ministry's documents are clear in terms of overall learning objectives and values, they are not sufficiently clear in guiding the practical aspects of teacher education. Consequently, researchers and educators are often uncertain about the vision and philosophy underpinning teacher education.

Furthermore, there has been criticism relating to teacher education in the Saudi context, despite the establishment of the NCAAA framework in 2013. The primary criticism has focussed on what

is deemed to be an ineffective programme that is not suitable for developing and manage the complexity of future practice (Alzaydi, 2010; Alsaleh, 2019; AlHarbi; 2021). These criticisms have been echoed in the literature from Saudi researchers who have identified a significant gap between theoretical knowledge, practical knowledge and skill-sets in pre-service teaching (Hamdan, 2015; Alblaihed, 2016; Alsharari, 2016; Albaqami, 2019; Alsaleh, 2019; Binmahfooz, 2019). These findings suggest that the gap identified is closely associated with the approaches and philosophies that shape teachers' training and preparation for their roles. Specifically, two crucial approaches in teacher preparation are technicism and reflective practice. The upcoming section will explore how these approaches align with the directions for training and development previously discussed.

2.2.3 Exploring Technicism and Reflective Practice in Teacher Preparation

A significant proportion of teacher education is to prepare qualified teachers and develop their understanding of teaching, both in theory and practice (Darling-Hammond, 2000, 2006; Allen & Wright, 2014; Caena, 2014), with a key cornerstones of teacher preparation being practicum (Valencia et al., 2009). The experience teachers gain is pivotal in preparing aspiring teachers for their future careers. Interestingly, from a student teacher perspective, practicum is often regarded as the most crucial aspect of their Bachelor of Education degree (Clarke et al., 2014).

Furthermore, in a recent study Algamdi (2020) who reviewed initial teacher education systems from various countries, including the UK, USA, Canada, and Australia identified crucial elements for successful initial teacher education programmes, while maintaining excellence. These key elements were identified as potential solutions to the challenges present in the Saudi initial teacher education programmes. The elements identified by Algamdi (2020) include:

- Continuous professional learning: which relates to the opinion that teacher education is not the achievement of a degree or award, but rather a continuous process that forms a part of educators' ongoing professional development and experience (Clarke et al. 2014), emphasising the significance of continual growth in their career of teachers (Schön, 1983, 1987; Zeichner & Liston, 2013; Livingston & Flores, 2017).
- Practicum: the practical experiences that teachers are exposed to during their teacher education programs has particular importance and is an integral component of teacher

education programmes (Darling-Hammond, 2006; Korthagen et al., 2006; Clarke et al., 2014; Hoffman et al., 2015; Svojanovsky, 2017).

- School-university partnerships: relates to robust collaborations between educational institutions and universities which have been widely acknowledged as a key factor that contributes to the effectiveness of a successful program (Darling-Hammond, 2006; Korthagen et al, 2006; Livingston & Flores, 2017).
- Mentoring: where student teachers can learn from those around them, but specifically a mentor who can guide learning and development is consistently highlighted in the literature as a prerequisite for a successful programme (Dunne & Bennett, 1997; Clarke et al., 2014; Hobson et al., 2015; Hoffman et al., 2015; Hobson, 2016).

Although the practical aspect of teaching constitutes a crucial component of teacher preparation, the mere presence of practical experience as a learning opportunity does not inherently ensure that this practical teaching transforms into meaningful and insightful learning for the student teachers (Svojanovsky, 2017). It is therefore important to consider the importance of teacher preparation and its contribution towards fostering continuous professional development and effective practicum experiences. Two key approaches that contribute towards teacher preparation are technicism and reflective practice (Halliday, 1998; Kumaravadivelu, 2003). Here I will discuss how technicism and reflective practice, despite their very different orientations, each contribute towards the development of future teachers within teacher preparation programs. This consideration of technicism and reflective practice and how these impact upon teacher preparation programs is a fundamental aspect of the current thesis, particularly in the context of teaching for creativity. However, due to the lack of comprehensible Saudi literature, it must be acknowledged that the studies reviewed here do not apply directly to Saudi Arabia.

2.2.3.1 Technicism Approach

This section provides an insight into the technicism approach and its association with standardisation of teacher qualities as an educational paradigm. The section also identifies potential challenges that may occur by this alignment, particularly in fostering creativity among teachers and nurturing a climate conducive to creative learning.

Technicism considers teaching as “a mechanistic way through criteria of performance” (Halliday, 1998, p.597), which simply put implies that good teaching is equivalent to ensuring a suitable performance that meets specified criteria when being assessed. Richards (1989) considered the technicism model as part of teachers’ ‘training’ approach, which is in contrast to the development approach in initial teacher education programmes. As a result, technical rationalism assumes teaching is a mechanism that teachers manage and control by experts who create professional knowledge. According to Hodkinson (1998), teaching is a systematic production process that include inputs, processes, and outputs. In the technicism model, the primary role of teachers is a transmission of knowledge from the expert to the learner without notable changes in the knowledge being delivered (Kumaravadivelu, 2003). However, the technicism model has been associated with a traditional approach to initial teacher education, which still remains present in many education systems around the world, including Saudi Arabia. The technicism model and traditional teacher approach both align when considering the role of the teacher, as one of being passive (Richards, 1989; Edwards & Thomas, 2010; Cakcak, 2016).

Furthermore, the technicist perspective aligns with a positivist worldview, emphasising that teaching practices should adhere to established scientific procedural standards (Grushka et al., 2005). Moreover, technicism encourages teachers to underline teaching outputs, as “technician would be concerned primarily with the successful accomplishment of ends decided by others” (Zeichner & Liston, 1987, p.27).

Despite its use, the technicism approach has faced criticism for its ineffectiveness in applying uniform techniques and resources to prepare teachers as experts, often overlooking the diverse teaching contexts. Specifically, three significant challenges that I have identified are presented here in the context of initial teacher education. Firstly, technicism in the initial teacher programme is divided between theory and practice (Halliday, 1998), where teachers are expected to firstly acquire theoretical knowledge about teaching, before then apply the knowledge and techniques learned in school classrooms (Schön, 1983). This separation of theory and practice creates a gap between the action of teaching and the knowing of how to teach. This observation reinforces earlier suggestions from recent Saudi studies who have identified the presence of a significant disparity between theoretical knowledge and practical skills in pre-service teaching (Hamdan, 2015; Alblaihed, 2016; Al-Arfaj et al., 2018; Alsharari, 2016; Albaqami, 2019; Alsaleh, 2019;

Binmahfooz, 2019). While proponents may contend that the technicism approach provides a clear structure and safe environment for future teachers (Kumaravadivelu, 2003), the reality is that professional teaching extends beyond putting knowledge into practice (Edwards & Thomas, 2010), which together suggests that the technicism approach may be an oversimplification of the complexity of education (Cakcak, 2016).

A second point of contention surrounding technicism relates to the disempowerment of teachers' abilities and experiences (Kumaravadivelu, 2003). This disempowerment indirectly prepares future teachers to be technicians who are passive recipients of information and skills as experts to be controlled instead of professionals that have been empowered to teach.

A third and final point relates to the fact that the technicism approach often ignores the unique requirements and varied learning styles of individual students (Cakcak, 2016). Any approaches that are rigid automatically make it more difficult for individualism and to establish creative and novel teaching techniques that encourage problem-solving, critical thinking, and student involvement. Hence, technicism poses a challenge for providers and policymakers within initial teacher programmes in relation to the current educational landscape, rather than solely being attributed to the capabilities of future teachers (Edwards & Thomas, 2010).

These three points collectively provide insight into the limitations of the technicism approach and its effectiveness in preparing teachers for the complexities of their roles and future careers (Fynn-Aikins, 2016). This analysis also highlights a stark contrast between the technicism approach and the principles of creative learning and teaching, particularly in the context of teacher preparation. The misalignment between these approaches becomes increasingly evident and will be further explored in the next section (2.5).

Despite the challenges and potential limitations of the technicism approach, it continues to attract interest and remains a dominant area in the context of teaching and teacher education (Tuinamuana, 2011; Aitken et al., 2013; Bourke et al., 2018; Singh et al., 2019). It is important to also consider the focus placed on the criteria of performance that is inherent to technicism. Halliday (1998) previously coined the phrase, "the notion that good teaching is equivalent to efficient performance which achieves ends that are prescribed for teachers" (p.597). Similarly, Zeichner and Liston (1987) emphasised the importance of achieving success within the technicism approach. Although accomplishing an efficient criteria of performance as per the technicism

provides encouragement and success for student teachers, the high importance placed on efficient outcomes leads to an underlying accountability in teacher education (Cochran-Smith et al., 2008). As a result, technical rationalism creates a climate of the standardisation amongst teachers, creating a standard of quality that may not be acceptable as a way of education, whilst hindering creativity (Halliday, 1998; Tuinamuana, 2011; Fynn-Aikins, 2016). In the last two decades the literature surrounding the standards of initial teacher education has been increasing (Ceulemans et al., 2012; Bourke et al., 2018). The standards that are set are “parameters and guidelines for conducting professional work” (Yinger & Hendricks-Lee, 2000, p.97), as researchers and education bodies aim to define the minimum level of behaviour expected of trainees in initial teacher education to become qualified teachers (Department for Education, 2011). Beck (2009) posits that contemporary educational standards, following the technicism basis, are underpinned by a loosely interpreted form of behaviourism. This approach emphasises acquiring specific performance abilities and related dispositions, prioritising measurable outcomes over holistic educational experiences.

The history of the standards framework in the Saudi education system is relatively recent, set in 2007 by the Saudi National Commission for Academic Accreditation and Assessment (NCAAA) who set generic standards and described the characteristics required and expected of graduates. In comparison to Saudi, the standards for teacher programs in colleges and universities in the USA was set by the National Council for Accreditation of Teacher Education (NCATE), established in 1954 (Council for the Accreditation of Educator Preparation, 2021), and in the UK by the Council for the Accreditation of Teacher Education (CATE) in 1984 (Gillard, 1998). Although Saudi, may be somewhat new to setting standards as described here, there is a vast potential to grow and develop, whilst learning from other countries.

The standards for the teaching profession are based on the technical rationale viewpoint that education is a tool for the production process and problems (Tuinamuana, 2011). Furthermore, standards that are set are a suitable and have an equal expectation to all student teachers, ensuring fairness for all future teachers (Zuzovsky & Libman, 2006). The standards that are set for teachers have been shown to provide insight and understanding for teachers that relates to the broad scope of teaching (Darling-Hammond, 2000; Norman & Feiman-Nemser, 2005). Furthermore, the standards for teachers facilitate and enhance professional knowledge of future teachers through

performance and thus empowers teachers to become more effective in their careers (Yinger & Hendricks-Lee, 2000; Mayer et al., 2005). Although these remains a strong body of support for setting of standards for teachers, there are also those who oppose the idea that standards provide an optimal approach to develop and improve teacher quality (Tuinamuana, 2011).

There are those who suggest that standards do not promote equality (Zuzovsky & Libman, 2006), and that standard-based evaluation for teachers where everyone is expected to have similar competences does not nurture development, success and creativity, especially in those from minority groups. One example of this is through comparing teaching in an urban school to teaching in a suburban school, which are likely to have different requirements. The use of standard may also impact upon trainee teachers autonomy in the classroom, where there may be a fear of trying something new and creative to enhance the teaching experience for the students (Mayer et al., 2005; Tuinamuana, 2011) and teachers' creativity (Jones et al., 2003; Baer & Garrett, 2010; Tang, 2020). As a result, aligning to one set of standards across the board will ultimately lead to a rise to inequality of educational opportunities for teachers whilst minimising opportunities for minority groups and the creativity and individualism (Zuzovsky & Libman, 2006; Elton-Chalcrafta et al., 2017).

In addition, there are some that have criticised the use of teaching standards as they tend to be profoundly reductive (Singh et al., 2019) and restricting teachers' practice (Yinger & Hendricks-Lee, 2000; Aitken et al., 2013). Conforming to specific standards does not breed creativity and may limit teachers willingness to explore, gain new and insightful teaching experience that can help develop their pedagogy (Yinger & Hendricks-Lee, 2000).

Although there appears to be a growing consensus that teaching standards do not support growth and development in teaching, there is ambivalence amongst policymakers who primarily see the standards as a focal point of professional development, but then there are growing concerns and criticisms toward the use of teacher standards in the education field. Regardless, there appears to be a need to develop teacher standards against a regulatory approach that supports critical and reflective thinking in teacher professionalism (Bourke et al., 2018), using different approaches to improve the quality in teacher education programmes, precisely because “the value of standards is not questioned. The key question that is being asked relates to the imposition of teacher standards as controlling devices” (Zuzovsky & Libman, 2006, p.48).

Aitken et al. (2013) indicated that the purpose of standards in initial teacher education has to be a developmental using a constructional vision for the profession and not merely for accountability purposes that depend on teacher knowledge acquisition. This direction of reform is driven by Dewey's view of reflective practice (Edwards & Thomas, 2010). In the next section I will discuss the reflective approach in initial teacher education in more detail.

2.2.3.2 Reflective Practice Approach

Reflective approach is a second and contrasting approach of technicism in initial teacher education (Halliday, 1998). Kumaravadivelu (2003), considers the use of reflective practice that empowers future teachers to become reflective practitioners. Given the aim of the current thesis is to explore the reflective practice of student teachers in alignment with the pedagogy of creative learning within the educational context, this section will encompass its significance within the Saudi context. This will include its historical background, the nature of the reflection process, the levels of reflection, and an exploration of the benefits of reflective practice within initial teacher education.

The reflective practice approach aligns with 21st-century teacher preparation, emphasising progressive approaches in education. There is a consensus among researchers in education that the works of John Dewey (1910, 1933, 1997) and Donald Schön (1983, 1987), both renowned American philosophers and educators, have significantly shaped educational theory. Their advancements in reflective practice and learning in professional settings have been supported by numerous studies, including those by (Zeichner & Liston, 1987; Calderhead, 1987; Smith & Schwartz, 1988; Copeland et al., 1993; Hatton and Smith, 1995; Griffiths, 2000; Calderhead & Gates, 2003; Grushka et al., 2005; Alger, 2006; Akbari, 2007; Ottesen, 2007; Larrivee, 2008; Edwards & Thomas, 2010; Dyer & Taylor, 2012; Rico et al., 2012; Kaasila & Lauriala, 2012; Smith & Trede, 2013; Edwards, 2014; Beauchamp, 2015; Russell, 2018; Tlali, 2019; Jao et al., 2020; Bjordal & Sernes, 2023). Dewey and Schön's foundational theories have particularly influenced my research into creativity in education, focusing on pre-service teachers and initial teacher education to explore and understand reflection from diverse perspectives.

Reflective practice is particularly relevant in Western countries where constructivism philosophy holds a significant place in school curricula and teacher education (Ko et al., 2014). A reflective

approach empowers student teachers to acquire extensive knowledge and teaching strategies while nurturing their ability to reflect within the context of teaching practice (Darling-Hammond, 2006). According to Dewey's perspective, the aim of teacher education must be to support the teacher candidate in the experimental development of becoming a "thoughtful and alert student of education" (in Greenwalt, 2016, p. 2). Thus, a significant contribution of teacher education is to prepare qualified teachers and develop their understanding of teaching for practice and from practice (Darling-Hammond, 2000, 2006; Caena, 2014).

In the context of Saudi education, there is a growing consensus among researchers that emphasise the urgent need for reforms in teacher preparation while advocating for a departure from traditional approaches (Alnesyan, 2012; Almazroa & Al-Shamrani, 2015; Alsaleh, 2019; Almalki, 2019; Alghamdi, 2020; Aldegether, 2023). Traditionally, approaches in Saudi Arabia have centred on transmissionism and theory-focused coursework, where the role of teachers has primarily been to transmit academic knowledge from teacher to student and enforce student discipline, with a limited focus on practical application (Klatt et al., 2020). This historical emphasis on academic knowledge transfer is further compounded by the prevalent use of behaviourist principles, which prioritise direct instruction and passive learning that further impairs progress in teacher preparation (Alkubaidi, 2014; Abahussain, 2016; Alyaeesh, 2022). The slow adoption of constructivist, inquiry-based approaches aligned with educational reforms highlights the need for more robust support for teachers' preparation in these areas (Hamdan & Alsouli, 2012). The need to adapt and evolve is even more evident when observing the absence of practice-based elements in many teacher preparation programs that are currently operational (Hamdan, 2015; Alblaih, 2016; Alsharari, 2016; Al-Arfaj et al., 2018; Binmahfooz, 2019; Alanazi, 2019). Alghamdi (2023), emphasised the need for significant shifts in teacher skills, including communication, collaboration, critical thinking, and self-directed learning. Additionally, Almalki (2020), pointed out a notable gap in adapting to constructivist, inquiry-based approaches and the development of reflective practices among educators. Alghamdi (2020) further identified resistance within educational faculties to integrate active learning pedagogies and the limitation of teacher autonomy as significant challenges to the necessary educational transformation. Recognising these issues, there is a growing consensus in the education community about the importance of reflective practice, autonomy, and creative freedom for teachers, as these are essential qualities for excelling in teaching. These changes mark the start of a transformative paradigm shift towards progressive,

student-centered approaches, crucial for meeting educational demands of the 21st century (Quamar, 2021a; Almazroa & Alotaibi, 2023).

However, while embracing this shift, Zeichner (2019), cautions that such reforms, although beneficial, can sometimes overly emphasise technical skills. This overemphasis risks neglecting the equally critical ethical, social, and enculturation dimensions of teaching, which are integral to holistic and effective educational practices. McDonald and Grossman (2008) also supported the expansion beyond cognitive demands to a holistic teaching view that includes cognition, craft, and emotion. This aligning paradigm, emerging on the horizon, complements Saudi Arabia's efforts to reform teacher education, focusing on developing intellectual, relational, and critical thinking skills needed in modern classrooms (Alghamdi, 2020; Almazroa & Alotaibi, 2023).

- ***Background of reflective practice approach***

Reflection is a transformed focus on the role of teachers from acquisition to development in the field of teacher education (Edwards & Thomas, 2010), specifically to a more constructivist approach (Cochran-Smith & Lytle, 1999). Accounting for both social constructivism and constructivism learning theory, many attempts have been made to imply reflection in teacher education from a range of epistemological positions (Cornford, 2002; Grushka et al., 2005; Boud, 2010).

Reflection, which is the ability to critically think about what has happened, how this can be improved and what this means to the teacher in developing their own experience and knowledge that shapes their teaching is not a new concept in teacher education (Griffiths, 2000; Boud, 2010; Beauchamp, 2015). However, despite being present in the education setting for some time, the exact definition of reflective teaching remains ambiguous and disputed (Day, 1993; Hatton and Smith, 1995; Rodgers, 2002; Ottesen, 2007; Boud, 2010). Dewey (1933), attempted to define reflective thinking with the following “involves a state of doubt, hesitation, perplexity, mental difficulty in which thinking originates and an act of searching, hunting, and inquiring to find material that will resolve the doubt and settle and dispose of the perplexity” (p. 12). Identifying a definition of reflection that accurately summaries the process of reflection in teaching is an essential concept that needs to be addressed and in doing will enhance our understand and development of reflective approaches (Rodgers, 2002). Although some believe the definition of reflective teaching is important, others believe that reflective practice simply means adopting a

rational approach towards practice (Finlay, 2008). For example, Richards and Farrell (2005) defined reflection as “the process of critical examination of experiences, a process that can lead to a better understanding of one’s practices and routines” (p. 7). Similarly, Bailey (2012) defined reflective teaching as “the idea that professionals carefully evaluate their own work, seeking to understand their motives and rationales as well as their practice, and then try to improve upon their work” (p. 23).

Dewey, as cited by Rodgers in 2002, views reflection as a crucial pathway to learning. He emphasises the role of education in enhancing reflection, defining it as a process that reconstructs experience, enriches its meaning, and enhances one’s ability to shape future experiences. The teacher’s ability to examine their experience is part of efficiency and something that is developed over time. Although every teaching experience is educational to some extent (Cohen, 2007), the validity of experiences depends on reflective action. Dewey refers to reflective action as a teacher being “active, persistent, and careful consideration of any belief or practice in light of the reasons that support it and the further consequences to which it leads” (as cited in Zeichner & Liston, 1996, p. 9). On the contrary, some experience is considered routine action and is not likely to have significant effects on teacher understanding, because routines assume teaching is passive, dominated by instructions of an authority and follows traditions (Hatton & Smith, 1995; Cohen, 2007; Farrell, 2014).

Building on Dewey’s distinction between reflection and routine, Schön (1983, 1987) suggested three major forms of reflection action in the context of professional practice. Firstly, reflection-in-action is thinking immediately about the performance and any unexpected problem that may have occurred during the teaching (Kumaravadivelu, 2003). This form of reflection leads to improvisational responses, which has previously been shown to be a challenging for some student teachers (Eraut, 1995; Griffiths, 2000). Secondly, Schön (1983, 1987) suggested thinking about the methods and reasons after it has already occurred, termed as reflection-on-action. This form of reflection may be the most popular type of reflection that is currently in place in initial teacher education (Griffiths, 2000). Thirdly, reflection-for-action, which is the most up to date form of reflection and applied to reflecting upon future practice. This approach allows teachers to use current knowledge and experience to develop their practice, and in doing so demonstrate a deeper

understanding surrounding the process of reflection. The following explores the nature of the reflection process.

- ***Nature of the reflection process***

Throughout the literature three major characteristics have been identified that relate to reflective process identified by Dewey (1933). The first characteristic is reflection, a systematic way of thinking that involves a process of thinking critically and problem solving (Day, 1993; Copeland et al., 1993; Hatton & Smith, 1995) to identify and develop a solution or meaning (Kaasila & Lauriala, 2012; Farrell, 2014). Rodgers (2002) suggested that the process of true reflection is a time consuming, rigorous, systematic, and distinct approach to thinking and practice, which may lead to unexpected consequences (Boud, 2010). It is important to acknowledge that the reflective process is not merely a guide to identify the best solutions to a problem by simply applying a best fit approach as per a technical approach (Boud, 2010; Thompson & Pascal, 2012). Due to the complexity of teaching (Alger, 2006), reflective practice should be used to enhance ones understanding of both theory and practice from a realistic perspective to effectively teach and learn (Thompson & Pascal, 2012).

The second characteristic of the reflective process is comprised of cognitive, moral, and emotional aspects (Copeland et al., 1993). Halliday, (1998) suggested that teaching is a moral practice. Thus, reflection approach considers teaching practice in a holistic approach (Kumaravadivelu, 2003). Hence, drawing upon Dewey's work (1933) on efficient reflective practice, teachers must essentially develop particular skills, such as observation and reasoning, as well those orientations of open-mindedness, whole-heartedness, and responsibility (Zeichner & Liston, 1987; Griffiths, 2000). Rodgers (2002) explained that integrating the combination will expand knowledge and awareness. For example, if feelings are engaged, the challenge of learning increases to accomplish success (Cohen, 2007).

One of the most famous models of reflection involving emotional, moral, and cognitive aspects is Gibbs' Reflective Cycle (1988). This model aims to improve professional learning from an experience (Finlay, 2008). Gibbs' model is structured in a never-ending circle of reflection, including description, feelings, evaluation, analysis, conclusion, and action plan.

The third characteristic of the reflective process is the importance of the social context where the learning happens, as any real reflective practice is associated with social context (Day, 1993;

Copeland et al., 1993; Rodgers, 2002). Context is considered to be a key part of individual learning (Brown et al., 1989; Lave and Wenger, 1991 in Camburn & Han, 2017).

Reflective practice, for example, is different from the training context in university than the practice context in school (Eraut, 1995). Vygotsky's perspective, "all cognition could be viewed as social, operating within individuals as interactions internalized from the external world, and that these interactions are inherent to the cognitive functions" in (Collin & Karsenti, 2011, p.574). Therefore, it indicates the importance of understanding the social context to develop the reflection process and behaviour of student teachers for their professional improvement. Moreover, social context pervades everything that happens around individuals, such as the details of society, school, peers, family background, and particular circumstance (Naidu & Bedgood, 2012; Pollard et al., 2014). Interestingly, many studies have shown that collaborative reflection in peers or groups among student teachers as part of the teaching context has motivated them in professional development (Hatton & Smith, 1995a; Kettle & Sellars, 1996; Rodgers, 2002; Yukawa, 2006; Boud, 2010; Collin & Karsenti, 2011; Jao et al., 2020). This was supported by Boud's (2010) findings that most practitioners now work cooperatively to achieve the career requirements. Çimer et al. (2013) stated that dialogues within social interaction are the most important feature that supports collaborative reflection. However, the influence of the social context on reflective practice is in line with social constructivism learning theory (Pollard, 2005). Some models, such as Gibbs (1988) and Rodgers (2002), might present useful steps to understand reflection, but some argue that it does not indicate critical and deep reflection, which is highly required (Finlay, 2008).

- *Levels of reflection*

The literature suggests that the impact of reflection approach in the effectiveness of student teachers is dependent upon the level of depth and breadth of reflection (Kaasila & Lauriala, 2012; Russell, 2018). Day (1993) stated that the levels of reflection and confrontation undertaken within the education environment are essential factors in identifying professional development within the teacher education programme. The early work of the distinction between the levels of reflection was that of Manen's (1977) model, which outlined three levels of reflective practice: technical, practical, and critical reflection, as expounded below.

(1) Technical reflection, the beginning level of reflection. Even though it is an initial level, it is an important aspect of pre-service teachers' development (Hatton & Smith, 1995) and

understanding the complexity of practice (Boud, 2010). It influences the effective application of skills and technical knowledge in the classroom setting. Thus, Day (1993) called this level a descriptive self-reflection, because it mostly includes writing or recording and describing a practical situation, such as the description of the teaching lesson activity (Boud, 2010). Larrivee (2008) referred to it as surface reflection, because it focuses on how effectively a specific predetermined purpose can be achieved without examining values.

Some studies found that most pre-service teachers reflect at the technical level (Kaminski, 2003; Minott, 2008; Dervent, 2015). According to these studies, reflection at the technical level result negative impacts (Boud, 2010). Therefore, there is concern of the shift in reflection from reflective approach to technical approach (Edwards & Thomas, 2010; Boud, 2010). For example, the ability of a teacher to reflect is one of the standards in the State of California's Teacher Performance Expectations (TPE) and the National Council for Accreditation of Teacher Education (NCATE) Standards (Alger, 2006). According to Edwards and Thomas (2010), the problem is not insufficient reflection ability of student teachers, but because the policymakers in teacher education who have reduced reflective practice to be just a dimension in teaching checklist or skills rubric. Policymakers neglect to develop critical reflective and pedagogical practice for their student teachers by standardising reflection. However, Hatton and Smith (1995) argued that each level of reflection is beneficial and valuable for student teachers' development, and that the technical level is a good first step in addressing the issues encountered by the pre-service teacher in the early practice, which may motivate them to progress from the basis to the next levels.

(2) Practical reflection, or pedagogical reflection (Larrivee, 2008). The intermediate level involves reflections on assumptions that support teachers' actions and the consequences of such practices. At this level, teachers work on fostering the consistency between their theory, beliefs, and theory-in-use in their teaching practice (Larrivee, 2008).

(3) Critical reflection, the highest and complex level of reflection that mostly overlapping meaning employed (Hatton and Smith, 1995). Critical reflection entitles to integrate the meaning within social, moral, and ethical issues. As well to analyse the factors of the situation from both personal and social values, and it includes the two previous levels of reflection. Critically reflective teachers attempt to become adequately conscious of their teaching behaviours and their consequences (Larrivee, 2008).

Upon reviewing the literature, the level of critical reflection is often considered the main purpose of reflective practice. Copeland et al. (1993) link this level of critical reflection to the tendency of educators to consciously engage in generating and testing solutions for enhancing professional practice. This is supported by a significant body of literature who have identified that critical reflection places a significant demand on student teachers and is a significant feature of teacher education (Day, 1993; Larrivee, 2008; Finlay, 2008; Boud, 2010; Kaasila & Lauriala, 2012; Jao et al., 2020).

Building on the idea of critical reflection as key in professional practice, Kaasila and Lauriala (2012) identified a lack of effective reflection as a barrier to the development in student teacher education, potentially leading to less professional and lower quality teachers. Addressing this issue, Grushka et al. (2005) suggested a comprehensive scheme that integrates three types of reflection—reflection for action, reflection in action, and reflection on action—with the stages of technical, practical, and critical reflection. This combination aims to ensure active engagement in teacher development. In a similar manner to Schön, Zeichner and Liston (2013) suggested that teachers never stop learning how to effectively teach, even after being qualified. They focused their work on five feature roles that facilitated student teachers to become reflective practitioners including: i) a problem-solver in classroom practice, ii) aware of and questions the assumptions and values of teaching, iii) attentive to the institutional and cultural contexts, iv) active in curriculum development, and v) responsible for their own professional development.

In summary, these recommendations aim to enhance the critical reflection skills of student teachers by encouraging them to reflect on their teaching practices before, during, and after their actual teaching sessions. It's crucial to note that the success of these initiatives depends on a robust and supportive framework within teacher education programs.

- ***Benefits of reflective practice in initial teacher education***

Reflective practice is an important component of enhancing teacher education, and amongst the literature reviewed here, three main points have been identified.

Firstly, developing reflective skills early in pre-service teacher training significantly enhances their capacity for reflection, a point consistently supported by various studies (Hatton & Smith, 1995a; Griffiths, 2000; Alger, 2006; Beauchamp, 2015; Tlali, 2019). Interestingly, similar findings have

been observed in teacher education in Saudi Arabia (Al-Ahdal & Al-Awaid, 2014; Sibahi, 2016; Almalki, 2020; Almusharraf & Almusharraf, 2021).

Secondly, reflective practice is essential for ongoing teacher development and encourages continuous learning (Schön, 1987; Zeichner & Liston, 2013). Through the process of conscious reflection upon their experiences, teachers will develop the ability to steer their own professional growth (Copeland et al., 1993; Griffiths, 2000; Alger, 2006; Dervent, 2015; Russell, 2018; Tlali, 2019; Jao et al., 2020), while also exploring solutions to the problems in both their teaching and social environment (Copeland et al., 1993; Hatton & Smith, 1995; Kaasila & Lauriala, 2012; Cakcak, 2016). Notably, Copeland et al. (1993), echoed these findings and observed that reflection played a pivotal role in assisting student teachers to develop professional knowledge, while finding effective solutions to challenges in the classroom.

In addition, Shulman (1987) identified that a reflective teacher possesses inner self-knowledge and metacognitive awareness, crucial for autonomy in influencing outcomes, improving decision-making, and enhancing self-confidence. This concept has been reinforced in more recent studies. For example, the ability to reflect forms a crucial part of metacognition (Armbruster, 1989; Eraut, 1995; Farrell, 2001; Bae & Kwon, 2019; Jao et al., 2020), and is able to enhance the ability of pre-service teachers to be self-aware and take charge of their own learning requirements (Kaasila & Lauriala, 2012; Jao et al., 2020).

The final benefit of reflective practice in teacher education is its role in fostering creativity in teaching (Shandomo, 2010; Lin, 2010; Al-Ahdal & Al-Awaid, 2014; Shukri, 2014; Dyer & Taylor, 2012; Razdorskaya, 2015; Twigg & Yates, 2019). Korthagen et al. (2006) suggested that knowledge is not an external product to be consumed, but something that is continuously created and recreated through reflective practice, with advantages for both teacher and learner. Through reflection, teachers can reassess personal dilemmas, identify classroom problems, experiment with new and innovative solutions that are beneficial for them as the teacher and the students (Dawson, 2003; Al-Ahdal & Al-Awaid, 2014). The capacity to reflect becomes especially important when teachers are confronted with uncertain situations in their educational practice. Critical reflection provides teachers with the opportunity to constructively challenge their own assumptions that underlie their teaching methods and decisions, while looking for opportunities to improve (Penso et al., 2001; Zeichner & Liston, 2013).

Although there is a significant body of evidence supporting reflective practice in teacher development, there are also those who oppose the strong belief in reflection, stating that the links between reflective practice and improvements in teaching are subjective and difficult to quantify (Akbari, 2007). Furthermore, addressing how reflective practice can effectively be supported in the development of student teachers remains a complex and challenging issue (Hatton & Smit, 1995). However, as previously mentioned, the success of implementing reflective practice relies on supportive conditions for pre-service teachers (Kaasila & Lauriala, 2012).

In the 21st century, teachers need to be equipped with skills, knowledge, and qualifications to manage uncertainties and creative solutions, while also inspiring and engaging students in productive and interest-driven learning (Yatvin, 2008). In summary, reflective practice can be viewed as a foundational pillar that enables self-awareness and adaptive expertise that are essential when fostering creativity in a dynamic educational setting and thus align with the demands of contemporary education.

2.2.4 Summary

This section addressed international literature on teacher preparation programmes, encompassing both teacher education and training. It particularly highlighted Saudi Arabia's progressive shift towards 21st-century educational methods in the preparation of future teachers and in its education system. Additionally, this discussion explored two main approaches to teacher preparation: technicism and reflective practice. It examined the philosophy and challenges associated with each approach, with a particular focus on their implications for creativity in education. For instance, the discussion emphasised the importance of bridging the gap between theory and practice, as well as the need for empowerment among pre-service teachers, which is often limited in the technical approach. In this context, the literature, which includes studies from Saudi Arabia, consistently underscored the benefits of reflective practice in teacher education. This approach is particularly effective in fostering creativity within dynamic educational environments and meeting the evolving demands of 21st century education (Craft et al., 2014; Watson, 2018; Crawford & Jenkins, 2018; Marangio et al., 2023). Building on these insights, this research adopted a reflective approach, and the next section will discuss the topics of creativity and creative pedagogy for supporting pre-service teachers.

2.3 Creative Learning and Teaching

This section explores creative learning and teaching through four key sub-sections. Section (2.3.1) provides an in-depth exploration of the concept of creativity in education. It explains the challenge of defining creativity and then identifies the definition of creativity adopted in this research, within the context of teacher education.

Section (2.3.2) explores creativity specifically in relation to the Saudi education context, encompassing universities, teacher education, and schools. It also highlights the current status and challenges in these areas. Then, Section (2.3.3) defines creative pedagogy, beginning with the concept of pedagogy and its link to creativity, followed by an examination of creative pedagogies in literature. While, Section (2.3.4) focuses on the three main elements of creative pedagogy, relating them to creative learning as the core of both creative pedagogy and this research.

Moving to Section (2.3.5), the discussion compares creativity training programmes with a pedagogical approach, aimed at fostering pre-service teachers' creativity.

After that, Section (2.3.6) explores the impacts and benefits of creative pedagogy in education. It examines models in the literature to construct a suitable creative learning framework in Saudi teacher education.

The final section (2.3.7) explores the five-dimensional model of creative habits of mind. In light of the rationale for adopting this model, it presents the theoretical foundations and key aspects of this model, serving as the framework for the research intervention.

2.3.1 Creativity in Education

Creativity has been shown to play a crucial role in the development of education, particularly in contemporary learning where skills such as creative thinking are becoming more prominent in the 21st century (Aljughaiman & Mowrer-Reynolds, 2005; Lucas et al., 2013; Beghetto & Kaufman, 2014a; Craft et al., 2014). The work of Bakhshi and Lucas (2019) and Ramalingam et al., (2020) suggested that creativity should be placed at the centre of learning as part of a deep reform in schooling.

Although the concept of creativity has been around for some time, it was primarily due to the work presented at the American Psychological Association's conference in 1958, where Guilford

addressed creative-thinking abilities, that it gained significant academic attention (Sternberg, 2003). Guilford's advocacy for recognising and fostering divergent thinking in education sparked a surge of research and interest in developing creativity as a vital skill, marking a pivotal moment in educational psychology. However, despite the progress since then, there is still no universally accepted definition of creativity within educational research, reflecting the complexity and multifaceted nature of this concept (Treffinger et al., 2002; Lin, 2009; Runco & Jaeger, 2012). A lack of a clear and concise definition of creativity undoubtably obstructs research endeavours in the realm of educational psychology (Plucker et al., 2004). Notably, this persisting absence of a singular definition is corroborated in the recent scholarly works of Walia (2019), Henriksen et al. (2020), Sternberg (2022), and Green et al. (2023).

While creativity may be “hard to explain, like the weather” (Kronfeldner, 2018, p.225), there have been numerous efforts by researchers to identify and enhance the understanding and definition of the creativity concept. A key difficulty is that creativity can be viewed in a myriad of different conditions, disciplines and from different perspectives, reflecting its adaptable and relativistic essence (Beghetto & Kaufman, 2009; Sternberg, 2022). Hennessey and Amabile (1988) suggested that creativity combines both novelty and appropriateness, which also aligns with the vast majority of the literature relating to creativity, and may have formed the basis for the definition set out by the National Advisory Committee on Creative and Cultural Education (NACCCE) where creativity is defined as “Imaginative activity fashioned so as to produce outcomes that are both original and of value” (NACCCE, 1999, p.30). In a similar manner, Runco and Jaeger (2012), also stated that “Creativity requires both originality and effectiveness” (p.92).

Although not aligning completely, Stein (1953) offered a multifaceted perspective on creativity, defining it as “a novel work that is accepted as tenable or useful or satisfying by a group in some point in time” (p.311). Stein (1953) argues that true creativity involves not only novelty but also acceptability, usefulness, and satisfaction, which essentially means it must be reliable. Stein's emphasis on the cultural context of creativity, specifically its acceptance by a group, underscores the influence of societal and group norms on the creative process. Runco and Jaeger (2012) suggested that the earlier work of Stein remains in used today, and that the approaches of Stein was ahead of the time, which also highlights their enduring relevance. A more contemporary perspective approach to defining creativity was provided by Plucker et al. (2004):

Creativity is the interaction among aptitude, process, and environment by which an individual or group produces a perceptible product that is both novel and useful as defined within a social context. (p. 90)

These different definitions of creativity highlight the dynamic nature of creativity, with two fundamental criteria: originality within its context and usefulness. The definitions also identify the dependence of creativity on both cultural and social factors, both of which are essential considerations in the Saudi context and for this thesis.

Interestingly, there is a body of research surrounding creativity, including the work of Vygotsky (1978, 1987), Csikszentmihalyi (1996), John-Steiner (2000), Moran and John-Steiner (2003), Cropley (2006), Sawyer (2003, 2008, 2014), and Craft et al (2007), who identify that creativity is not solely an individual endeavour but can thrive in social interactions and collaborations, where collective approaches can often stimulate and inspire creative thinking, leading to creative solutions and outcomes. Thus, environmental factors significantly influence creative outcomes in a classroom setting.

In this regard, Sternberg (2003) suggested that both the inherent characteristics of individuals and the context in which they operate play crucial roles in determining how creativity is manifested and developed. Furthermore, Craft (2001, 2007) investigated how eminent and everyday creative levels influenced possibility thinking and everyday creativity, showcasing the inherent potential for creativity in individuals and emphasised its importance in classroom settings. Building on this foundation, The Durham Commission defines creativity as “the capacity to imagine, conceive, express, or make something that was not there before”. This definition highlights the importance of teaching for creativity, which involves “explicitly using pedagogies and practices that cultivate creativity in young people” (p.2). This approach aligns with the goal of fostering both originality and practical application in students’ learning experiences across various subjects.

Therefore, within the domain of individual-level creativity research, particularly in education, the Four C Model of Creativity, developed by Beghetto and Kaufman (2007, 2009), delineates four distinct levels of creativity: Big-C, Pro-c, little-c, and mini-c. Across these levels of creativity, the essence of creativity remains a pursuit of balance between originality and utility (Simonton, 2011; Beghetto, 2016). Hence, integrating these insights is pivotal for designing and implementing creative learning and teaching strategies that cater to diverse needs and optimise the educational

environment. Consequently, this research focuses on the ‘mini-c’ level of creativity, which was described as “the novel and personally meaningful interpretation of experiences, actions, and events” (Beghetto & Kaufman, 2007, p.73). This focus is particularly relevant for fostering pre-service teachers’ creativity within teacher education. The definition of creativity adopted in this research will be explored in the next section.

2.3.2 Creativity Definition in This Research

As shown previously, defining creativity is challenging, a complexity amplified by the diverse nature of creativity and the absence of consensus on the specifics for its definition. In educational creativity, broad definitions encompass a range of criteria to evaluate creative activities, including aspects like efficiency, enjoyment, or satisfaction. Amidst the complexities of defining creativity, the study by Hills and Bird (2018) identified four key elements that they felt should be included in the definition of creativity, “the disposition or set of linked dispositions of an individual: to have many ideas (fertility); which are novel (originality) and generated through use of the imagination (imagination); and to carry through these ideas to completion (motivation)” (p.78). This definition of creativity underpins the approach to creative learning and teaching adopted in this study and provides insights that, in my view, are relevant in the context of educating future teachers. It also aligns with my personal motivation (see section 1.3).

These four elements including fertility, originality, imagination and motivation align with the focus of this research on ‘mini-c’ creativity within the context of teacher education. However, this definition of Hills and Bird (2018) does not appear to provide a direct link between creativity and the objective value, a component commonly included in many definitions of creativity, as noted by Runco and Jaeger (2012). The significance of value in defining creativity is also underscored in key works such as the NACCCE report (1999). Although recognising values is key in understanding creativity, this issue warrants careful consideration (Plucker & Beghetto, 2004; Plucker et al., 2004; Audi, 2018).

Hills and Bird (2018) noted that the values associated with creativity may vary under different conditions. Similarly, Amabile (1983) and Csikszentmihalyi (1988) highlighted how social and environmental factors can influence these values, adding complexity to quantifying the usefulness of creativity (Craft et al., 2001). In light of the varying perspectives on the value associated with creativity, Craft et al. (2001) suggested that value in creativity can be considered through self-

evaluation, an approach that is particularly relevant to this research as it ensures participants can develop and assess their creative endeavours.

Referring back to the definition by Hills and Bird (2018), I will explore their four key elements within the context of teacher education. This exploration aims to deepen understanding of how their definition aligns with the focus of this current research.

The first element, fertility, refers to the ability to generate a multitude of diverse ideas. To date, there is a lack of evidence linking the term fertility to creativity, which may be linked to the fluency trait of divergent thinking. Guilford previously defined fertility as “The ability to think of many ideas; many possible solutions to a problem” (1973, p.2). This approach of fertility as a pre-service teacher, or as an established teacher is invaluable when trying to identify solutions to problems, trying to teach complex topics and/or making the teaching individualised to the students.

A second element identified is originality, which appears to have a general consensus in the literature, along with terms such as novel or original and useful valuable which are commonly used to do describe creativity (Runco & Jaeger, 2012). Originality means that something is unique or novel (Runco, 2013), which can relate to an idea or a new object or product (Kronfeldner, 2018). Boden (1996, 2004), identified two different forms of creativity, P and H-creativity. P-creativity relates to a form of psychological creativity, a novel idea that is surprising of the individuals mind regardless of others’ thoughts. H-creativity relates to a historical creativity such as a great idea that is well known throughout history and has stood the test of time.

Although there appears to be a solid foundation that originality should be included in the definition of creativity, originality alone is insufficient (Runco, 1993; Runco & Jaeger, 2012; Kronfeldner, 2018) due to the multifaceted nature of creativity. For example, according to Rhodes’ model, creativity should be examined from four distinct perspectives: product, process, person, and the press or the influence of the environment (Rhodes, 1961), of which there is a significant body of literature that defining creativity as a process (Garrett, 1987; Sternberg & O’Hara, 1999; NACCCE, 1999; Runco & Chand, 1995; Simonton, 2011; Runco & Jaeger, 2012; Csikszentmihalyi & Wolfe, 2014).

An interesting third element is imagination, which has previously been associated with creativity throughout the literature (Vygotsky, 2004; Urbach & Eckhoff, 2008; Craft et al., 2014; Clack, 2017; Audi, 2018; Gaut & Kieran, 2018). According to the Oxford English Dictionary, the word imagination is defined as “The power or capacity to form internal images or ideas of objects and situations not actually present to the senses, including remembered objects and situations”. Gaut and Kieran (2018, p.8) described imagination as a “productive faculty capable of generating new thoughts, ideas and actions”. The ability to generate new thoughts, ideas and actions is crucial for learning and could be nurtured within formal education. However, there is evidence that most children lose or have a reduced capacity for imagination in schools due to current teaching approaches (Craft et al., 2001), where imagination is represented by its originality and escaping from reality (Furlong, 2004) and without imagination, one’s ability to be creative is also limited (Daniels, 2013). Vygotsky previously described imagination as a “creative activity, the ability of our brain to combine elements, is called imagination or fantasy in psychology” (2004, p.9). In contrast the NACCCE report in 1999 defined creativity as “Imaginative activity fashioned so as to produce outcome” (1999, p.30), thus aligning with the limited approach to teaching and creativity evident in the literature.

A final element identified by Hills and Bird (2018) is motivation as a significant factor of creativity, which Sternberg (2005) and Runco (2013) identified as being an indispensable factor for student learning, success, and creativity (Sternberg, 2005; Runco 2013). As previously mentioned, Runco and Jaeger (2012) stated that originality alone is not adequate for creativity, and without significant motivation an individual will find it difficult to persist with creativity (Runco, 2013).

Motivation can be viewed as intrinsic or extrinsic dimensions, relating to an inherent interest or enjoyment in the task itself or external rewards or recognition, respectively (Amabile et al., 1994). Although there are clear differences in an individual’s intrinsic and extrinsic motivation, intrinsic motivation appears to have a significant impact upon creativity in education (Runco, 2013). For example, the Componential Model of Creativity by Amabile (1996, 1983), states that three major components are needed to develop creativity: expertise, creative thinking skills, and intrinsic motivation or task-motivation. Amabile also suggested that these components encourage individuals primarily through an interest in the topic, engagement, enjoyment and achievement

that will increase their creativity, which has subsequently been confirmed in more recent research (Ward et al., 1998; Amabile et al., 1994; Ruscio et al., 1998; Craft et al., 2001).

In a similar manner, there are those who believed that extrinsic motivation can also be advantageous for teachers, where a deeper understanding of the intricacies of student motivation will enhance the ability of the teacher to teach more effectively and creatively (Baer, 2012). There is also evidence suggesting that extrinsic motivation could influence creative outcomes (Runco, 2013), where certain extrinsic motivators like rewards, can positively enhance creativity by reinforcing intrinsic drivers under certain conditions (Eisenberger & Shanock, 2003). This interplay between intrinsic and extrinsic highlights a “creative tension” (Amabile, 1988). Dweck (2006) suggested that this tension can be beneficial when extrinsic motivators are strategically structured to complement intrinsic motivation. Overall, the relationship between intrinsic and extrinsic factors and creative potential is complex, however, if educators can identify approaches that can combine both between intrinsic and extrinsic factors, this may enhance the creative capacity of teachers and students.

Accordingly, these four elements are essential for cultivating creativity in pre-service teachers' learning and teaching. They form the foundation of this research, which focuses on the 'mini-c' level of creativity. Hence, this level regards creativity as a dynamic set of individual dispositions, including fertility, originality, imagination, motivation, and context-specific usefulness. As a result, the exploration of 'mini-c' creativity offers valuable insights into the development of these key dispositions in future teachers, enhancing their ability to teach creatively and respond adaptively to diverse educational contexts. Additionally, as a researcher, my understanding of creative learning and teaching will be explored in Chapter Five, where I will further explore this definition in real practice during the intervention. I will reflect on my understanding based on the use of the creativity model by Lucas et al., as well as consider the results of this research and the subsequent discussions around those findings (see Section 5.6). The following section will discuss fostering creativity, particularly considering the influence of cultural and social factors in the Saudi context.

2.3.3 Fostering Creativity in Saudi Education

As stated previously in Chapter One, the Saudi Ministry of Education has launched several initiatives focusing on nurturing creativity and critical thinking among students. These initiatives

are part of broader educational reforms aimed at improving teaching methodologies and learning outcomes (Ministry of Education, 2019). Significantly, Saudi Arabia's education system's push towards fostering creativity is a crucial component of the broader national development goals, as outlined in Saudi Vision 2030 (see Chapter One, section 1.4). This includes innovative education and empowerment through modernising Saudi Arabia's education system, which involves updating curricula, teaching methods, and educational technologies to meet best practices worldwide (OECD, 2020). Transitioning from traditional rote learning to more dynamic, interactive, and student-centered approaches encourages creative thinking and problem-solving (Alnasib, 2017; Alghamdi, 2020; Maash, 2021). Furthermore, these efforts align with UNESCO's focus on integrating 21st century skills into curricula, highlighting the importance of creativity in education (UNESCO Regional Centre for Quality and Excellence in Education, 2023). This study contributes to these initiatives by exploring the pedagogy of creative learning for integrating creativity into pre-service teacher education in Saudi Arabia, thereby addressing a critical area within the ongoing educational reforms.

The incorporation of creativity and its impact on education have significantly grown in both the school and university sectors of Saudi education. This growth is primarily driven by recent reforms aimed at preparing younger generations for the demands of the 21st century (Allmnakrah & Evers, 2020; Almazroa & Alotaibi, 2023). Overall, these comprehensive reforms, supported by both national policy and international frameworks, underline the importance of fostering creativity and critical thinking in Saudi Arabia's education system to meet contemporary global standards and future challenges.

Additionally, as previously explored in Section 1.4, upon examining the formal document of Saudi Vision 2030 (2016), it becomes evident why Saudi Arabia is placing a strong focus on creativity within its educational reforms. Here are the primary reasons, as I see them:

First, Economic Leadership: By nurturing creativity, Saudi Arabia is equipping a future workforce with the critical thinking, problem-solving, and innovation skills essential for thriving in a diversified economy (Allmnakrah & Evers, 2020). Saudi Arabia's ambition to lead globally across various domains, such as technology, science, and the arts, is anchored in the transformative Vision 2030, introduced in 2016. This vision integrates all sectors, including education, and positions

Saudi Arabia as “the heart of the Arab and Islamic worlds, the investment powerhouse, and the hub connecting three continents” (Saudi Vision, 2016). Creative education is seen as vital for achieving these strategic objectives by fostering skills necessary for leadership in these areas.

Second, Cultural Influence: Creativity plays a pivotal role in cultural and social enrichment. The focus on culture has ignited widespread creativity, offering Saudi young people working in creative sectors a renewed sense of hope and identity (Montagu, 2024). This effort aligns with the Ministry of Culture’s objectives to build a society that values cultural diversity and artistic expression, while also enhancing Saudi Arabia’s global cultural footprint and improving domestic quality of life (Ministry of Culture, 2019; Foley, 2019).

Lastly, Meeting Future Challenges: By integrating creativity into its educational framework, Saudi Arabia is laying the groundwork for a sustainable, innovative, and competitive future. This strategic focus is instrumental in transforming Saudi Arabia into a thriving, knowledge-based economy (Essa & Harvey, 2022; Almazroa & Alotaibi, 2023; Aldegether, 2023).

However, while these reasons have significantly impacted the creative development within Saudi schooling and higher education, integrating substantive creative initiatives requires significant effort to overcome lingering conceptual, cultural, and systemic challenges. In the following section, I will explore creativity in the Saudi context, focusing on higher education, schools, and specifically within teacher education.

In terms of higher education, the development of creativity has emerged as a top priority in Saudi, driven by the need to better prepare younger generations for future careers in a knowledge-based economy (Qahl et al., 2019; Allmnakrah & Evers, 2020; Okonofua & Omonkhua, 2021). However, Smith and Abouammoh (2013) identified a significant tension between traditional Saudi teaching methods in higher education, predominantly characterised by rote learning, and the demands of the global knowledge economy (see Figure 1). They proposed a spectrum, with rote learning, marked by memorisation without deep understanding, at one end, and creative thinking, crucial for innovating ideas and solutions, at the other. This delineation emphasises the need for a shift in Saudi higher education practices to embrace the creative thinking that is essential in today’s global knowledge economy.

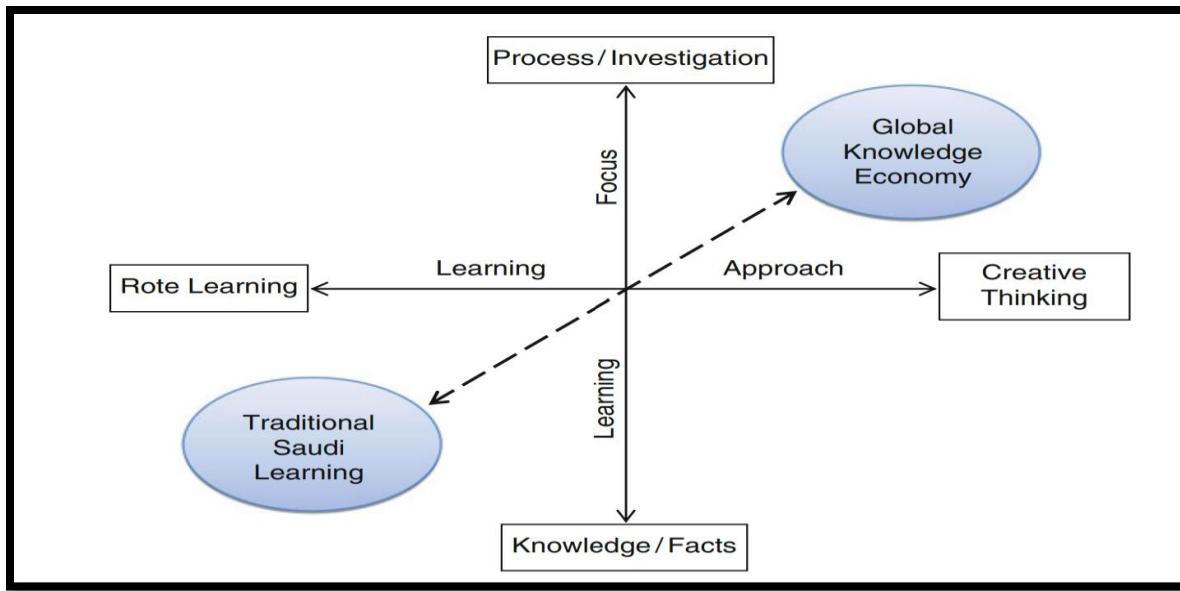


Figure 1: The tension between traditional Saudi learning approaches and the needs of a global knowledge economy by (Smith & Abouammoh, 2013, p.187)

In this regard, Alnasib (2017), advocated for the use of active teaching methods in higher education such as discussion, dialogue, and thought-provoking questions to foster student metacognition which is important for student teachers to develop autonomy and influence outcomes, and enhance self-confidence. Albaqami (2019) also stressed the importance of integrating a practical approach and suggests that digital media should be created to engage students' imaginations in Saudi teacher preparation programmes.

Moreover, due to the current teaching approaches in Saudi and the bias towards rote learning, there is an significant emphasis and responsibility upon Saudi universities to play a pivotal role in cultivating a culture of innovation and entrepreneurship (Yusuf & Atassi, 2016; Khayati & Selim, 2019). For example, both the King Abdullah University of Science and Technology (KAUST) and Prince Sultan University (PSU) have established innovation hubs, serving as focal points for nurturing creativity and innovation among students (Qahl et al., 2019). These hubs provide students with access to cutting-edge technology, creative spaces, and mentorship opportunities. Additionally, several Saudi universities actively support student participation in innovation competitions, such as the King Saud University's Innovation and Entrepreneurship Institute in Riyadh, which assists students in engaging in local and international competitions by providing comprehensive training and support (King Saud University [KSU], 2023).

While Saudi leaders and policy, as highlighted by Iqbal (2011), Yusuf and Atassi (2016), Khayati and Selim (2019) have primarily focused on the emphasis placed on Saudi universities in cultivating a culture of innovation and entrepreneurship. Building on this emphasis, it can be extended to pre-service teachers, acknowledging the significance of their creativity. The need to adapt and to keep pace with the advancing 21st century means that Saudi need to develop creativity and creative pedagogy as a ‘fundamental life skill’ starting from initial teacher programmes, which has recently been reviewed by the education board in Saudi (Al-Qahtani, 2016; Aljashaam, 2017; Aldujayn & Alsubhi, 2020; Ismail & Kassem, 2022). Although there are aspirations to achieve the Vision 2030 goals, there remains a significant need for improvements in higher education, particularly in the methods of course delivery and student learning (Alnassar & Dow, 2013). Nonetheless, substantial work is required in terms of integrating creative learning within teacher preparation programs and standard university curricula (Almutairi, 2015; Al-Qahtani, 2016). To further advance creativity development across various educational levels, including higher education, teacher education, and schools, Saudi educators recommend curricular reforms to promote effective teaching and assessment (Khayati & Selim, 2019; Quamar, 2021a). Aligning with Vision 2030 goals, upcoming Saudi education policies are set to emphasise active learning, problem-solving, innovation, and technology integration, all aimed at fostering creative thinking (Alnahdi, 2014; Almutairi, 2015; Alghamdi, 2023).

In addition, recent years have seen the emergence of several supportive factors that foster creativity within the Saudi context. These include influences from Islamic religion, political perspectives, community culture, societal changes, and the recognition of economic benefits (Quamar, 2021b). All of these elements have emphasised a positive attitude toward learning, creativity and critical thinking. In the Saudi context specifically, the use of technology has contributed to the case for implementing creativity in education within the Saudi context (Alnahdi, 2014; Al-Yami, 2018). However, there are also limitation as to how quickly the Saudi school system may be able to adapt and evolve due to systemic constraints that attenuate the full potential of creativity.

Although there is a clear focus and drive to modify the teaching system in Saudi Arabia, numerous constraints impede this process. In this context, I will discuss several key issues related to pre-service teachers’ creative learning and teaching, which are also related to the research gap as discussed in section 1.4.1. One key difficulty is the enormity of changing the current system in

Saudi, where defining and researching creativity within the Saudi context remains in early stages (Salamah et al., 2023a). Although the Saudi government has acknowledged the importance of creativity, leading to the establishment of the King Abdul-Aziz & His Companions Foundation for Giftedness and Creativity, called ‘Mawhiba’ in June 2000 (Alfaiz et al., 2022). Mawhiba, is non-profit endowment organisation that aims to identify and nurture talented and gifted students, with a specific focus on supporting students’ creativity. This initiative, however, leads to the second challenge: the association between giftedness and creativity in the Saudi context (Alawfi, 2016; Salamah et al., 2023a).

Although Mawhiba was designed in an attempt to nurture talented and gifted students, there has been a prioritisation to ensure excellent education for gifted students, with less focus on the development of creative capacities for all students (Al-Qahtani, 2016). A focus on education for gifted students and their teachers risks prioritising a select group, potentially neglecting the development of creativity, problem-solving, and innovation skills in the wider student body. Such an approach may not suffice to drive substantial change in Saudi’s education system or foster creativity universally (Aljughaiman & Mowrer-Reynolds, 2005; Almutairi, 2015; Salamah et al., 2023b). Al-Qahtani (2016) also echoed the pressing need to re-evaluate the role of creativity in current educational programs in Saudi Arabia, primarily due to the existing disparity between educational outcomes and societal expectations, especially in terms of creative thinking skills.

The third challenge is the reliance on Western definitions and frameworks for identifying creative ability in Arabic studies, as noted by Mourgues et al. (2016). This approach often overlooks the unique sociocultural influences on Saudi conceptualisations of creativity, leading to ambiguity in understanding and differentiating key terms such as creativity, innovation, giftedness, and talent, as highlighted by Iqbal (2011) and Almutairi (2015). Therefore, Mourgues et al. (2016) and Salamah et al. (2023) suggested that educators conduct further research focused on outlining cultural specificities and establishing an empirically grounded understanding of Saudi creativity in education.

Building on the third challenge, the ambiguity in defining creativity for teachers across all educational levels can lead to diminished self-confidence and a reduced application of creative teaching methods (Aldujayn & Alsubhi, 2020). Furthermore, a critical factor hindering change in Saudi education is the lack of meaningful engagement with teachers, particularly concerning their

perspectives on educational reform and creative teaching. Allmnakrah and Evers (2020) highlighted underscores this issue, highlighting a disconnection between teachers' voices and the ongoing educational reform efforts in Saudi Arabia. In addition, effective training for pre- or in-service teachers, is vital for implementing curriculum reforms, adopting new teaching methods, integrating innovative educational technologies whilst providing a supportive environment to adapt, evolve and enhance their teaching practices (Almutairi, 2015; Al-Qahtani, 2016; Aldujayn & Alsubhi, 2020; Allmnakrah & Evers, 2020; Almazroa & Alotaibi, 2023). Al-Qahtani (2016) highlighted the predominance of lecture-based teaching in current teacher education, with limited practical exposure to teaching creativity, underscoring the need for more experiential training for student teachers to design and engage in creative learning opportunities that are suited to the Saudi culture.

The studies presented here demonstrate that beyond policy proclamations, there is a clear need to fundamentally transform the educational system to that of a pedagogical practice which requires substantial teacher education and empowerment. Overall, transforming Saudi Arabia's education system, encompassing higher education, teacher education, and school levels, involves overcoming several key challenges. Advancing a creative culture within this broad educational spectrum is an emerging endeavour, facing conceptual and practical barriers (Khayati & Selim, 2019). Meaningful reform will necessitate substantial investment in teacher education focused on creative pedagogies, along with a flexible and collaborative approach in implementation, and a cultural shift in perceptions of learning. Additionally, policy changes are needed to address systemic constraints and to encourage broad creative development among all students. Crucially, empowering educators' voices in shaping these reforms and addressing creativity within the unique Saudi sociocultural context is essential. Consequently, there is a clear need for further exploration of creative pedagogical approaches, both theoretically and in practice. The next section will address the pedagogy of creativity in more depth.

2.3.4 Creative Pedagogy/ies

To provide a comprehensive understanding of the topic, this section will begin by introducing the concept of pedagogy, followed by an exploration of the pedagogy of creativity, and subsequently, an examination of its main elements.

The term ‘pedagogy’ is a common concept used in education, however, there is often a lack of understanding relating to its relations to teaching and learning and complex and multifaceted nature encompassing various aspects (Watkins & Mortimore, 1999; Niemi, 2019). For example, the Oxford English Dictionary defines pedagogy as “The art, occupation, or practice of teaching. Also: the theory or principles of education; a method of teaching based on such a theory”, which in simple terms means an understanding surrounding approaches to teaching in both theory and practice and the myriad of factors that can affect these. There have also been a significant number of definitions of pedagogy in relation to educational research, such as “the act of teaching together with the ideas, values, and beliefs that inform, sustain, and justify that act” (Alexander, 2008, p.4), and “any conscious activity by one person designed to enhance learning in another” (Watkins & Mortimore, 1999, p.3).

Leach and Moon (2008) ascertained that pedagogy can be used as a powerful concept when exploring contemporary ideas that relate to learning, teaching and their relevance to teachers. Particularly in relation to the Saudi, Alblaihed (2016) stated that a teachers’ pedagogy had a significant influence on their teaching through a conscious or unconscious adaptation to a particular teaching method and their practices in accordance with learning factors and context. Tudor (2008) identified a significant link between pedagogy and creativity in education. Building on these views, pedagogy holds significant relevance in the context of understanding creativity within education. However, Hinchliffe (2000) distinguished between pedagogy and education, highlighting that pedagogy refers ‘instrumental learning,’ and learning oriented towards serving government, political power, the economy, and social goals. While education represents a “more disinterested endeavour in which teacher and pupil engage in a form of enquiry” (p.31). However, it’s important to note that this distinction can be unclear because both pedagogy and education are fundamental components of the teaching and learning process, since both play pivotal roles in shaping the educational landscape and are influenced by various external factors, including societal, economic, and political influences (Leach & Moon, 2008).

At the beginning of the twenty-first century there was a significant increase in the interest surrounding the pedagogy of creativity and creative pedagogies within education (Banaji et al., 2010, as cited in Cremin & Chappell, 2019), subsequently leading to the development of a variety

of different definitions and models of creativity in pedagogy. Lin, for instance, contributes through a series of publications on creative pedagogy in 2009, 2010, 2011, 2012, and 2014.

Jeffrey (2006) suggested that creative pedagogy encompasses both creative teaching and learning. According to Lin (2011), the framework of creative pedagogy comprises three interrelated elements: 'creative teaching, teaching for creativity, and creative learning' (p.152), as depicted in Figure 2. These elements will be explored further in this chapter.

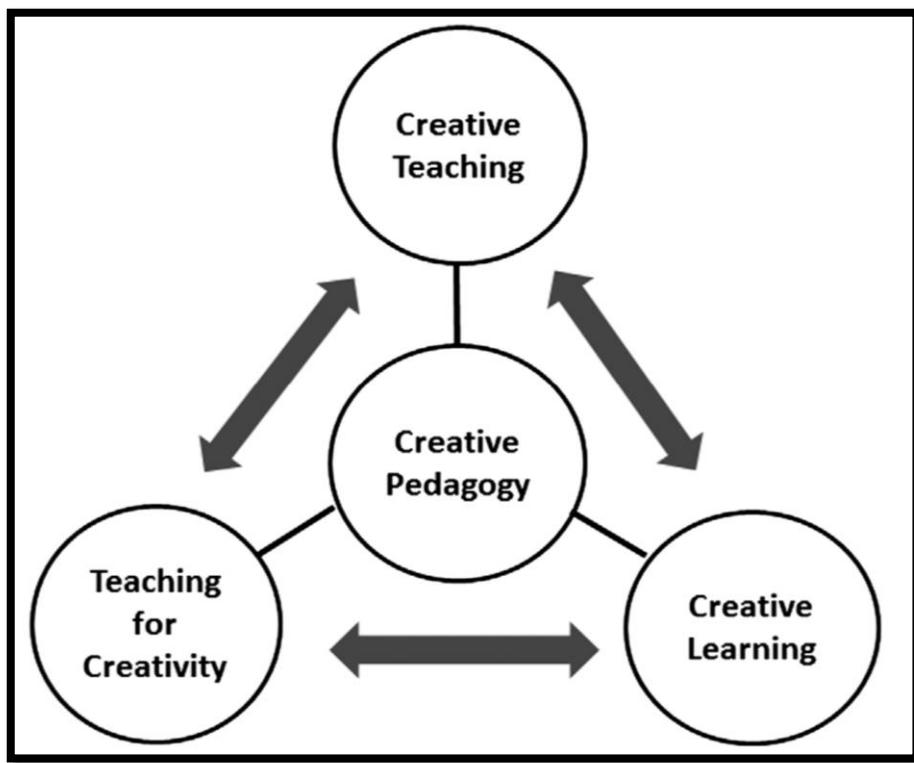


Figure 2: The three elements of creative pedagogy by Lin (2011, p.152).

A further consideration of creativity in pedagogy has been proposed by Dezuanni and Jetnikoff (2011) that creative pedagogies should be considered in the plural sense, encompassing 'both the imaginative and innovative structuring of curricula and teaching strategies in school classrooms and the cultivation of students' creative abilities' (p.264). The variety of different definitions and perspectives of creative pedagogy highlight the use of various approaches and teaching strategies

to promote creativity, but also highlights the importance of a solid understanding surrounding creative pedagogy.

In a recent systematic review, Cremin and Chappell (2019) identified 35 empirical studies relating to creative pedagogies between 1990 to 2018. They found seven key features of creative pedagogies, including idea generation and exploration, fostering autonomy and agency, encouraging playfulness, promoting problem-solving, fostering risk-taking, emphasising co-construction and collaboration, and recognising teacher creativity.

Based upon these seven key features identified in the review, two terms were identified, 'creative pedagogy', encompassing the three interrelated elements previously discussed, (creative teaching, teaching for creativity, and creative learning), and 'creative pedagogies', which shared similar goals, essentially referring to overarching concepts in education that involve various aspects and approaches related to fostering creativity.

2.3.5 Creative Teaching, Teaching for Creativity, and Creative Learning

Based on Lin's model (2011), all three elements work together to create a harmonious teaching and learning process in everyday creativity (Lin, 2014). This approach promotes everyday creativity and fosters the development of creative skills in the classroom, ensuring that all aspects of creative pedagogy and pedagogies are considered and integrated for maximum effectiveness. In the current thesis the focus will primarily be on the pedagogy of creative learning that encompasses creative teaching, teaching for creativity, and creative learning. This approach minimises the risk of polarisation which can occur due to educators rigidly adopting one approach over the other in their teaching approach (Jeffrey & Craft, 2004). The aim is to provide a comprehensive view that encourages a balanced teaching and learning environment. In the following, each of the three terms associated with creative pedagogy will be explained in detail.

In accordance with the definition from the NACCCE (1999, p165), the term 'creative teaching' emphasises teachers "using imaginative approaches to make learning more interesting, exciting, and effective. Teachers can be highly creative in developing materials and approaches that ignite children's interests and motivate their learning, a necessary part of all good teaching" (NACCCE, 1999, p.165). This concept aligns with the approach "teaching as art", as articulated in Dewey's work from 1934.

The second term, ‘teaching for creativity’ refers to “forms of teaching that are intended to develop young people’s own creative thinking or behaviour” (NACCCE, 1999, p.165). This is typically viewed as a collaborative approach to teaching and learning that involves both the learner and the teacher (Jeffrey & Craft, 2004). Beghetto (2019) suggested that effective teaching for creativity requires that teachers possess extensive expertise in their subject matter, combined with an ability to foster student creativity within the specific academic content, which have been suggested to underscore the positive nature of both aspects (Jeffrey & Craft, 2004). Irrespective of their distinct focuses, creative teaching and teaching for creativity are considered by many to be key interrelated components of creative pedagogy (Lin, 2014). The first aspect emphasises teachers serving as role models for their students, inspiring creativity in the learning process by demonstrating creative teaching approaches. Simultaneously, the second aspect promotes a holistic approach to education whilst ensuring equitable learning opportunities. This approach extends beyond art and encompasses problem-solving, critical thinking, and adaptability which has been suggested to be a comprehensive set of skills that can enhance learners’ creative capacities and can be applied in various contexts (Lin, 2014).

The third and final element of creative pedagogy is creative learning, which is a focus of this research, and is the “middle ground” between creative teaching and teaching for creativity (Jeffrey & Craft, 2004). Creative learning is central to creative pedagogy and is interconnected with both of creativity and learning elements. As a key focus in this thesis research, here an in-depth exploration of creative learning will be performed in order to justify its focus in this thesis.

In recent years, the concept of creative learning has become well established in educational research and practice, which has led to many scholars attempting to further promote its application and represent the interdependent view of creativity and learning in a classroom setting (Beghetto, 2019). According to Sefton-Green et al. (2008), the term creative learning became common place in England beyond 2005 as a shorthand description for ‘Creative Partnerships’, contributing to its development in schools, curriculum and teaching practices.

To date, various definitions of creative learning have been linked with the associations between creative learning, teaching for creativity, and creative teaching. Each of these concepts has distinct features, and they can overlap; however, in practice, particularly within the Saudi context, all are significant, as I will explore from my perspective at the end of Chapter Five (see Section 5.6).

For example, Jeffrey (2006) provided a holistic overview in which 'creative learning' involves a dynamic interplay of two terms. Firstly, creative means "being innovative, experimental and inventive, but learning means that young participants engage in aspects of knowledge enquiry" (p.407), where a significant level of intellectual inquiry within the context of creative learning was evident. This inquiry particularly revolved around two key aspects: "possibility thinking", which involves considering various potential solutions or ideas, and "engagement with problems, which demonstrated an active involvement in tackling and solving complex issues or challenges (Jeffrey, 2006). Sefton-Green et al. (2008) provided a related perspective, defining creative learning is "teaching that encourages young people to use their imaginations and engage their natural curiosity, to see age-old problems in a new light, to experiment and test ideas, to apply mixed mediums and interdisciplinary approaches, to pursue their interests and strengths to develop a life-long love of learning" (cited in Lucas & Anderson, 2015, p.2). This comprehensive definition of creative learning includes both teaching creatively and teaching for creativity. In essence, both definitions described here highlight the idea that creative learning involves not only students' active engagement with knowledge but also the role of teachers in facilitating and promoting creativity in the learning process, echoed further by Lin (2014) who identifies that creative learning emphasises that learners engage actively and creatively in their learning, as opposed to passively receiving knowledge.

In addition, Wyse and Spendlove (2007) stated that creative learning "is learning which leads to new or original thinking which is accepted by appropriate observers as being of value" (p. 190). Furthermore, Beghetto (2016) offered a unique perspective on creative learning, defining it as "a combination of intrapsychological and interpsychological processes that result in new and personally meaningful understandings for oneself and others" (p.9). Intrapyschological processes refer to the mental activities that occur within an individual's mind, such as thinking, imagining, and problem-solving, whereas interpsychological processes involve interactions between individuals, particularly in a social context. Here, the emphasis on students' personal and social experiences, as well as their in-depth understanding processes, underscores the close relationship between creativity, learning, and sociocultural factors. This approach to creative learning not only emphasises the importance of creating insights and meanings valuable for both the learner and the broader community but also highlights the need for acquiring knowledge (Beghetto, 2021). Additionally, fostering a positive teacher-learner relationship is considered crucial in this context

(Jeffrey & Woods, 2009; Beghetto, 2021). In essence, this conception situates creative learning at the intersection of individual cognition, social dynamics, knowledge-building, and personal meaning-making.

Consequently, the interplay between learning and creativity, as suggested by various perspectives on creative learning, highlights their mutual support and enhancement (Lin, 2011; Craft, 2005; Jeffrey, 2006a; Sawyer, 2015; Beghetto, 2019, 2021). Craft (2003) and Beghetto (2016) suggested that learning within rigid educational structures or inappropriate learning environments can potentially suppress creativity although further work is required to identify the reasons for these discrepancies. Lin (2011) provided an additional perspective and indicates that neglecting creative learning within the framework of creative pedagogy may attenuate student creativity. It is therefore important that teachers have insight into creative learning and are able to foster creative learning, however, the question remains as to the most efficient approach that can facilitate the implementation of creative learning in the classroom.

Nevertheless, there is a growing body of research surrounding the role of teachers' and their perceptions on how best to promote creativity (Jeffrey & Woods, 2009). Cremin (2009) outlined essential qualities for a creative teacher, emphasising the need for self-understanding of one's own creativity, the use of imaginative approaches in teaching, and the ability to be flexible and actively engage with learners. However, Selkirk and Keamy (2017) questioned the ability to teach for creativity or to teach creatively unless teachers understand their own creative learning. Thus, they developed Lin's (2011) model of creative pedagogy by placing the concept of teachers' creative learning at the centre of the model, see Figure 3. They described teachers' creative learning as "just like their students, teachers should be encouraged to be curious; provided with opportunities to understand things in new ways; learn how to focus on their own thinking skills, cultivate their own agency and creative capacities" (Selkirk & Keamy, 2017, p.329). Therefore, teachers need to familiarise themselves with creativity studies and incorporate elements such as innovation, ownership, control, and relevance (Jeffrey, 2006) into their classroom subjects for effective enhancement of their professional practice (Beghetto, 2019). This approach places considerable emphasis and demand on teachers, encompassing the understanding and implementation of common characteristics of creative teaching and learning. Given its significance, this aspect should

be an integral part of pre-service teacher education. However, as previously discussed, this inclusion is currently lacking in the context of teacher education in Saudi Arabia.

In support of creative learning pedagogy within education, various researchers have developed models and programs, including rubrics and materials for both teachers and learners, aimed at promoting creative learning in the classroom context (Gornall et al., 2005; Campbell, 2006; Spencer et al., 2012; Lucas et al., 2013; Henriksen, 2016). However, exploring effective strategies and approaches for teaching creativity remains an intense area of ongoing research (Cremin, 2017). In particular, integrating creativity into initial teacher education programs is crucial to ensure a solid foundation (Ludhra, 2008), especially within the context of Saudi Arabia.

Given the breadth of research in this field and the word constraints of this thesis, I will focus on the specific teaching methods used in the creative learning sessions. For example, play, mind maps, and brainstorming are explored in section 3.7.2 of the Methodology Chapter. The next section aims to explore the distinctions between training programs for creativity and the pedagogy of creativity within the context of teacher education.

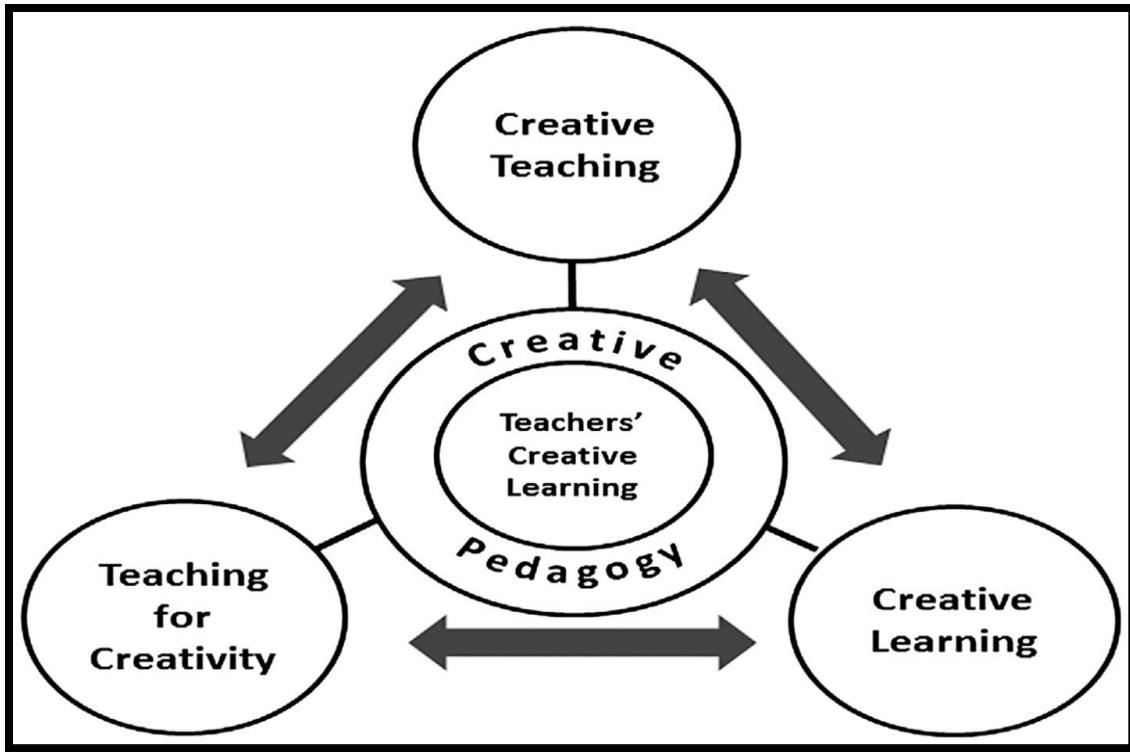


Figure 3: A reimaged view of creative pedagogy with teachers' creative learning at the core by Selkirk and Keamy (2017, p.327).

2.3.6 Creativity Training or Creative Pedagogy?

Creativity training programs have become increasingly widespread as a means to develop creative abilities offering valuable techniques required for teaching (Scott et al., 2004). However, despite the popularity of creative training, I argue that adopting a creative learning pedagogy is more fundamental to achieving the objectives of this study, which aims to nurture creativity among pre-service teachers. This section will provide an overview of the main characteristics and types of creativity training programs, address concerns about their short-term focus, and subsequently offer a rationale for prioritising creative learning pedagogy in this research.

Due to advances in our knowledge surrounding creative training over recent decades, there has been considerable efforts from educational researcher and educational systems worldwide to enhance thinking skills, including creativity, in classrooms (Valgeirsdottir & Onarheim, 2017). Based on the principle that creativity can be developed (Torrance, 1965, 1995) and taught (McWilliam, 2007) there are many researchers who have shifted their focus towards examining

the 'products' and outcomes of creativity, especially from a psychometric perspective (Sternberg, 2022). The ability to identify creative genius has also become a focal area of research and educational practice (Craft et al., 2001). For example, Sternberg (2001) proposed that nurturing individuals' creative thinking is considered more crucial than increasing their intelligence. This shift in focus led to the prominence of two related directions. The first is a focus on measuring creativity. For instance, The Torrance Tests of Creative Thinking, developed in 1966 by Torrance, which became a cornerstone in the assessment of creative potential, enabling educators and researchers to objectively measure and identify creative thinking abilities in individuals. The Torrance Tests was subsequently modified in 1974, 1984, 1990, and 1998 (Kim, 2006). These tests provided quantifiable assessments of critical aspects of creativity, including fluency, flexibility, originality, and elaboration, foundational dimensions of divergent thinking and creative abilities (Treffinger et al., 2002).

The second direction involves the pivotal role educators play in designing and evaluating creativity training programs. These programs, aiming to nurture and channel the creative potential identified by assessments, are exemplified by studies such as those by (Alencar et al., 1976; Mansfield et al., 1978; Glover, 1980; Alencar, 1991; Bull et al., 1995; Mildrum, 2000; Byrge & Tang, 2015; Birdi, 2016; Valgeirsdottir & Onarheim, 2017) Research on existing programs provides valuable insights into current approaches, techniques, and impacts that can inform efforts to improve teacher training for fostering creativity.

In the literature, a creativity training programme has been described as a programme that presents instruction to improve the individual's ability to produce original and potentially valuable solutions to complex problems (Scott et al., 2004). Another specific definition is "a pre-defined and structured program consisting of one or multiple sessions, with the main purpose of increasing the creativity of one or multiple participants" (Valgeirsdottir & Onarheim, 2017, p. 432). These training programs are often developed based on theories such as divergent thinking (Guilford, 1965) or techniques such as lateral thinking (De Bono & Zimbalist, 1970), Six Thinking Hats by (De Bonon, 1985) which metaphorically means "it has individuals metaphorically wear different hats, such as a white hat for data-based thinking, a red hat for intuitive thinking, a black hat for critical thinking, and a green hat for generative thinking, to stimulate seeing things from different

points of view" (Sternberg, 2003a, p.3), brainstorming (Cox, 1977) and creative problem solving (Treffinger, 1995; Osburn & Mumford, 2006).

Although all of these approaches provide different aspects of insight in relation creativity training, it must be noted that these approaches often adopt a restricted perspective (Copley, 2001). These programs are characterised by a limited and narrow understanding of creativity, rather than embracing creativity in its broader and more comprehensive sense. In addition, these early creativity training programs frequently employ quantitative research designs that focus on measuring the impact of the intervention through a pre vs. post-test result comparison (Valgeirsdottir & Onarheim, 2017). In contrast, it is important to note that this research study adopts a qualitative.

Creativity training can be categorised into two main types, the first involves long-term programmes that are administered in an extended series of lessons and the second focuses on reflective creativity training that emphasises the acquisition of theories, models, and techniques through discussions and seminars (Mansfield et al., 1978; Byrge & Tang, 2015). An example of the first form of creative training, long-term programmes that are administered in an extended series of lessons is the Purdue Creative Thinking Program, designed by Feldhusen et al. (1970). They designed the programme for fourth-grade students in an attempt to foster students divergent thinking abilities such as fluency, flexibility, originality, and elaboration (Feldhusen et al. 1970). In contrast, the second creativity training category, short-term procedures conducted over several brief lessons, can often be referred to as creativity workshops, with one example being the Ten Lessons Creativity (TLC) programme aimed at helping sixth-grade students understand their creative abilities through one hour per week for between six to ten weeks (Mildrum, 2000).

Although both creative training categories are based on the premise that they will develop and foster creativity in students, there is limited evidence as to the effectiveness of both creative training categories at increasing creativity (Copley & Copley, 2000). Furthermore, there is a concern that instead of enhancing creativity, the creative training categories described here may actually have the opposite effect, and potentially attenuate or reduce creativity (ibid). An additional area of concern surrounds the lack of consensus surrounding defining and evaluating creativity, making a valid assessment difficult (Kampylis & Valtanen, 2010).

Although the purpose of increasing and fostering students' creativity is an important facet of education, further research is required for aligning training goals, activities and measurements related to creativity (Scott et al., 2004).

Another perspective surrounding creative training has been proposed by Byrge and Tang (2015) who also distinguished between two kinds of creativity training. The first category is embodied creativity training, which focus on developing creative abilities through practice, which is commonly utilised in drama education (Lin, 2010). The second category is reflective creativity training, which emphasises the acquisition of theories, models, and techniques through discussions and seminars, exemplified by the program developed by Byrge and Tang (2015).

Reflective creativity training enhances our understanding from previous experiences, as discussion in Section 2.2.2 of this chapter, where I explored two critical approaches in teacher education: technicism and reflective practice. To date, there is a lack of literature relating to creativity, specifically technicism and reflective practice approaches. In this current research, the focus will be on the reflective practice approach for pre-service teachers, aiming to provide them with support and empowerment in their teaching roles. In addition, upon reviewing the literature, there is a significant body of evidence that has highlighted significant successes in creativity training programs. However, in the current research, I will prioritise the exploration of creative learning pedagogy for several reasons.

Firstly, creative pedagogy and creative learning in higher education is an essential requirement needed to foster a deep understanding and empower young teachers to enact substantial changes, rather than applying tools and steps they have been taught (Livingston, 2010). Similarly, Fleith (2000) advocated that emphasising specific teaching techniques and activities in the classroom that have been learned is insufficient to foster creativity. Scott et al. (2004) has previously suggested that in order to design and implement a successful creative training programme requires thoughtful insight into creativity that must then be reviewed to ensure a deep insight of creative thought. Scott et al. (2004) also indicated that current approaches to creative teaching, including the use of practiced and drilled techniques is insufficient for any creative teaching. In this research, I will focus on participants who are students affected by teaching methods and the nature of discipline in their college. At the same time, they are going to teach pupils in schools' placement. Therefore, it is a complex co-participative process between adult learners and young

learners that needs efforts to enhance potential creativity. The approach that will be utilised here is in line with the previous observations of Lofthouse et al. (2011), who indicated that in order to develop professional knowledge and practical strategies successful pre-service teachers in the school environment need to employ a pedagogical approaches.

A second important implication relates to the wider terminology of creative pedagogy, rather than a creativity training programme. Creativity training focuses on the structure of the programme, as defined previously. Tudor (2008) highlighted that limiting creativity in processes and steps leads to a missed opportunity in education to fully engage and develop students' creative potential. In contrast, creative pedagogy, a subset of pedagogy focusing on creative practice and learning (Cremin et al., 2006), is inherently exploratory, involving both structured and unstructured activities that connect with real-life experiences (Halsey et al., 2006; Craft et al., 2014). In creative education practices, prioritizing diversity and adaptability over standardized methods is crucial to foster flexibility and responsiveness within the educational context (Hunter & Emery, 2015). Moreover, this pedagogical approach often demands additional time and a cooperative strategy in the classroom (Hall et al., 2007), especially with pre-service teachers, who are the focus of this research.

A further point to consider around the use of creative pedagogy in relation to the current research is that creative pedagogy is relevant to educational principles and settings as it encompasses both creative teaching and teaching for creativity Aleinikov (2013) stated that "creative pedagogy is a philosophy, theory, and methodology with a theoretically predetermined sequence of activities that leads to the accelerated child's (or adult's) creative development – not just the teacher's own creative practice in the classroom" (p.10). Furthermore, Selkirk and Keamy (2017) highlighted that it is crucial to avoid relying on traditional and conventional teaching methods that are often seen as safe but may not be highly effective or engaging. Instead, they propose that teachers should cultivate their professional identities and teaching skills by embracing reflective practice and critical evaluation. This perspective aligns with the principles of the pedagogy of creative learning.

Finally, in relation to the Saudi context, associating creativity and teaching with learning remains in its infancy but is an emerging concept. Currently, there is limited research surrounding creative pedagogical practice in the Saudi educational context, especially in higher education. Therefore,

exploring creative pedagogical approaches in Saudi is invaluable and will provide important insight (Aichouni et al., 2015; Al-Qahtani, 2016). The need for further research into creative pedagogy in Saudi is also exemplified by previous evidence reporting on the low levels of creativity and thinking skills in Saudi classrooms, which may extend to higher education in Saudi Arabia (ALRowais, 2019; Al-Silami, 2010).

According to McWilliam (2007), it is crucial for universities to provide environments that support and encourage critical thinking while fostering a strong link between pedagogy and creativity within the university's teaching culture. Another significant issue is the structure and implementation of creativity practices in Saudi Arabia. For instance, the Saudi Ministry of Education recognises the importance of creativity and has implemented recurring training programmes for teachers each term (Ministry of Education, 2021). Although these programmes aim to develop creativity, Halsey et al. (2006) have noted that short, intense sessions may not necessarily enhance creativity in teachers' practices. Hunter and Emery (2015) suggested exploring alternative methods to better prepare pre-service teachers and support in-service teachers in effectively adopting new curriculum objectives that focus on integrating creativity into education. For these approaches aimed at enhancing creativity in education to be effective, both student teachers and practicing teachers must actively participate and commit to implementing these strategies (Elton-Chalcraft & Mills, 2015). Therefore, it is crucial to create environments and provide resources that encourage and support the active involvement of pre-service teachers, motivating them to integrate creativity into their teaching.

In this regard, Craft et al. (2007) emphasised the need for teachers to value creative learning, which encompasses fostering critical thinking, curiosity, and agency in their students' development. Craft et al. also emphasised the need for researchers to engage in discussions with teachers to address pressures on pedagogy and challenges that may occur in effectively enhancing creative learning. The evidence presented here indicates that to ensure creativity in education requires more than just teacher training and instruction and must involve teachers in developing any approaches aimed at enhancing creativity.

Therefore, I found that creative learning pedagogy is not only a more suitable approach than creativity training but also essential to support Saudi pre-service teachers in their teaching for

creativity and to facilitate the gathering of rich qualitative data. I will discuss the most benefits and models of creative learning in the next section.

2.3.7 Impacts and Models of Creative Learning

To date, there is a lack of quantitative data capable of providing tangible evidence demonstrating the impacts of creative learning. However, qualitative observations and educational case studies consistently highlight immediate benefits for learners, particularly children and young people, such as nurturing a love of learning and curiosity (Robinson & Aronica, 2016). These benefits include enhanced engagement in the classroom, improved problem-solving skills, and fostering teamwork and collaboration (Sefton-Green et al., 2008). Creative learning activities help children develop essential social skills as they learn to work with others, share ideas, negotiate, and handle conflicts (Starko, 2010).

Additionally, Lucas and Anderson (2015) have indicated its positive influence on creativity-related skills and have advocated for creative learning approaches to be implemented in education with the purpose of enhancing skills such as problem-solving, reflection, innovation, and critical thinking, all of which positively influence learning outcomes. According to a report by The Office for Standards in Education, Children's Services and Skills (Ofsted), a regulatory body overseeing schools in the UK, has previously revealed that schools actively promoting creative learning experienced significant improvements in students' achievement, motivation, progress, and attainment. There is also evidence that creative learning may be particularly beneficial for students who face academic challenges or disengagement (Ofsted, 2010).

Lin (2011) reported that creative approaches to teaching are able to develop creative qualities such as imagination, independent thinking, and risk-taking in pupils. This was echoed in a recent study by Amponsah et al. (2019) et al. who focused on the impact of creative pedagogy in classrooms implementing STEM education, which relates to educating students in specific disciplines, namely, Science, Technology, Engineering and Mathematics (STEM). Amponsah et al. found that creative pedagogy enhanced creative thinking skills and improved academic outcomes. This empirical evidence offers support for the positive effects of creative learning on both students' creativity and academic achievement. Overall, these studies collectively demonstrate that creative learning plays a crucial role in enhancing students' performance in educational settings.

Moving forward, there appears to be significant support for creative pedagogy in developing students' creativity and academic achievement, however, it is also essential to consider different creative learning models and strategies that can be employed to encourage students' creativity in the classroom. According to Ofsted (2010), creative learning is widely characterised by qualities such as questioning, challenging, making connections, identifying relationships, envisaging what might be, exploring ideas, remaining open minded, and reflecting critically on ideas, actions, and outcomes. The potential benefits of creative pedagogy are clear, but the role of the teacher in ensuring a creative learning environment is paramount (Jeffrey, 2006; Beghetto, 2016).

Students benefit from having a teacher who supports creative behaviour and creative learning. This support is characterised by seven core traits:

- Good preparation and rich content knowledge in a particular domain.
- High interest in both their discipline and their students.
- Ability to stimulate students to produce ideas and seek new knowledge.
- Respect for their students' individual personalities.
- Proficiency in using a variety of instructional techniques.
- Flexibility and openness to criticism and suggestions from students.
- Belief in the value of students' ideas (Alencar, 2002, as cited in Kampylis et al., 2011).

Furthermore, the work of Lin (2011) identified several characteristics and strategies that should be employed in the lessons to promote creativity. These include:

- Innovation: Where lessons encourage innovative thinking among students.
- Playfulness: Playful elements are integrated into the learning process.
- Task-Oriented Approaches: Lessons are structured around specific tasks or objectives.
- Collaborative Learning: Students engage in collaborative learning activities.
- Teacher Guidance: Teachers provide guidance and support throughout the lessons.
- Enjoyment of Lessons: Students find the lessons enjoyable and engaging.

The work of Lin (2011) and Alencar (2002) provide two key findings, firstly the potential benefits of creative pedagogy, and secondly, they identify commonalities between specific teaching approaches or elements that are valuable in teacher education preparation. Consequently, the development and understanding of creative learning are pivotal in fostering creativity in students'

behaviour. There have been a number of different creative learning models that can be utilised in the classroom environment, however, these models are only as effective as their implementation (Selkirk & Keamy, 2017 ; Beghetto, 2019). To effectively implement creative learning models, educators must understand and differentiate between specific creative learning activities and comprehensive models for cultivating student creativity, as identified by Beghetto (2019).

Therefore, these views has prompted the exploration of how creative learning is able to influence various aspects of education and the diverse frameworks and models used to prepare pre-service teachers for its implementation in the classroom.

To meet the objectives of current research in this study, I conducted a critical review of existing models of creative learning in the literature, aiming to develop a pedagogy that aligns with the needs of pre-service teachers in Saudi Arabia. During the review, two perspectives were particularly influential. The first, drawing from the insights of Hunter and Emery (2015) in their project on creative teachers, emphasised the need to empower teachers and grant them autonomy. This approach facilitates critical thinking and creativity in pedagogical practices and includes enhancing teachers' planning, teaching abilities, and confidence in their professional development, especially during challenging times and amidst uncertain changes. The second, drawing from the insights of Cropley (2001) who advocates for a holistic approach to creative teaching. According to Cropley, this involves considering pre-service teachers' cognition, motivation, personality traits, and their interaction with the environment when researching and applying creativity in practice. Based on these suggestions explored here, I will now briefly review four creative learning models.

The first model to review is the model of pedagogy and possibility thinking, as developed by Cremin et al. (2006), which considers the process of possibility thinking to be at the core of creative learning (Craft et al., 2001; Craft, 2002). This model encompasses several core features, including posing questions, play, immersion, innovation, risk-taking, imagination, and self-determination (see Figure 4). In recent years, efforts have been made to collect empirical evidence supporting the applicability and validity of this model (Craft et al., 2012, 2013). Although the model of pedagogy and possibility thinking shows promise, a key limitation of this model in relation to the current research, is that the models primary focus is on early years and pedagogical practices, which does not align with the goals of this particular research.

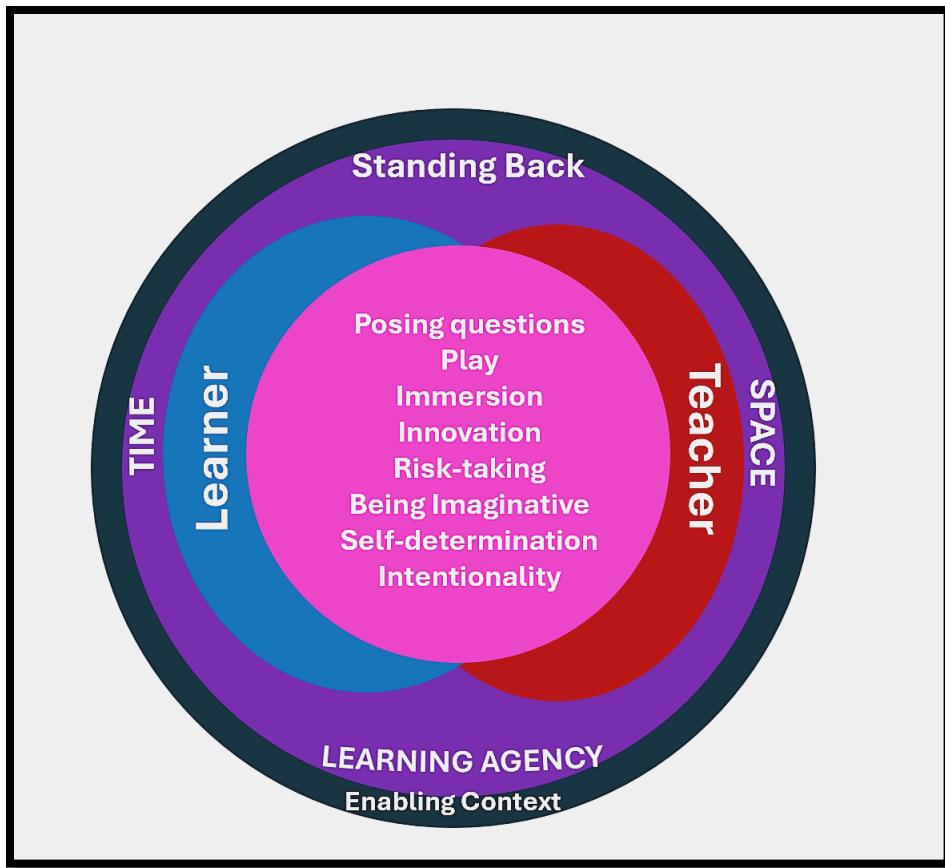


Figure 4: A model of pedagogy and possibility thinking by Cremin et al (2006, p.116).

The second model to review is by Truman (2011), who proposed a generative framework for creative learning. The premises of the generative framework for creative learning is based on a three-phase process of preparation, generation, and evaluation that is able to integrate both personal and social factors, including elements such as task negotiation and collaborative design (Figure 5). This framework provides valuable guidance for fostering creative outcomes and has significant potential in influencing curriculum design (Beghetto, 2016). However, it is important to consider that this framework, when introduced to pre-service teachers as a means of incorporating creative learning can be complex due to its numerous components. Although implementing this model may seem appealing to some teachers, it may also pose significant challenges to others without adequate training and support. Furthermore, in order to implement the model to its fullest potential may require a higher level of pedagogical knowledge than many teachers possess. Finally, this framework is primarily based on a conceptual model rather than

empirical evidence, and there is lack of research confirming the validating of this framework at enhancing the creativity in students.

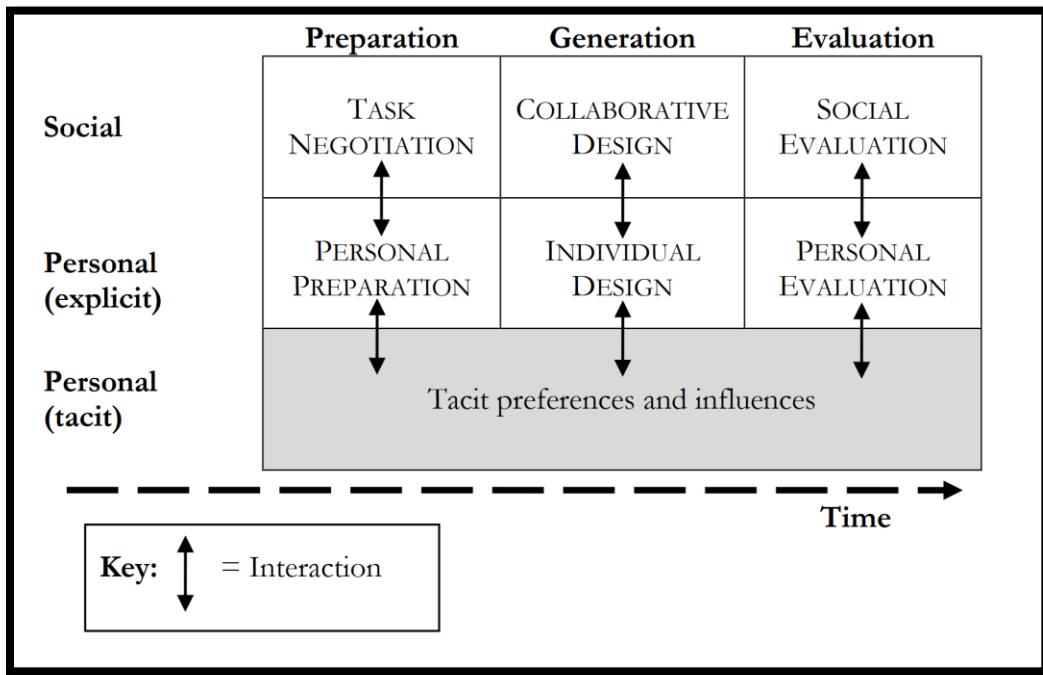


Figure 5: A generative framework for creative learning by Truman (2011, p.8).

The third model being reviewed, the Creative Learning Process Model introduced by Beghetto (2016), represents the interconnected processes of intrapsychological and interpsychological interactions (see Figure 6). This model was designed with the purpose of tailoring depict (drawing, painting, or other art forms) creative learning in formal instructional settings, particularly in primary and secondary classrooms. This model also provides semi-structured learning experiences which allows students to meet learning goals in novel ways that ensure students are able to develop as individuals and academically. Despite the potential benefits of the Creative Learning Process Model, there are two noteworthy limitations that make it unsuitable for this research. Firstly, the model appears to present creative learning as a systematic process, implying a linear sequence of actions and feedback, which is likely to oversimplify the complex and dynamic nature of creativity in education, while potentially missing out on the non-linear and serendipitous aspects of creative thinking. Secondly, despite the conceptual value of this model, to date there is a lack of robust empirical literature supporting its use in creative learning.

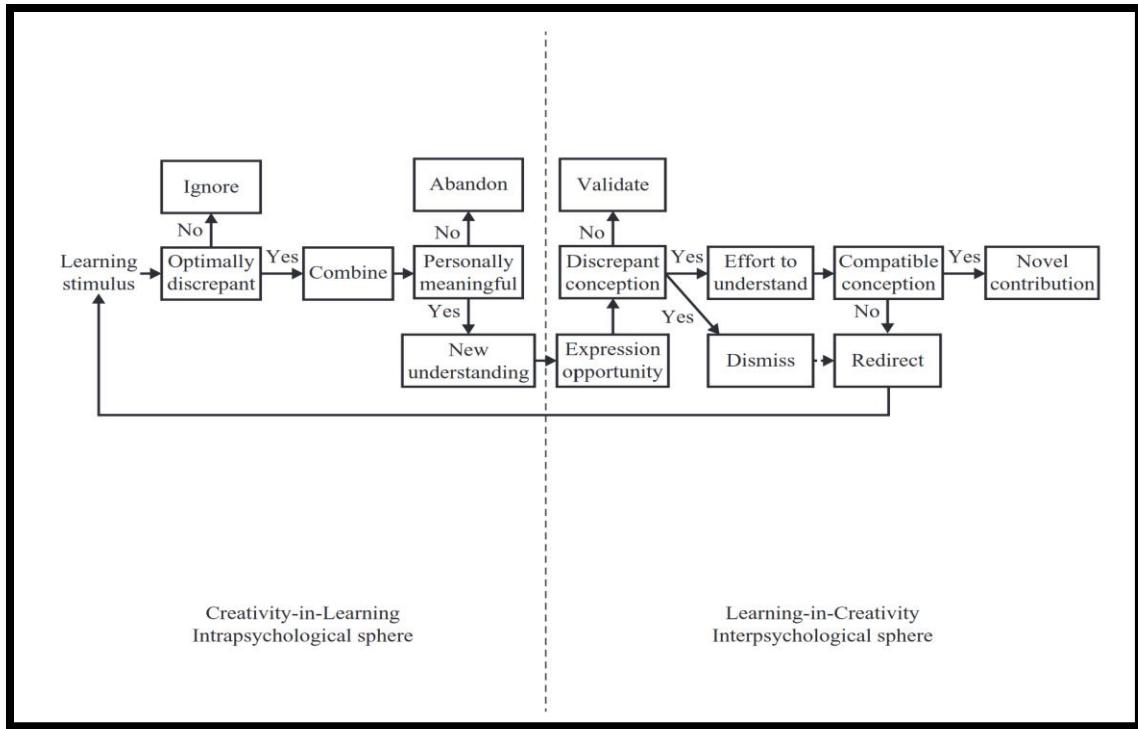


Figure 6: Creative Learning Process Model by Beghetto (2016, p.10).

The fourth and last model to review is the five-dimensional model of creative habits of mind, developed by Lucas et al. (2013). This model focuses on five dimensions: inquisitive, persistent, imaginative, collaborative, and disciplined, each of which has three sub-habits (see Figure 7). This model provides a novel teacher-friendly conceptual framework that supports educators in developing pedagogical activities that enables creative and critical thinking in primary and secondary classrooms. (Lucas, 2016). Lucas et al. (2013) originally offered the five-dimensional model of creative habits of mind for two field trials in schools in England. In the two field trials, six schools engaged in 'being inquisitive' for the first trial, and eleven schools engaged in 'being imaginative' for the second trial (Spencer et al., 2012; Lucas et al., 2013). This model provided a theoretical underpinning that allowed for both the definition and assessment of creativity and a number of practical observations on how the educational system may be able to develop creativity and track the changes in creativity (Lucas, 2015). Following on from the success of the five-dimensional model of creative habits of mind, this model was recently selected as the foundation for the creative thinking assessment by the Programme for International Student Assessment (PISA), scheduled for 2021 (Lucas et al., 2013).

The assessment of the five-dimensional model of creative habits of mind places emphasis on three areas: (1) generating diverse ideas, (2) generating creative ideas, and (3) evaluating and improving ideas. The results generated by this form of assessment has the potential to support policymakers in making evidence-based decisions regarding creativity in education (OECD, 2019). Furthermore, due to the evidence base supporting this model it may lead to changes in educational policies and priorities to moving away from traditional rote learning methods. Instead teachers will be supported to promote a deeper understanding of concepts, incorporate creative learning methods into their teaching practice, and encourage creative thinking amongst students (Lucas & Anderson, 2015). Furthermore, a significant outcome of the model is the ability of the five-dimensional model to concretely assess changes in the five identified sub-habits of creativity (Lucas, 2016).

Following the publication of the five-dimensional model of creative habits of mind by the Organisation for Economic Cooperation and Development (OECD), several member countries have adopted the model in various capacities within educational projects or policy initiatives. These countries include Brazil, China, Finland, France, Hungary, India, Italy, the Netherlands, the Slovak Republic, Thailand, Wales (UK), and the United States (OECD, 2015). This has been implemented as a valuable tool for fostering creativity into practice in real and diverse educational settings. An additional example stems from Australia, where the Rooty Hill High School in Western Sydney, adapted and refined the five-dimensional model of creative habits of mind, and named their version the 'Rooty Hill High School's Creativity Wheel'. Here the school developed specific strategies and activities that were designed to support each of the fifteen sub-habits associated with creative learning (Lucas & Anderson, 2015; Lucas, 2015).

A further use of the five-dimensional model has been in the field of creativity research, where it has provided the foundations for developing novel creative models. For instance, the Durham Commission on Creativity and Education in the UK (2019), established in 2017 as a joint research initiative between Durham University and Arts Council England, has been influential in advocating for creativity across the curriculum. The Commission defines creativity as "the capacity to imagine, conceive, express, or make something that was not there before" (Lucas & Venckutè, 2020, p. 35). This definition centres on the cultivation of students' creativity and critical thinking, aligning with the integration of creativity in educational frameworks and emphasising its essential role across various disciplines, not just within the arts.

Furthermore, the five-dimensional model has influenced endeavours by the OECD Centre for Educational Research and Innovation (CERI) in France (2019) and the LEGO Foundation in Denmark (2020), particularly focusing on Digital Play (Lucas & Venckutè, 2020).

These findings provide considerable support for the five-dimensional model as a framework for this research. However, there remains a scarcity in its validation through further robust longitudinal research studies in educational contexts. To date there is limited empirical evidence supporting its testing and validation in published studies. An important point to make about the five-dimensional model is that to study real change in creativity, and changes in educational practice requires longitudinal studies to assess if pre-teacher education is able to support creativity in teachers' learning and teaching, and if this creativity filters down to the students.

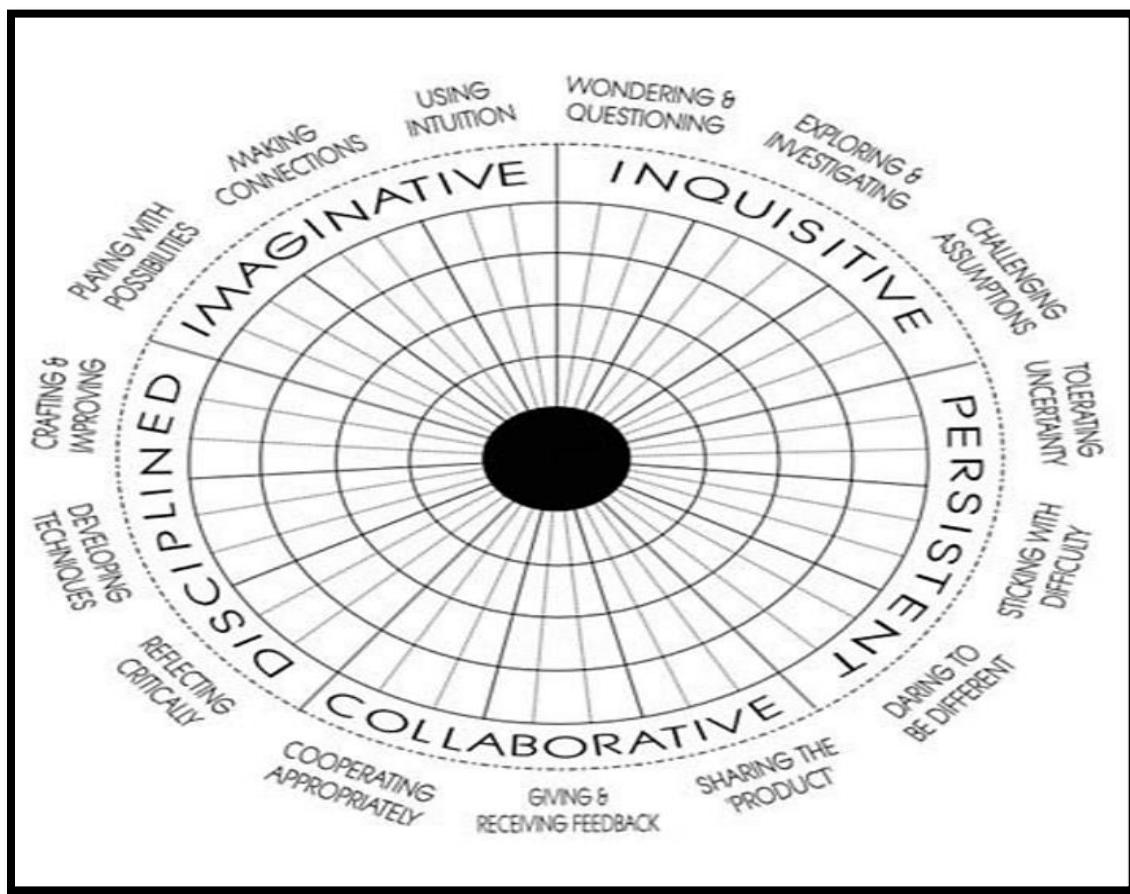


Figure 7: The five-dimensional model of creative habits of mind by Lucas et al. (2013, p.18).

Additionally, the model includes fifteen sub-habits, presenting a challenge for detailed exploration within the limited scope of this research intervention. This was notably apparent in the two initial trials, where the focus was narrowed to one dimension in each trial (Lucas et al., 2013). In response, I have strategically chosen to concentrate on the primary sub-habits for an in-depth study. This decision is not only a practical response to the model's extensiveness but also aims to maintain a balance between breadth and depth, ensuring that the research provides substantial insights while remaining manageable and focused. The structure of the model along with further details on how it was implemented in this study, is elaborated in the methodology chapter (see Section 3.8).

In addition, there are notable similarities between the five-dimensional model and the concept of creative learning that has been reviewed here. Interestingly, both approaches advocate for a learner-centered approach and emphasise the interaction between educators and students in nurturing creativity. Additionally, the five dimensions model postulated by Lucas et al. (2013) align closely with the creativity definition of Hill and Bird (2018), which was previously discussed in section 2.2.1, and this is illustrated in Figure 8, which also holds significant influence on this research.

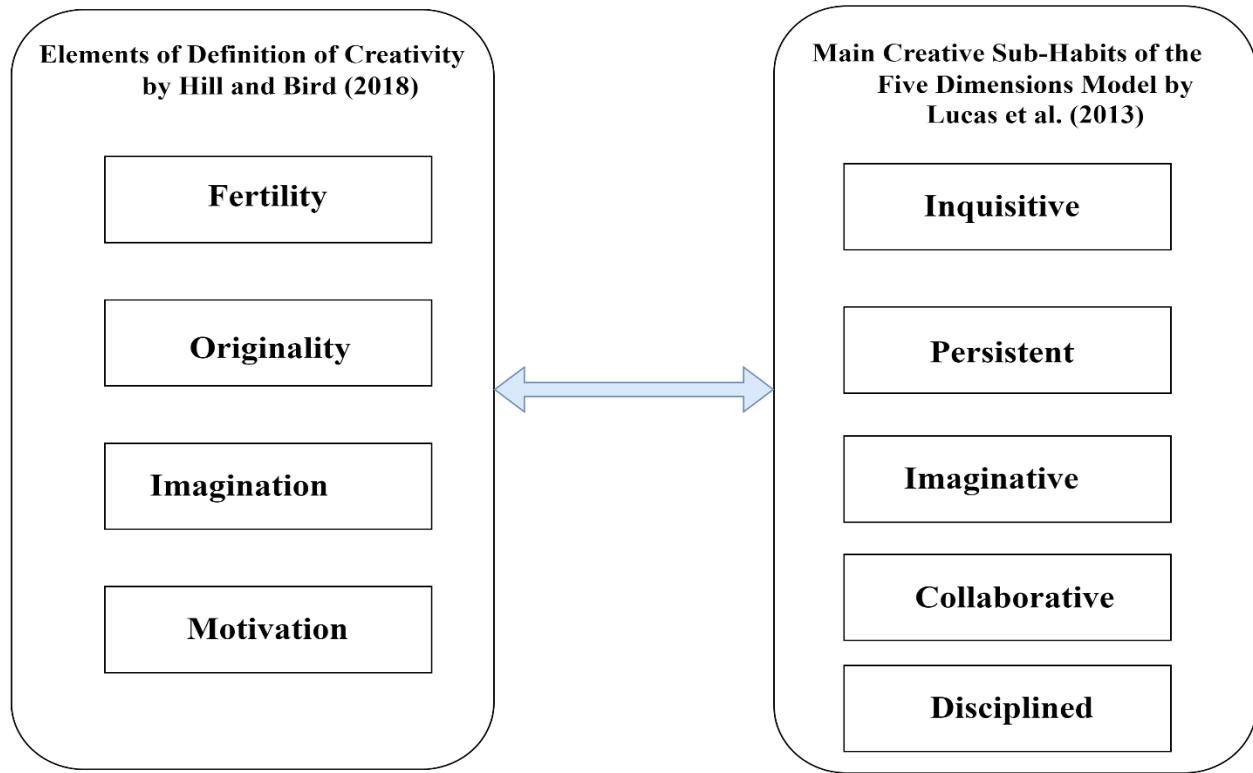


Figure 8: Representation of Creativity Elements by Hill and Bird (2018) and the Main Creative Sub-Habits of the Five Dimensions Model by Lucas et al. (2013).

Furthermore, some dimensions of the five-dimensional model, such as imagination and inquisitiveness, play a significant role in the existing literature on learning and creativity and shares insights with Ofsted's (2010) description of elements conducive to creative learning. The five-dimensional model aligns with the research approach of this current research by encouraging teachers to reflect and develop a precise understanding of creativity while developing their creative skills (Section 2.2.3.2: Reflective Practice Approach).

Based on the findings presented here, the five-dimensional model proposed by Lucas et al. (2013) was used to construct the pedagogy of creative learning for the research intervention in this thesis. This comprehensive conceptual framework encompasses key cognitive aspects of creativity such as inquiring, making connections, exploring ideas, motivational and social dimensions such as collaboration and co-constructing knowledge. Furthermore, the model provides clear assessment tools and vocabulary that can be translated into tangible teaching and learning activities to encourage and support creativity in the classroom. Given the breadth of this theoretically grounded

model covering various facets of creativity, the five-dimensional model offers an integrated foundation for developing a pedagogy aimed at enhancing creative thinking, expression, and problem-solving abilities in students. In the following section, a detailed exploration of the five-dimensional model and its limitations will be addressed.

2.3.8 The Five-Dimensional Model of Creative Habits of Mind

In this section the five-dimensional model will be discussed in two parts: theoretical foundation (section 3.7.1), and the five dimensions with a perspective on key terms from the literature and within the context of the research proposed in this thesis (section 3.7.2).

It is crucial to emphasise that the model employed in this study is an adaptation of the original model by Lucas et al. (2013), rather than a direct application of it in its entirety. This adaptation was specifically tailored to serve as a scaffold for the teaching intervention developed, leveraging its structure to enrich the educational environment rather than validating the model itself, as will be explained in the Methodology Chapter (see section 3.7).

2.3.8.1 Theoretical foundation

The definition of creativity originally identified by Lucas et al. (2013) in their five-dimensional model included imaginative, inquisitive, persistent, collaborative and disciplined, with each of these five core dimensions containing three sub-habits. The definitions of imagination and inquisitive defined by Lucas et al. (2013) are similar to the vast majority of published definitions of creativity. However, the dimensions persistent, collaborative, and disciplined are not used to the same extent in the literature surrounding definitions of creativity. Despite the myriad of different definitions of creativity, the definition and criteria for creativity at the individual and/or group level remains an area of contention (Sternberg, 2003a; Hennessey & Amabile, 2010).

The background of the five-dimensional model is influenced by the social-psychological approach, where the behaviour of an individual is determined by the characteristics of the individual and the social context that the individual is placed in (Spencer et al., 2012; Lucas et al., 2013).

Through using the social-psychological approach, the five-dimensional mode focuses on identifying creativity from personality traits, motivations, and the sociocultural environment at historical and everyday levels.

For example, Amabile (1983) and Sternberg (2003) identified that some personality traits related to creativity more strongly than others, such as:

- a sense of curiosity;
- attraction to novelty;
- and risk-taking.

The research here also adopts socio-constructivism, which will be discussed in the methodology chapter. Moreover, the five-dimensional model depicts creativity as a multi-faceted approach that can be developed and assessed. This novel approach to the concept of creativity provided the catalyse for modern interest in creativity and corresponds to an increasing focus on “everyday” creativity, mini-c and little-c creativity or “psychological” creativity – as opposed to historical creativity (Barbot et al., 2011).

Recognising a gap in educational practices for nurturing creativity, the inception of a novel framework was imperative. To address this, Spencer et al. (2012) at the Centre for Real-World Learning (CRL) developed a creativity framework for England’s schools, inspired by the habits of mind essential for effective learning (Costa & Kallick, 2000; 2008), which refers to “having a disposition toward behaving intelligently when confronted with problems” (Costa & Kallick, 2000; 2008, p.1). Disposition indicates a desire to learn and proactive approach to find and take learning opportunities (Carr & Claxton, 2002).

Drawing upon the established relationship between creativity and learning, as highlighted in the literature (Jeffrey, 2006; Starko, 2010; Truman, 2011), the Centre for Real-World Learning set out to cultivate creative habits, which led to the development of ’The Five Creative Dispositions Model’ by Lucas et al. (2013), encompassing five main dimensions. This framework was later refined by Lucas (2016) and renamed ’A Five-Dimensional Model of Creativity’. Additionally, Lucas and Spencer (2015) described this model as ’a working model of creative learning in action,’ thereby establishing a strong connection with the focus of this research. However, to avoid confusion, I have referred to it as the ’A Five-Dimensional Model of Creativity’ throughout this current research.

2.3.8.2 Exploring the Five Dimensions

Here each disposition of the five-dimensional will be described based on literature surrounding creativity and the works of Lucas et al. (2013) and Lucas (2016).

The first dimension is inquisitive, which relates to creative individuals who are good at uncovering and pursuing interesting and worthwhile questions in their creative domain. This includes:

- Wondering and questioning: beyond simply being curious about things, questioning individuals who pose concrete questions about topics to help them think things through and develop new ideas.
- Exploring and investigating: creative individuals act out their curiosity through exploration and follow up on their questions by actively seeking and finding out more on specific questions they have.
- Challenging assumptions: an appropriate degree of scepticism and not taking things at face value without critical examination, are important characteristics of creative individuals.

Being inquisitive is having a desire and interest to learn, with some theorists suggesting that curiosity is an essential component of creativity (Csikszentmihalyi, 1988a; Sternberg, 2005). This has been supported in practical perspectives where previous research has shown associations between curiosity and creativity, where individuals with higher curiosity were shown to be more explorative and creative, resulting in the production of new and/or valuable ideas (Cecil et al., 1985; Harrison, 2011; Hardy et al., 2017; Schutte & Malouff, 2020; Hagtvedt et al., 2019). There is a belief among some psychologists that intrinsic motivation is the catalyst of curiosity or inquisitively (Amabile, 1988; Snyder & Lopez, 2009). Sternberg (1999) previously identified that, children are naturally inquisitive, curious to discover and question, which requires teachers to ensure that their responses are able to maintain and stimulate curiosity. Meadows (2006) added to the earlier work of Sternberg (1999) and suggested that teachers should consider three important dispositions when trying to nurture curiosity: open-mindedness, active curiosity and reflective inquiry, which are to some extent all relatable to the five-dimensional model.

The second dimension relates to being imaginative, which has been suggested to be at the heart of a creative personality that leads to imaginative solutions and possibilities. This includes:

- Playing with possibilities: developing ideas that require manipulation of the idea, implementing the idea and finally attempting to improve the idea.
- Making connections: synthesising processes and bringing them together a new amalgam of disparate things.
- Using intuition: intuition allows individuals to make new connections that would not necessarily materialise with analytical thinking alone.

Imagination is the 'process of generating something original: providing an alternative to the expected, the conventional, or the routine' (NACCCE, 1999, p. 31), and has previously been recognised as an important features of creativity (Craft, 2002). The relationship between imagination and creativity has been of interest to scholars since the early work of Vygotsky (Vygotsky, 2004). As imagination is a large and complex concept, only salient points related to the aims of the current thesis will be discussed.

Firstly, considering various possibilities is related to the 'possibility thinking' concept developed by Craft and colleagues (Craft, 2000; Cremin et al., 2006), and is at the core of creative learning. Possibility thinking is an inquisitive approach used in the classroom that involves questions such as 'what if' and 'perhaps if' (Hammershøj, 2021). Secondly, imagination includes connecting unrelated objects to develop new solutions, such as synthesising, which is 'a process of combining ideas to create' (Cannon and Feinstein, 2005). An example of assimilating connections is using imagination and the use metaphors to observe and express relationships. Thirdly, intuition, defined as 'knowing without knowing how' (Stierand & Dörfler, 2016, p.182), is considered an element of imagination (Lucas et al. 2013). There is also a body of evidence suggesting that intuition should be included in any definition of creativity (Raidl & Lubart, 2001; Policastro, 2010; Pétervári et al., 2016; Stierand & Dörfler, 2016). However, 'intuition' will not be included in this research intervention, primarily due to the poor evidence base linking intuition with creativity. Furthermore, intuition does not stem from logical thinking, it is difficult to assess and manage validity and is influenced by many themes, such as gender, religion, culture and nature of personality.

Overall, imagination within education is involved in a myriad of functions for teachers and students (Craft, 2002), where teachers primary role is to teach creatively.

According to NACCCE (1999), teachers could employ “imaginative approaches to make learning more interesting” (p. 103). The role of the learner appears to be focused more on a teaching for creativity approach, described as ‘a demanding process which cannot be made routine’. Similarly, the use of a creative learning approach in teaching that “encourage[s] young people to use their imaginations”. Consequently, imagination is vital in the classroom, however, its use in teaching must be differentiated based on the approach and the purpose of using it.

The third dimension relates to persistence, which is demonstrated by a continual drive to never give up in creative individuals.

- Sticking with difficulty: persistence can be viewed as a form of tenacity, which in creative individuals is crucial as this persistence is what enables creative individual to go above and beyond familiar ideas and encourage them to develop new ideas.
- Daring to be different: creativity requires a certain degree of self-confidence as a pre-requisite. Self-confidence enables creative individuals to take sensible risks, and in doing so create novel and innovative ideas that may not have been realised in a non-risk taking individual.
- Tolerating uncertainty: the ability to tolerate uncertainty is important when actions or even goals are not fully set out.

Persistence in the face of adversity is essential to excel in any aspect of life. For example, creative behaviours often involve tasks that are complex, requiring persistence and determination when adversity is encountered in order to continue working until success has occurred, or all avenues have been exhausted. The link between persistence and creativity is not a new concept and has been reported on in the literature. Key examples where associations between persistence and creativity have been identified include lifelong learning (NACCCE, 1999) and the ability to maintain concentration levels for long periods (Amabile, 1988). Further research in gifted students by Renzolli (2005) identified that task commitment, described as the motivational energy that drives creative individuals to achieve more than those who are less creative even in the face of adversity, is amongst the second cluster of vital traits in productive and creative individuals.

The fourth dimension is collaborative, which in today’s modern world is associated with complex challenges, such as unravelling DNA or understanding climate change, requires creative

collaboration among creative individuals from different specialities. The ability to identify when collaboration would prove productive, facilitate collaboration and recognise the social dimension of the creative process is higher in creative individual these outputs are less creative.

- Sharing the product: creative outputs are important, whether they are ideas or objects, the creation has impact beyond their creator.
- Giving and receiving feedback: this is the propensity of wanting to contribute one's own ideas to other people's ideas and then hear how one's own ideas may be improved.
- Cooperating appropriately: creative individual individuals possess an ability to co-operates appropriately with others and work collaboratively as required, but not necessarily all the time.

The contemporary approach of creativity also includes group collaboration and highlights the social components ((Amabile, 1988; Csikszentmihalyi, 1988; John-Steiner, 2000; Craft, 2009; Lucas, 2016). The role of a teacher in a classroom needs to encourage discussion amongst learners whilst sharing ideas that enhance learning. However, in the literature there is a slight discrepancy between cooperative and collaborative learning. Cooperative learning is described as 'students working together to learn and be responsible for one another's learning in addition to their own' (Slavin, 1989, p.232). However, collaboration is a broader concept than cooperation, requiring more in-depth preparation for tasks. Therefore, in light of the five-dimensional model of creativity, I have used the term 'collaboration'.

The fifth dimension is disciplined, which some consider to be a counterbalance to the more intuitive side of creativity. The disciplined aspect of creativity requires the need for knowledge and craftsmanship in shaping creative products and in developing one's expertise.

- Developing techniques: skills and techniques may be established or be novel in nature, but creative individuals will always practice in order to improve.
- Reflecting critically: following the generation of novel ideas, evaluating these idea is just as important and 'converging' requires decision-making skills that are commonly present in creative individuals.

- Crafting and improving: relates to a sense of taking pride in one's work. The creative individual pays attention to each minute detail, acknowledges and corrects errors, while aiming for perfection with the finished article (Berger, 2003; Ericsson et al., 1993; Lucas et al., 2013).

The concept of discipline aligns with the mini-c level of creativity, previously proposed by Beghetto and Kaufman (2007; 2009) and the expertise acquisition approach outlined by Ericsson (2006). The mini-c discussed earlier, can be defined as the “novel and personally meaningful interpretation of experiences, actions, and events” (Beghetto & Kaufman, 2007, p. 73). Incorporation of discipline into the five-dimensional model is invaluable, and the ability to recognise the importance of discipline, and the role of discipline in nurturing creativity within the classroom environment is essential for teachers. Discipline also emphasises the strong association between the processes of learning and creativity, where learners who are interested in one subject may advance through expertise acquisition and practice. Expertise is defined as the ‘mastery of a well-organised body of usable knowledge’ (Ericsson, 2006).

The concept of discipline plays a pivotal role in metacognition, an aspect fundamentally interwoven with creativity. Metacognition, often referred to as ‘reflective critical thinking’, involves the ability to introspect and deliberate on one’s thought processes (Lucas, 2019). Research surrounding creativity have repeatedly stressed the unique role of metacognition (Armbruster, 1989; Erbas & Bas, 2015; Davey, 2016; Jia et al., 2019), and its association with persistence and ability to focus on learning (Martinez, 2006).

According to Lucas et al. (2013), the design of the five-dimensional model enabled the researcher to track the development of each of the 15 sub-habits across three specific dimensions: strength, measured by an individual’s level of independence; breadth, assessing the frequency that students applied creative dispositions in new contexts; and depth, evaluating the level of sophistication in the application of these dispositions. It is essential to note that this is an advanced step to assess creativity which may be conducted in the future work but is beyond the scope of the current thesis. The current research will focus on pre-service teachers who do not have the capacity to assess their students during the placement period and will not involve tracking these sub-dispositions across these three dimensions.

2.4 Reflections on and Summary of the Chapter

This chapter explored key facets of teacher education programs. It provided background on teacher preparation, then examined two prevalent approaches within most educational systems. First, technicism was analysed, including its limitations in integrating creativity. Discussion then shifted to reflective practice, examining its philosophy, models, and impacts, with an emphasis on accommodating creativity. This exploration synthesised literature to inform this research's focus on cultivating creative learning capacities aligned with the reflective practice emphasis on teacher experience, autonomy, and adaptive expertise.

Then, this chapter explored a pedagogy for creative learning and teaching, with a focus on pre-service teachers. It has highlighted the complexity involved when defining creativity in education and emphasised its dynamic nature. This research specifically concentrated on the 'mini-c' level of creativity, encompassing key dispositions, including fertility, originality, imagination, motivation, and context-specific usefulness.

This chapter has also considered the cultural and social factors alongside issues within the Saudi context across universities, teacher education, and schools. Furthermore, this chapter addressed the interconnectedness of creative teaching, teaching for creativity, and creative learning, all of which are crucial elements for pre-service teachers to grasp.

Finally, this chapter has examined training programs versus a pedagogical approach, justifying the adoption of the latter in the current thesis. Ultimately, I have concluded this chapter with an extensive introduction to the five-dimensional model as the framework for the research intervention, providing rationale, theoretical underpinnings and defining key terms. This model was chosen as an initial framework given its multidimensional components that aligned with the aim of enhancing creative capacities of pre-service teachers. However, thoughtfully addressing the limitations of the five-dimensional model in practice is essential.

In summary, this chapter has provided essential groundwork, examining key concepts, relevant literature, and setting the foundation for the development of a tailored creative learning pedagogy for pre-service teachers in the Saudi context. The review of literature concerning teacher education and the pedagogy of creative learning, particularly in the context of fostering creative teaching and learning, has highlighted some significant issues and limitations.

First, it has revealed a concerning oversight in the realm of teacher education within Saudi Arabia, as explored in this chapter and in Section 1.4. Despite the burgeoning recognition of the necessity for creativity in pedagogical practices, there remains a startling deficiency in comprehensive, evidence-based models for teaching creativity within the Saudi context. This gap not only indicates a pressing need for scholarly inquiry but also calls for the development of effective strategies that integrate creativity into teacher education programmes. Furthermore, a dissonance between policy aspirations and the realities of classroom practice in Saudi Arabia has been consistently observed. Such discrepancies underscore the urgency for research that bridges these divides, ensuring that policy objectives are realised through substantial, creative educational practices.

Second, empirical research specifically fostering creativity and teaching for creativity among pre-service teachers is markedly scant in the Saudi context. This is exemplified by the absence of discussion on ‘creative learning’, ‘creative pedagogy in initial teacher education’ or ‘pre-service teachers’ creativity in Saudi Arabia’ in prominent databases. The research gap becomes more pronounced when acknowledging the limited focus on female pre-service teachers, an area which presents significant opportunities for scholarly exploration.

A significant point identified from the literature is the absence of models to support pre-service teachers in their pursuit of creative learning and teaching approaches in Saudi studies. Furthermore, the studies examined highlight the intricate nature of creative pedagogy and its interactions with sociocultural factors. Accordingly, it becomes imperative to explore a pedagogy that enhances creative learning within the Saudi context. The literature review has identified the benefits of creative learning pedagogical approaches, including enhanced confidence and creativity among students. Hence, my research seeks to address these critical gaps. It aims to investigate the main research question and sub-questions:

What are the fundamental components of a pedagogy of creative learning that can enhance the understanding of teaching for creativity among Saudi female pre-service teachers?

- RSQ1: How did the views of creative learning and teaching evolve among Saudi pre-service teachers during creative learning sessions?
- RSQ2: How do Saudi teacher educators perceive creative learning and what factors influence the preparation of creative pre-service teachers in higher education?

Additionally, it is important to note that creative learning can pose challenges in the classroom. Therefore, investigating this aspect from the perspectives of pre-service teachers and their teacher educators would be valuable.

Furthermore, including teacher educators in this study is essential because of their pivotal role in shaping the pedagogical approaches and educational philosophies to which pre-service teachers are exposed. Their perceptions and practices directly impact the development of pre-service teachers' abilities to foster creativity in their future classrooms. Therefore, understanding teacher educators' perspectives on creative learning is critical for identifying potential enablers and barriers that pre-service teachers may encounter. This insight is invaluable in designing interventions that support the cultivation of creativity within teacher education.

The upcoming chapter represents the intervention phase of the methodology and provides a comprehensive overview of the research methodology in detail.

Chapter Three: Methodology

3.1 Introduction

Research methodology plays a crucial role in connecting a researcher's theoretical framework or paradigm with the overall approach to investigating a problem (Jackson, 2013). This chapter provides a focused justification for the choice of a qualitative action research methodology based on the research aims and questions. It explains how the methodology logically flows from the philosophical underpinnings, examining the alignment with the research approach, research settings, participants, data collection, data analysis process and ethical considerations.

The credibility of a study can be bolstered by aligning the chosen methodology with the research questions (Sikes, 2004). As outlined in Chapter One (see section 1.5), the study was guided by the following main research question and sub-questions: *What are the fundamental components of a pedagogy of creative learning that can enhance the understanding of teaching for creativity among Saudi female pre-service teachers?*

- RSQ1: How did the views of creative learning and teaching evolve among Saudi pre-service teachers during creative learning sessions?
- RSQ2: How do Saudi teacher educators perceive creative learning and what factors influence the preparation of creative pre-service teachers in higher education?

To address the research questions and examine the subject matter in depth, this study endeavoured to achieve the aims presented in Table 1. This table also outlines the methods employed to achieve these aims, aligned with the research paradigm and data analysis.

As previously mentioned in Chapter 1, section 1.5, this research acknowledges the tension in making changes as a main aim and explores Saudi pre-service teachers' and educators' perspectives on creative learning. This research aims to discover existing views and develop a framework to enhance understanding and integrate creativity in Saudi teacher education. The goal is exploration and understanding, not immediate change, although change or development of understanding may occur during the sessions.

Qualitative Action Research

*What are the fundamental components of a pedagogy of creative learning
that can enhance the understanding of teaching for creativity among Saudi female pre-service teachers?*

Research sub-questions



Research aims

1) How do the views of creative learning and teaching evolve among Saudi pre-service teachers during the creative learning sessions?	2) How do Saudi teacher educators perceive creative learning, and what factors influence the preparation of creative pre-service teachers in higher education?	<ul style="list-style-type: none">• Investigate the progression of Saudi pre-service teachers' understanding of creative learning and teaching throughout the creative learning sessions.• Explore Saudi teacher educators' perspectives on creative learning and the factors influencing the preparation of creative pre-service teachers in higher education.• Develop a framework for a pedagogy of creative learning that supports the development of Saudi pre-service teachers' understanding of teaching for creativity.• Contribute to the professional development of student teachers in Saudi Arabia and the international education context by enhancing their understanding of creative pedagogy.
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Research paradigm

Interpretivist ontological perspective and social constructivist epistemology

Inductive approach

Research tools and participants



Data analysis methods

○ Reflective journals and focus groups with 15 pre-service teachers	○ Semi-structured interviews with 12 teacher educators	Reflexive thematic analysis approach
○ Researcher's reflective journal		

Table 1: Outline of research questions, aims, paradigm, methods of data collection and analysis

This chapter is organised in several sections. Section 3.2 introduces the research paradigm, discussing the interpretive perspective chosen for the study and justifying its selection. This entails a brief description of ontology, epistemology, methodology and the research design.

Section 3.3 sets out the action research approach and discusses definitions and models. Section 3.4 covers the research context and sample selection, and section 3.5 addresses the research tools: reflective journals, focus groups, semi-structured interviews and my reflections. Section 3.6 presents my position vis-à-vis the research.

Sections 3.7, 3.8 and 3.9 present the research intervention, the pilot study and the main study, respectively. Section 3.10 sets out the data analysis process. Finally, section 3.11 discusses ethical considerations, followed by Section 3.12, which addresses the limitations. By detailing and justifying these key components, a critical framework is established for obtaining meaningful findings.

3.2 Research Paradigm

This qualitative action research was framed within social constructivist and interpretive perspectives. According to Creswell (2014), the impact of philosophical ideas may not always be explicitly acknowledged in research, yet their presence remains influential and must not be overlooked. Identifying the underlying philosophical underpinnings is crucial as they shape the researcher's perspective and approach to the study (Jackson, 2013).

According to Guba and Lincoln (1994), a paradigm can be perceived as a worldview or philosophical belief that guides investigators in studying various issues in the educational field. Paradigms are built through philosophical assumptions and questions that direct the researcher's planning and decisions. These fundamental assumptions are related to ontology, epistemology and methodology, which are considered in this section. Following that, the research design will be discussed.

3.2.1 Ontology

Ontology refers to the nature of social reality. According to Guba (1990), ontological questions are formulated as follows: What is the nature of the “knowable”? Alternatively, what is the nature of “reality”?

From the perspective of interpretivism, which is often combined with social constructivism as a worldview (Creswell, 2009), I firmly believe that truth and reality are socially constructed (Crotty, 1998; Willis, 2007). Phenomena are far more intricate than they may outwardly appear, with multiple viewpoints constantly existing to comprehend them. These complexities have significant implications for data analysis and the process of arriving at findings, which are inherently of a subjective nature (Schwandt, 1994). Therefore, it is not possible to know reality because there are always several realities and multiple perspectives arising from social construction and interactions.

The pragmatist paradigm is well-suited to action research given its focus on action, change and the dynamic interplay between knowledge and action (Goldkuhl, 2012). However, for this specific study, the interpretive paradigm was chosen for its explanatory nature, which aligns well with the research objectives of gaining rich, in-depth insights. Rather than focusing solely on change, this research aimed to build a deeper understanding and explanation of the topic under study in fulfilling the research objectives (Merriam, 2002; Willis, 2007).

Moreover, an interpretive paradigm allows for a deeper exploration of the participants' experiences and a better understanding of social phenomena within the researched context (Schwandt, 1994). As Willig (2017, p. 274) puts it, "interpretation is at the heart of qualitative research because qualitative research is concerned with meaning and the process of meaning-making". The interpretive methodology requires that social phenomena be understood "through the eyes of the participants rather than the researcher" (Cohen et al., 2007, p. 21). At the same time, the researcher is a member of a society interacting with others. Grix (2004) and Willis (2007) highlight that researchers are inherently part of the social reality they are investigating, particularly in interpretive research.

It is important to acknowledge the limitations of generalisation within interpretivist research, which will also be discussed further in Section 3.11. Interpretivist studies, by nature, aim to understand phenomena within specific contexts rather than generalise findings across different settings. As Larsson (2009) argues, generalisation in qualitative research is often more about identifying patterns and recognising similarities across contexts rather than making broad, universal claims. This approach aligns well with the goals of this study, which seeks to explore the

nuanced experiences and perspectives of Saudi pre-service teachers and their teacher educators regarding creative learning and teaching.

Thus, interpretivism was adopted because of its explanatory nature, allowing for the explication of participants' experiences and facilitating the acquisition of rich data from them. This approach supports a deeper understanding of the complex phenomenon studied, specifically focusing on creative learning and teaching within the unique educational landscape of Saudi Arabia. While the study does not aim to produce widely generalisable results, it does intend to provide valuable insights and contribute to the broader educational discourse in Saudi Arabia. The rich, qualitative data collected through this approach can inform policy and practice, offering detailed examples and case studies that can inspire similar initiatives in other contexts.

3.2.2 Epistemology

Epistemology refers to “the branch of philosophy that studies the nature of knowledge and the process by which knowledge is acquired and validated” (Gall et al., 2003, p. 13). Guba (1990) formulated the epistemological question in terms of “what is the nature of the relationship between the knower (the inquirer) and the known (or knowable)?”

My epistemological assumptions for obtaining knowledge in this study are rooted in social constructivism, drawing on Vygotsky's (1978) work. Social constructivism views all knowledge as constructed and depending on people who are actively involved in interactions between their experiences and their ideas (Creswell, 2009). Specifically, Vygotsky's sociocultural theory views human development as a socially mediated process in which people acquire their cultural values, beliefs and problem-solving strategies through collaborative dialogues with more knowledgeable members of society (Lindqvist, 2003).

The social constructivist paradigm was adopted due to the nature of the research topic, which is creative learning and teaching for pre-service teachers within teacher education, and its contextual relevance. Social constructivism, as highlighted by Creswell (2014), acknowledges the diverse and multifaceted nature of meanings, encouraging researchers to explore complexities and avoid restricting interpretations to a few predetermined categories. Moreover, it allows the investigation of variables that are not easily measured. As a teacher educator, I was particularly interested in uncovering the views of pre-service teachers concerning the promotion of creative pedagogy

within their learning experiences, as well as exploring teacher educators' perspectives within the broader social context. By embracing social constructivism, I acknowledge that participants' actions are imbued with meaning and by engaging with these meanings, deeper insights into relevant social and psychological processes are likely to be attained (Creswell, 2007).

Moreover, to investigate creative pedagogy in the Saudi context, a deep and thoughtful approach was required to gain a comprehensive understanding of the subject matter. There is a lack of research addressing the subject and the picture has not sufficiently matured in the education field. In addition, social constructivism highlights the collaborative nature of learning. Consequently, it was suitable for exploring and developing knowledge in a context that required operating within an interpretive and social constructivist paradigm (Schwandt, 1994).

3.2.3 Research Methodology

Methodology is “a theory of which methods and techniques are appropriate and valid to use to generate and justify knowledge” (Ernest, 1994, p. 21). As exemplified by Guba (1990), the methodological question asks, “how should the inquirer go about finding knowledge?”

The two major directions of analytic strategy are inductive and deductive. According to Thomas (2006), the main difference between inductive and deductive approaches concern reasoning and the relation to theory. Inductive reasoning aims at developing a theory and involves drawing a general conclusion from a set of specific observations. In contrast, deductive reasoning aims at testing an existing theory. This study applied an inductive approach to data collection and analysis. In extending knowledge, this approach does not require people to confirm predetermined theories. Rather, it seeks to understand particular social phenomena from individuals' perspectives (Thomas, 2003). According to Patton (2002), inductive analysis prevents the researcher from making *a priori* assumptions before important aspects that need to be considered.

The inductive reasoning approach is in line with the methodological assumption of interpretivism and social constructivism (Creswell, 2014). It enables the researcher to maintain flexibility and permit participants' responses to emerge within the social context. Moreover, this approach allows the exploration of participants' views and reflections derived from their experiences with the subject under investigation.

3.2.4 Research Design

Building upon the aforementioned considerations, this research was driven by an interpretive, social constructivist and inductive approach. These philosophical underpinnings guided the exploration of multiple perspectives and the co-construction of knowledge within the context of the study. The interpretive stance acknowledges the subjective nature of reality, while the social constructivist lens stresses the role of social interactions in shaping understanding.

Moreover, the inductive approach allows the emergence of themes and insights from the data, facilitating a deeper exploration of the research subject. Given the interrelationship between the paradigmatic components, including the researcher's epistemological and ontological perspectives and the subsequent selection of methodology, it follows that paradigmatic considerations influence the data-gathering methods (Gray, 2014). This study is classified as qualitative due to its nature and objectives.

According to Creswell (2009), a qualitative study is "a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem" (p. 22). This study adopted a qualitative design for the research process, including sampling, data collection and analysis, consistent with the interpretive, naturalistic and reflexive approach (Denzin & Lincoln, 2000) and the aim of seeking to understand how others make sense of their experience. As noted by Creswell and Poth (2018), qualitative research collects particularly rich detail because the researcher is able to connect with the participants in their context. Qualitative research encompasses many methodological frameworks and research approaches (Bradbury-Jones et al., 2017; Denzin & Lincoln, 2018; Gaudet & Robert, 2018). These include case study, action research, comparative research, ethnography, participatory action research and others.

Qualitative research often faces criticism concerning its external validity, namely its lack of generalisability – the ability to apply findings to different contexts, people, or samples (Creswell, 2009). However, Smith (2018) argues that qualitative research can achieve generalisability through means that are distinct from those in quantitative research. Indeed, qualitative inquiry offers diverse types of generalisabilities, including transferability, analytical generalisability and intersectional generalisability, each of which contributes valuable insights (Smith, 2018).

Nonetheless, it is necessary to consider this point and it is taken up in the study limitations and ethical considerations (see Sections [3.11](#) and [6.5](#)).

Overall, as previously represented in table 1, the study's chosen philosophical perspectives align with interpretivism and social constructivism, both falling under the qualitative perspective. These frameworks are well-suited for understanding the subjective and socially constructed nature of the research topic, allowing an in-depth exploration of participants' perspectives and experiences.

The next section specifically examines the action research approach and the justification for its use.

3.3 Action Research Approach

Action research has gained significant popularity as a research method in the field of education (Elliott, 1991; Berg, 2001; Baumfield et al., 2008), including in pre-service teacher education (Ponte et al., 2004; Smith & Sela, 2005; Heikkinen et al., 2011; Lattimer, 2012; Ulvik & Riese, 2016; Niemi, 2017). In light of the nature and objectives of this study, the chosen research approach is qualitative action research. The decision to adopt this approach was the result of particular considerations, aiming to align the research design with the study's aims. This section offers a background to action research and outlines the rationale for selecting it as the primary methodology. Subsequently, it sheds light on some models of action research and discusses the nature of the design and its processes. Figure 13 offers an overview of the action research approach, the research participants, and summary of data collection processes, and tools, (see [p.147](#)).

3.3.1 Background and Rationale

The action research model was developed in the mid-1940s by Lewin (1946) in response to problems in social action. Later, in the mid-1970s, it was linked to the field of teacher education by Stenhouse (1975, cited in Cohen et al., 2007; see also, Koshy, 2005; McNiff & Whitehead, 2002). This study adopts the definition of action research offered by Koshy (2005):

I consider action research as a constructive enquiry, during which the researcher constructs his or her knowledge of specific issues through planning, acting, evaluating, refining, and learning from the experience. It is a continuous learning process in which the researcher learns and also shares the newly generated knowledge with those who may benefit from it. (p. 9)

Much of the literature on action research highlights its practical nature. To justify the selection of the action research approach, three key points are elaborated upon herein. Notably, these points also serve as considerations that will subsequently be examined in the context of criticisms associated with action research. These are summarised in Table 2.

Reasons for and benefits of adopting action research	Concerns about and criticisms of the action research approach
<ul style="list-style-type: none"> • Fostering creativity among pre-service teachers in a teacher education context 	<ul style="list-style-type: none"> • Concerns about generalisability, validity and reliability of findings
<ul style="list-style-type: none"> • Driving improvements and changes within the teacher education field 	<ul style="list-style-type: none"> • Potential for subjectivity and bias
<ul style="list-style-type: none"> • Incorporation of reflection 	<ul style="list-style-type: none"> • Requires significant time and resources

Table 2: Summary of benefits and criticisms of the action research approach in this research

The first reason for adopting action research is its significance in fostering creativity (Smith, 2004; (Smith, 2004; Wyse & Spendlove, 2007; Ulvik & Riese, 2016). From my standpoint as a teacher educator who enjoys engaging with pre-service teachers to foster creative learning and teaching and as a researcher conducting educational research, this study is grounded in the principle of “close to practice” in that it explores the relationship between educational practice and research (Hordern, 2021). As stated by Ponte et al. (2004), teacher-educators have to deal with teaching contexts “creatively” to provide effective approaches in teacher education. The action research approach involves working with the participants instead of working on them (Koshy, 2005), in “an iterative process involving researchers and practitioners acting together on a particular cycle of activities” (Avison et al., 1999, p. 94). Hence, the participants are not merely passive subjects to be studied but active contributors who play a vital role in shaping the research process and outcomes. In addition, action research seeks to bridge the gap between theory and practice (Cohen et al., 2007; Elliott, 1991; McAteer, 2013; Kemmis, 2009; Ulvik & Riese, 2016; Niemi, 2019), in this study to contribute to the field of teacher education and to foster creative learning and teaching. Interestingly, a link between action research and creativity is made by Smith (2004), who supports the idea that action research offers significant opportunities for fostering creativity through qualitative inquiry. Moreover, Wyse and Spendlove (2007) further affirm the connection between action research and creativity.

The second reason revolves around improvements and changes within the teacher education field as action research “combines theory and practice (and researchers and practitioners) through change and reflection in an immediate problematic situation within a mutually acceptable ethical framework” (Avison et al., 1999, p.94). This study aims to enhance pre-service teachers’ approaches to teaching for creativity within the context of Saudi Arabian teacher education programmes (see section 1.5). Hence, it seeks to drive tangible improvements in existing practices while empowering stakeholders to make informed decisions that will enhance teacher education programmes. Aligned with the views of Kemmis and McTaggart (1992), action research is an approach to improving education by changing it and learning from the consequences of those changes.

Similarly, McNiff and Whitehead (2010) describe the “action” of action research as focusing on improving practice. Indeed, making changes in practice is a key feature of action research that sets it apart from other qualitative approaches, such as the case study approach. While a case study seeks to comprehend complex issues within real-life contexts, action research actively pursues improvements and transformations (Dresch et al., 2015).

Consequently, the action research approach employed in this study aligns with social constructivism, which posits that individuals actively generate knowledge through their experiences and interactions (Avison et al., 1999; Reason & Bradbury, 2008).

The third reason is the incorporation of reflection, an essential aspect of data collection and analysis in this research that enables valuable insights for enhancing creative learning and teaching practices. Action research draws heavily on the concept of “reflective practice”, involving a self-reflective spiral of planning, implementation, observation and reflection that fosters continuous learning (Avison et al., 1999; Kemmis, 2009; Koshy, 2005; Burns, 2005; Cohen et al., 2007; Ulvik and Riese, 2016). In this study, the pre-service teachers were encouraged to reflect on and take ownership of their own learning and develop an understanding of how creative learning and teaching can foster creativity (Ulvik & Riese, 2016).

Their active participation in a process that involves action and reflection contributed to this ability. Moreover, the iterative nature of action research, with its cycles of planning, acting, observing and

reflecting, was likely to facilitate continuous improvement in terms of development in the development and understanding of creative learning and teaching.

Considering these points, I found action research to be an appropriate approach to conducting this research and exploring the research topic, in alignment with Creswell's (2014) description of research approaches as "plans and the procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis... [involving] the intersection of philosophical assumptions, designs, and specific methods" (p. 31).

While it is commonly perceived that action research is solely a collaborative approach, the literature indicates the existence of various types of action research. Berg (2001) classified these types, which include the technical/scientific/collaborative mode, the participatory/practical/mutual collaborative mode and the emancipating/enhancing/critical mode. Each mode brings distinct perspectives and methodologies to the research process.

This study adopted an individualistic approach to action research, aligned with the "teacher-as-researcher" movement (Stenhouse, 1975, cited in Cohen et al., 2007) and supported by many researchers, such as Smith (2004), Burns (2005), Baumfield et al. (2008), McNiff and Whitehead (2010) and Ulvik and Riese (2016). In this type of action research, the researcher conducts, gathers and analyses the data independently, making it suitable for a PhD thesis in which individual exploration and inquiry are emphasised (Herr & Anderson, 2005). In contrast, participatory action research entails a collaborative research process involving members of a particular community over an extended period of time, including in the analysis of the data. The aim is to create a broader impact within a wider context by actively involving all stakeholders in the research (Danley & Ellison, 1999; Berg, 2001).

While action research has clear advantages over other approaches, especially in light of the three points previously discussed, it also faces certain criticisms. A primary concern in action research is the potential for subjectivity and bias, heightened by the researcher's close involvement in the process (McNiff & Whitehead, 2002). Ponte (2002) argues that within the interpretive paradigm, the researcher's perspective is not just inevitable but essential to meaning making. In this study, my approach, grounded in the interpretive ontological perspective and social constructivist epistemology (see Sections 3.2.1 and 3.2.2), this close involvement and personal perspective of

the researcher is not seen as a flaw but rather as an essential component of the research. These foundations acknowledge and address the potential for subjectivity by using reflexivity, which means the researcher is continuously self-aware and critically examines his/her own role and influence in the research process (Mruck & Breuer, 2003).

Another critique revolves around the generalisability of findings (McNiff & Whitehead, 2002; Lattimer 2012; Mills, 2018). Given the context-specific nature and often small samples in action research, there is a perception that the results might not be broadly applicable (Herr & Anderson, 2005; Lattimer 2012). However, Melrose (2001) posits that action research can achieve theoretical generalisability, facilitating conceptual application across varied settings. Specifically, generalisation is not in a statistical sense but through context similarity and pattern recognition, as Larsson (2009) suggests. This viewpoint resonates with the aim of nurturing creativity among pre-service teachers in their educational setting. The issue of generalisability is explored further in the discussion of ethical considerations (see Sections [3.11](#) and [6.5](#)).

Furthermore, the iterative approach of action research raises doubts concerning the validity and reliability of its outcomes (Mettetal, 2001), and it has been criticised as lacking rigour (Mills, 2018). However, while acknowledging that the findings of action research are often specific to the group or context studied, Mills (2018) contends that the true rigour of action research lies in its profound contextual insight, methodical reflection and triangulation. In this research, triangulation was strategically employed to support confirmability and validity (Mettetal, 2001).

Action research is time-intensive in nature and there is commonly limited time and space available for reflection within the placement context (Smith & Sela, 2005; Lattimer, 2012; Ulvik & Riese, 2016). In this research, concerns for pre-service teachers in terms of time pressure, effort required, and lack of resources were addressed by narrowing the focus of the intervention and collaborating closely with the participants. This ensured that the research was achievable within the given constraints, while emphasising the importance of reflection in the process.

In sum, while action research faces criticisms, they can be addressed through reflexivity, triangulation, clear contextualisation and focus (Herr & Anderson, 2005; Mills, 2018). These strategies not only mitigate concerns but also highlight the benefits of action research, particularly in the context of teacher education. The next sub-section explores models of action research.

3.3.2 Models of Action Research

This sub-section presents some action research models to gain insight into the practical application of the approach and to identify a model that aligns with the research questions and aims of this study. It must be recognised that action research in practice can be considerably more complex and fluid than the models might suggest (Burns, 2005).

Lewin (1948, cited in McNiff and Whitehead, 2002), often regarded as the father of action research, defined it as a spiral of steps, each comprising a cycle of planning, action and fact-finding about the outcome. This model is commonly referred to as an action–reflection cycle (see Figure 9). Although this depiction of action research may imply a continuous process, in practice research set boundaries based on their goals (McNiff and Whitehead, 2002).

Over the decades, various models have been constructed based on Lewin's work and they share a number of similarities (Lattimer, 2012). For example, Kemmis (1982, cited in McNiff and Whitehead, 2002; see also Kemmis and McTaggart, 1988, cited in McNiff and Whitehead, 2002) proposed a model comprising four systematic steps forming a self-reflective spiral as the basis for understanding how to take action to improve an educational situation: planning, acting and observing, reflecting and re-planning.

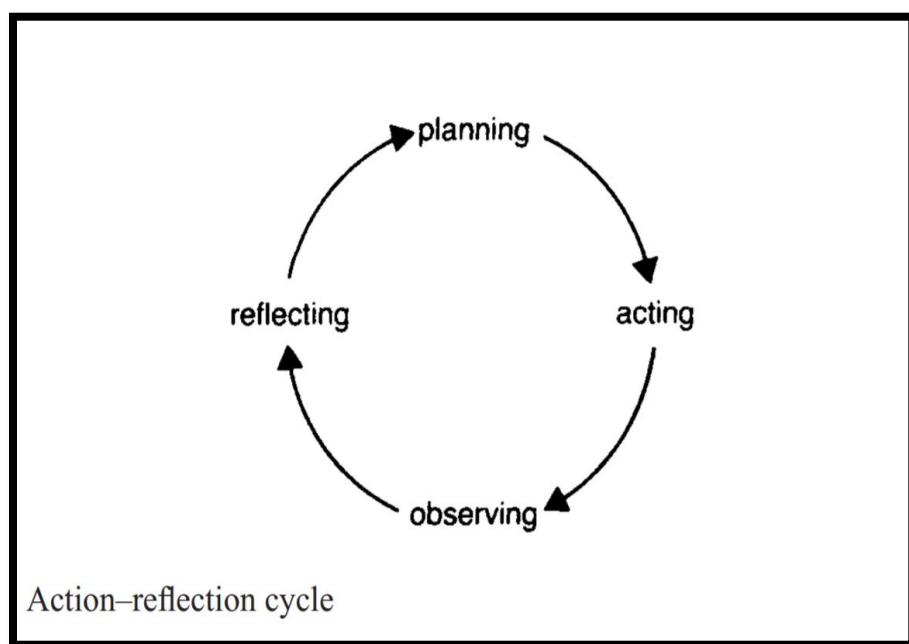


Figure 9: The action–reflection cycle cited in McNiff and Whitehead, (2002, p. 40)

This cycle would be repeated according to the scope, purposes and outcomes of the research (see Figure 10). While the process delineated in the two models in Figures 9 and 10 is similar (Berg, 2001), the latter is considered particularly significant in the field of action research and has influenced policymakers due to its clear structure, detailing major steps in the form of spirals (Burns, 2005; McNiff and Whitehead, 2010).

Burns (2005) advises that while exploring various models can be valuable, it is essential to avoid over-reliance on any particular model or rigidly follow its stages or cycles. Such inflexibility can potentially limit the unique opportunities offered by the dynamic and adaptable nature of action research. Moreover, McNiff and Whitehead (2002) advocate constructing an action research model based on one's personal perspective and the surrounding context. This emphasises the significance of the researcher's own viewpoint and adaptability in shaping the action research process, making it dynamic and contextually relevant.

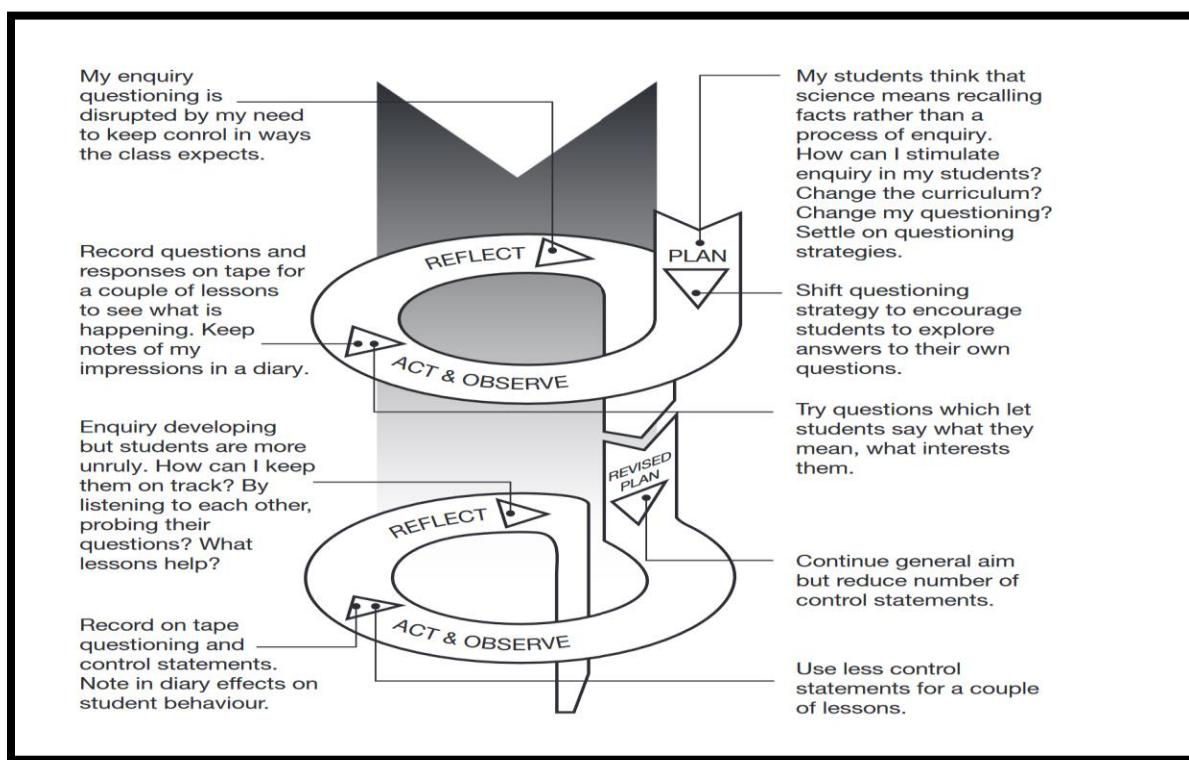


Figure 10: Kemmis's (1982) model of the action research process (cited in McNiff and Whitehead, 2002, p. 45)

Building on these views, my research is focused on developing a pedagogy of creative learning to support pre-service teachers in their teaching for creativity. The pedagogy of creative learning represents the intervention, a crucial component of this research. Hence, I was interested in how to develop the intervention for implementation with participants. I aimed to involve planning, acting, observing and reflecting in the intervention sessions. For this purpose, I adopted the action-reflection cycle, as explained in the following section.

3.3.3 The Application of the Action-Reflection Cycle in Designing This Action Research

I adopted the action-reflection cycle, due to its ease of application and its alignment with Gibbs' (1988) model, as explained in Figure 11. The action research approach in this study embraced flexibility, a hallmark of action research emphasised by Burns (2005), in two main respects: first, in the planning and structure of the research, and second, in the ability to move between different activities. In terms of planning and structure, the study encouraged active engagement among the participants in the process. After each session, participants were encouraged to reflect, make suggestions and express their interests and needs. While encouraging participant input, the study maintained a well-organised and focused approach during the sessions, ensuring that the research objectives were addressed without undue distractions or time wasting.

The second point concerned the flexibility to move between series of activities rather than rigidly adhering to predefined phases. This iterative process, illustrated in Figure 11 allowed continuous improvement and adaptation throughout the research. It comprised four steps, involving both the researcher (myself) and the actions of the participants:

1. Plan: In this stage the researcher/tutor takes the lead in structuring the activities and preparing the groundwork, ensuring a focused and productive planning process. During this stage, participants are encouraged to engage in introspection and research, suggesting ideas for the next sessions. The collaborative approach allows the identification of potential gaps in their teaching techniques and fosters creativity in their students.
2. Act: During the action phase, both the researcher/tutor and participants actively collaborate in the learning process. They explore, engage in discussions and pose questions, contributing to the dynamic nature of the research activities.

3. Observe: During the observation phase, the tutor/researcher focuses on creativity aspects by closely observing the participants' responses during the sessions, particularly in unexpected situations. The researcher/tutor also encourages participants to observe their own behaviours, interactions with others and pedagogical approaches during their study and classroom placement. This process of self-observation serves as the foundation for meaningful reflection.
4. Reflect: During the reflective action phase, both the researcher and participants engage in analysis and write their insights through open and honest self-dialogue. They assess the outcomes of their actions, considering both the positives and negatives. This phase prompts participants to examine the alignment between their actions and guiding ideas or frameworks. Through discussions and exchanges of perspectives, new insights emerge, leading to adjustments and improvements in the intervention. The iterative nature of action research enables continuous learning and refinement, ultimately fostering a more efficient approach to encouraging creative thinking. The reflective action step plays a vital role in the action research process, providing a systematic framework for introspection, critical thinking and progressive development.

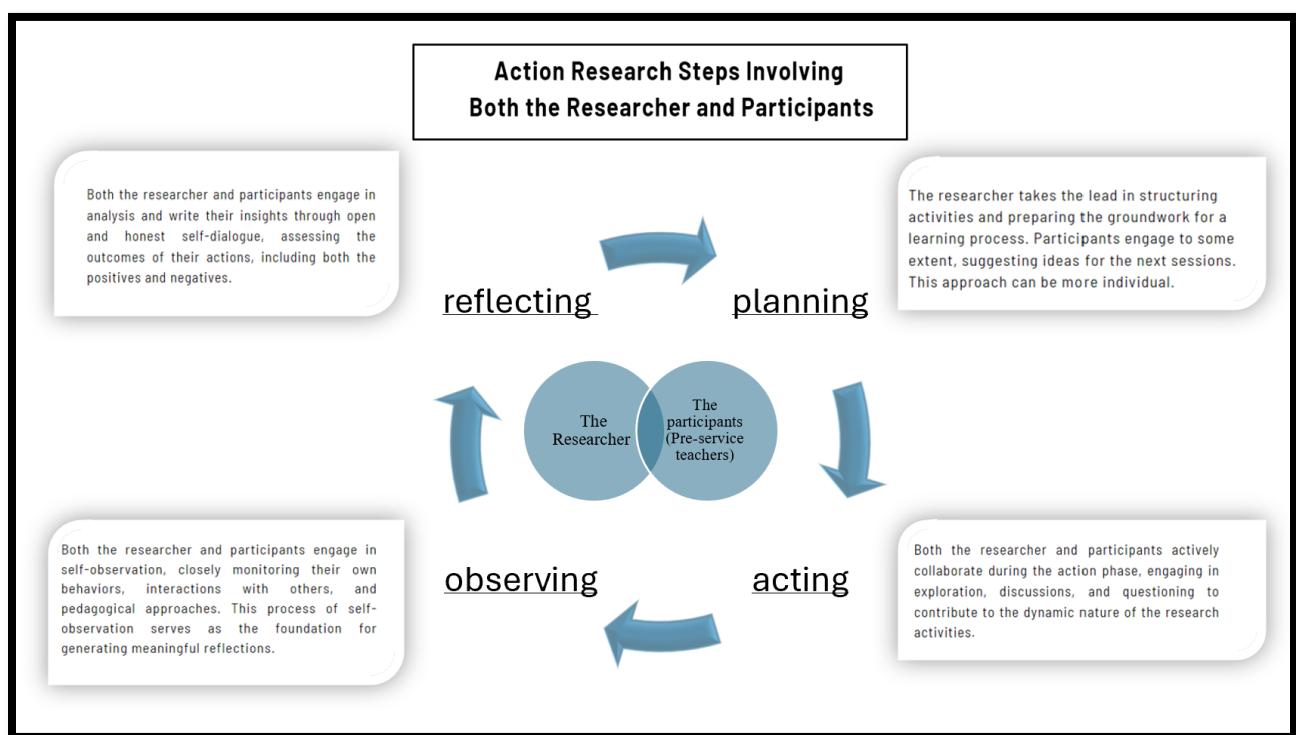


Figure 11: Steps in action research in this current research

In this current research, the design consists of seven interconnected cycles: six corresponding to the creative learning sessions, and a seventh, overarching cycle represented by the focus group discussion (see Figure 12). This approach organises the action research process into four distinct steps: planning, acting, observing, and reflecting. These steps are repeated across the cycles, with each cycle aligning with a session to ensure a thorough exploration of the research objectives.

The action research cycles are organised as follows:

1. Cycle One: Introduction to Creative Learning
2. Cycle Two: Imagination
3. Cycle Three: Curiosity
4. Cycle Four: Persistence
5. Cycle Five: Collaboration
6. Cycle Six: Discipline and Teaching for Creativity
7. Cycle Seven: Focus Group

Each session addresses a specific aspect of creative learning and teaching, contributing to a comprehensive understanding of the topic. These six sessions are detailed in Section 3.7, while the focus group will be discussed in Section 3.5.2.

As the seventh cycle, the focus group gathers qualitative data through reflective discussions, complementing the findings from the sessions. This seventh cycle plays a crucial role in enhancing coherence between the research design and the reflective insights captured in the findings, as presented in Appendix A. It serves as an overarching reflective component, ensuring that the research narrative flows smoothly from the methodology to the findings. Beyond validating the outcomes of the creative learning sessions, the focus group provides a platform for deeper reflection, enriching the overall research process and maintaining continuity throughout the study's narrative (for further details, see Section 4.2.1.7 in the Findings Chapter).

Figure 12 offers a clear overview of the research framework, outlining the topics explored in each session and providing a comprehensive roadmap of the research process. The seven mini cycles within the broader overarching cycle facilitate this process by allowing for iterative reflection and

action. Each mini cycle contributes to the synthesis of insights and practices, ensuring that the research is both reflective and adaptive.

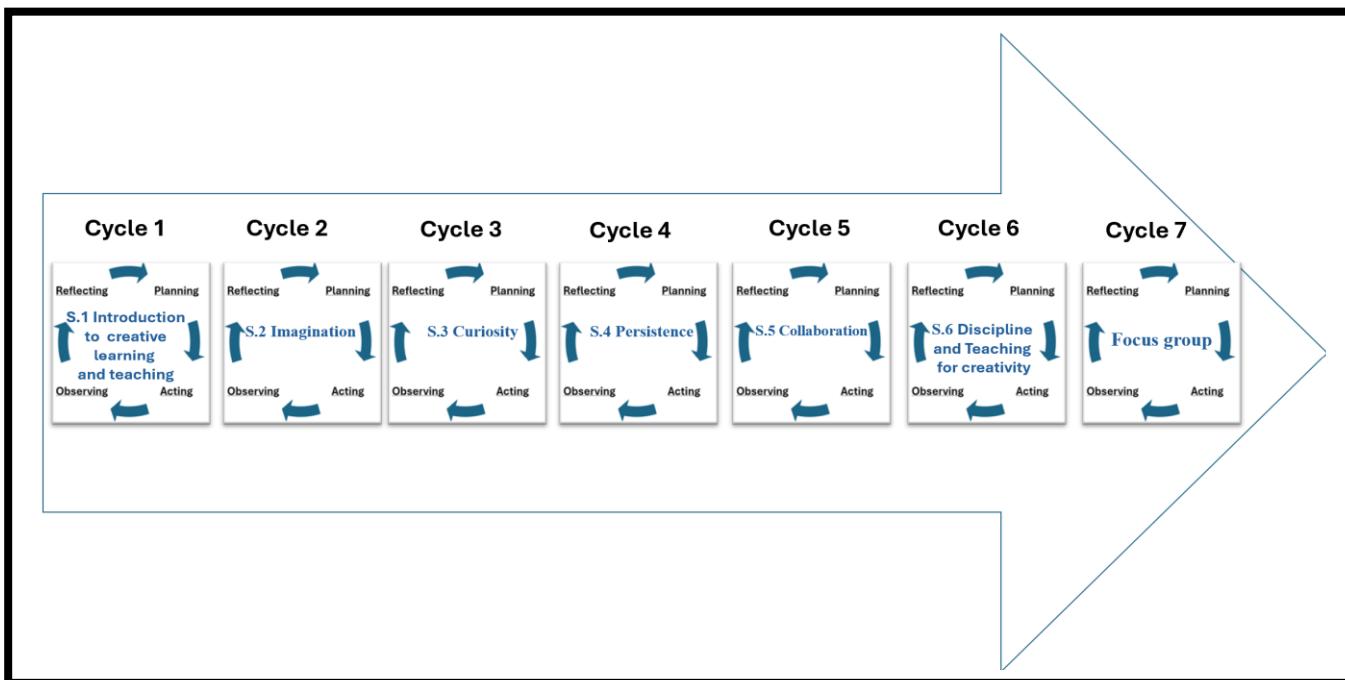


Figure 12: The Model of Action Research in This Research: Seven Cycles Spanning Across Six Sessions and One Focus Group

This figure serves as both a model of practice and a supportive structure for this research framework. Additionally, it offers practical value by demonstrating how action research can be implemented in higher education teaching practices, grounded in several studies. For example, Zuber-Skerritt (1992) defines action research as collaborative critical inquiry by academics into their own teaching practices, problems of student learning, and curriculum issues. Similarly, Gibbs et al. (2017) emphasise that action research is central to investigating, reflecting on, and improving practice in two key areas: academic teaching and pedagogy, as well as student engagement.

In summary, this section has provided an in-depth look at the action research process, justifying its adoption in this study. It has highlighted the alignment of this approach with the theoretical framework, emphasising the constructive nature of knowledge. The suitability of applying action research in teacher education and creativity research has also been discussed. A model aligned with the research questions and objectives has been identified from the literature. The action

research approach in this study embraces flexibility, a hallmark emphasised by researchers. The next section will explore the research context and the process of sample selection.

3.4 Research Context and Sample Selection

The research was conducted at an undergraduate college within a public university located in the eastern region of Saudi Arabia. In Saudi public universities, the government provides full funding, adheres to Ministry of Education guidelines and enrols students from diverse socioeconomic backgrounds, with the majority being native Arabic speakers.

This university and the college in particular were chosen due to their ease of accessibility (Cohen et al., 2007). There are three departments within the college: (i) Arabic Language and Literature, (ii) Sharia and Islamic Studies and (iii) English Language and Literature. Within each department, there are stated objectives to be achieved. The subject matter focuses on developing the academic background of the student teachers in their disciplines and educationalists have the responsibility for preparing the pre-service teachers pedagogically. This involves introducing the pedagogy of teaching, acquainting them with general psychology and familiarising them with teaching methods and curricula. It is important to note that all these pedagogical subjects are delivered in Arabic, even in the English department. Finally, in the last term of their studies, alongside courses, there is a school placement. This placement is mentored by both university-based teacher educators and school tutors. These departments were selected because they were related to the future roles that female pre-service teachers would take up on completing their education at the college and were accessible during the time of data collection.

In addition, I had experience of teaching and mentoring in these departments from 2014 to 2018, which provided valuable insights into the preparation of future teachers, as well as aiding access to participants.

It is necessary for researchers to select the most appropriate sample based on the research question (Patton, 2002). In this study, I opted for convenience sampling, also known as accidental or opportunity sampling, selecting participants who were readily accessible and convenient, in line with Cohen et al. (2007). Moreover, due to religious and cultural considerations in Saudi Arabia, only females participated in this research. In total, the research sample comprised two groups: 15

pre-service teachers and 12 teacher educators. Further details about these groups are provided in 3.4.1 and 3.4.2.

The convenience sampling strategy entails selectivity that is built into a nonprobability sample derived from the researcher targeting a particular group in the full knowledge that it does not represent the wider population; it simply represents itself (Cohen et al., 2007). As such, this small-scale action research pertains to a group of student teachers and a specific subset of their teacher educators, with no intention of generalising the findings. Creswell (2014) acknowledges that small qualitative studies typically prioritise in-depth understanding of a specific context under investigation rather than widespread generalisation (see section 3.11).

Moreover, despite the drawbacks that arise from the non-representativeness of nonprobability samples are adopted, they are adopted because they are far less complicated to set up and are noticeably less expensive than probability samples and can prove perfectly adequate where the researcher does not intend to generalise the findings beyond the sample in question, or it is simply a matter of piloting a questionnaire as a prelude to the main study. As Etikan et al. (2016) and Malterud et al. (2016) discuss, nonprobability sampling and smaller, in-depth samples are well-aligned with the inductive, meaning-oriented aims of many qualitative studies. However, a small sample can impact representation and thus necessitates careful consideration, as it has the potential to undermine bias and result validity (Crouch & McKenzie, 2006).

Morse (2015), on the other hand, argues that validity in qualitative research depends more on the richness of information in a sample rather than the sample size. Therefore, in a qualitative study, the focus often leans toward a small sample size due to the in-depth nature of the data required to achieve the research objectives (Creswell, 2014).

To access the targeted sample and undertake data collection, I requested a visit to Saudi Arabia. The visit was planned and carried out in the academic year 2021–2022, in the second semester of the Saudi Arabian academic calendar. This would be equivalent to the spring term in the UK academic calendar. The research sample comprised two groups – pre-service teachers and their teacher educators – and I outline the procedure for selecting the participants and provide information about each group in the following sub-sections.

It should be noted that all names used throughout this thesis are pseudonyms to ensure the participants' confidentiality. In the context of my research, the term 'pilot' refers to the initial phase of the study, typically involving a smaller-scale sample to test and refine the research tools and processes. While the 'main study' follows the pilot phase, encompasses the use of these tools and processes for data gathering and analysis, leading to the key findings (Malmqvist et al., 2019).

3.4.1 Pre-service Teachers

The procedure for selecting the participants comprised two paths and took place in the first week of data collection. Selecting the suitable pre-service teachers to participate was particularly challenging, considering the study's primary focus and the limited time available before Ramadan.

Morse and Field (1996) discuss this issue and suggest that when a researcher is unsure about selecting the best participants, it might be pragmatic to turn to volunteers. This approach involves encouraging those interested to contact the researcher directly. In essence, the sample of pre-service teachers for this study was selected by asking the teacher educators to contact their students and send out a brochure about the creative learning sessions, either through their personal contacts or via the virtual learning environment Blackboard, regardless of the pre-service teachers' levels of creativity.

According to the admissions department, the 2021-2022 academic year saw approximately 116 female pre-service teachers in their final year before graduation, distributed across three majors: 55 in Arabic, 32 in English, and 29 in Islamic studies. All were invited to an introductory in-person meeting that outlined the study's objectives and requirements. Of those invited, 36 attended the first meeting.

Following this initial session, attendees had the opportunity to register for further involvement, which included engaging in sessions on the pedagogy of creative learning, writing reflective journals, and participating in focus group discussions (see Figure 13, for the data collection summary). This was planned to accommodate up to 25 volunteers, anticipating potential dropouts due to the voluntary nature of participation. Ultimately, 6 pre-service teachers participated in the pilot study (detailed in Table 7, see Section 3.8), and 15 engaged in the main study (detailed in Table 3). From the beginning, the participants were informed and assured of their confidentiality and anonymity (see section 3.11 ethical considerations for further details).

This volunteer-based approach revealed varied motivations among participants; not all were initially enthusiastic about creativity. Some engaged out of curiosity or academic interest, while others participated to fulfil course requirements. This understanding comes from their reflective journals, as will be explained in the Findings Chapter. Understanding these varied motivations provides deeper insight into the participants' backgrounds and their engagement with the study. This diversity in motivation and initial attitudes towards creativity among participants provided a rich context for exploring the impact and reception of creative pedagogical strategies within the sample, as further discussed in the Discussion Chapter.

No.	Student participant (pseudonym)	Academic major	Year
1.	Ola	Arabic Language and Literature	Four
2.	Fouz		
3.	Huda	English Language and Literature	
4.	Nouf		
5.	Noor		
6.	Ranim		
7.	Dima		
8.	Lina		
9.	Haifa		
10.	Nawal		
11.	Lama		
12.	Duaa		
13.	Joud		
14.	Bdoor	Sharia and Islamic Studies	
15.	Manar		

Table 3: Information concerning pre-service teacher in the main study (the participants in the sessions of creative learning)

3.4.2 Teacher Educators

The teacher educators participating in this study were faculty members in the Teacher Education Programme at an Education College in a Saudi university. Due to the limited number of participants, all available teacher educators were invited to take part in this study, participating in semi-structured interviews about creative learning and teaching for at least 40 minutes. This

resulted in a sample of 12 out of 14 members. One educator declined due to her busy schedule, and another was on maternity leave. Despite the small sample of teacher educators at this college, this qualitative research aimed to ensure comprehensive representation and insightful findings.

This group comprised five professors holding doctoral degrees, six lecturers with master's degrees and one tutor with a bachelor's degree. All had experience mentoring pre-service teachers during field placements. These educators, specialising in various areas such as educational psychology, instructional methods and content area disciplines, play a vital role in teacher preparation by helping to bridge theory and practice. Their participation provided critical perspectives on nurturing creativity in teacher education and the challenges and enablers in this process. The diversity of their expertise and roles enriched the study's insights into creative development as part of teacher preparation. Pseudonyms were used to protect confidentiality.

Table 4 provides information on each teacher educator, including qualifications and teaching experience.

Participant (pseudonym)	Qualification	Academic title	Specialty (academic major)	Years of experience
1. Amal	Bachelor	Tutor	English teaching methods	4 years
2. Hanaa	PhD	Assistant professor	Applied linguistics and English language	11 years
3. Hlaa	Master	Lecturer	Educational psychology	9 years
4. Joory	Master	Lecturer	English teaching methods	9 years
5. Mada	PhD	Assistant professor	Educational administration and leadership	12 years
6. Mouna	Master	Lecturer	Educational administration and leadership	9 years
7. Rahaf	Master	Lecturer	Special education	2 years
8. Rana	PhD	Assistant professor	Educational psychology	8 years
9. Shams	PhD	Assistant professor	Teaching methods and curriculum design for gifted education	13 years
10. Walaa	PhD	Assistant professor	Arabic teaching methods and curriculum design	16 years
11. Wedad	Master	Lecturer	Psychology, clinical and counselling	2 years
12. Zahra	Master	Lecturer	Special education for learning disabilities	3 years

Table 4: Information concerning teacher educators in this research.

3.5 Research Tools

In this section, I present and discuss the research tools used to collect the data. Action research employs qualitative methods that align with the cyclical process of planning, acting, observing and reflecting (Berg, 2001).

In this action research, I adopted several qualitative methods to answer the research questions, as follows:

- Pre-service teachers' reflective journals in Section (3.5.1)
- Focus groups with pre-service teachers in Section (3.5.2)
- Semi-structured interviews with teacher educators in Section (3.5.3)
- My reflective journal in Section (3.5.4)

Before discussing each data collection tool in turn, it is worth outlining the purpose of employing such diverse methods. The reflective journals and focus groups sought to capture the pre-service teachers' perspectives concerning the creative learning sessions. Specifically, the reflective journals offered longitudinal insights into their evolving thoughts and experiences over time, documenting their emerging teacher identities (O'Connell & Dyment, 2011). The focus groups elicited interactive discussions, revealing commonalities and differences in their viewpoints (Lambert & Loiselle, 2008), and gathered oral feedback on the creative learning sessions. The semi-structured interviews with the teacher educators probed their approaches to fostering creativity and perceptions of challenges and enablers. My own reflections added an observational and interpretive lens (Ortlipp, 2008). Together they facilitated a nuanced exploration of creative learning and teaching from multiple standpoints.

This methodological diversity not only allowed a richer interpretation of the research problem than would have been possible using fewer methods but also strengthened the validity of the study through triangulation of methods, i.e. collecting data through multiple sources on the same phenomenon (Creswell, 2014). Triangulation is a powerful way of demonstrating concurrent validity, particularly in qualitative research (Campbell & Fiske, 1959, cited in Cohen et al., 2007)). Thus, triangulating the findings across the four qualitative techniques, as Lambert and Loiselle (2008) recommend, allowed richer interpretation and strengthened validity, aligning well with the iterative process of action research. Thoughtfully integrating multiple methods provides a multifaceted exploration vital for the development of insights. To establish coherence and provide a comprehensive overview of the methods and their practical implications, each is discussed in relation to the respective group of participants in the following sub-sections.

3.5.1 Reflective Journals

Reflective writing has increasingly been recognised as a valuable data source within qualitative research (Jasper, 2005; Creswell, 2014). In this study, reflective journals were implemented in two ways: (i) with the pre-service teachers and (ii) by me as the researcher (see [3.5.4](#)).

The adoption of reflective journals entailed the pre-service teachers using notebooks or pads of paper to record their thoughts, reflections, emotions and individual opinions, as well as hopes or

concerns during their educational experience (Hiemstra, 2001). These journals were created during the intervention period.

Hatton and Smith (1995) describe reflection as “deliberate thinking about action with a view to its improvement” (p. 40). A reflective journal is well-suited for use in action research, as it allows student-teachers to develop their practical and theoretical understanding in a way that enhances the transferability of their experiences (Ulvik & Riese, 2016). Reflection serves as a valuable tool for pre-service teachers (Alger, 2006), providing a space for them to express their thoughts and feelings and providing access for the researcher that could be challenging through other research methods (Creswell, 2014). According to Ortlipp (2008), the significance of reflective journals in teacher education is closely tied to the concept of reflective practice put forth by Schön (1983, 1987) in his influential books, which describe reflection-on-action as a key process in making meaning from experiences and professional growth (see Appendix B).

These journals served as valuable tools for recording any pertinent observations for two specific reasons. First, the reflective journal is a dialogue with oneself and thus it is subjective. Jasper (2005) explains that:

This ownership and focus on subjectivity – the owning of thoughts, feelings and emotions, owning the outcomes of the process – may lead to action, or a change in behaviour when set within a reflective practice framework. (p. 250)

Indeed, this research was generally of a collaborative nature; therefore, journals potentially provided an opportunity for the pre-service teachers to think, create and express themselves individually and freely. Jasper (2005) also contends that reflective writing allows the transformation of personal and individual experiences into a format suitable for sharing findings with the wider public.

Second, the reflective journal represents a relationship between reflective writing and the development of critical thinking (Boud et al., 1985; Ho & Richards, 1993; Penso et al., 2001; Jasper, 2005). These studies suggested reflective writing is seen as a tool or method that helps individuals develop a deeper and more sophisticated understanding of the subject matter, which in turn improves their higher-level thinking and analytical abilities. Journals can draw out the writers' critical comments regarding the activities during the intervention, including the role of the researcher or even their own participation in the study. Hence, reflective journals were likely to

make valuable contributions to understanding what was happening in the researched context during the sessions.

In terms of implementing reflective journals during the intervention, the pre-service teachers were asked to complete entries after each of the six creative learning sessions. This allowed them to document their thoughts and reactions outside class time. The aim was for the participants to engage in an ongoing reflective process throughout the intervention to make sense of their experiences of learning and practising creative teaching approaches. I introduced the reflective journals during the first session, providing a clear definition, explaining the potential benefits and limitations, and offering examples to illustrate their informal nature. This study adopted informal and personalised journals. The pre-service teachers could choose their own topics and styles for their reflective entries rather than following a rigid template, thus providing “freedom and flexibility … to trainee teachers within a reflective paradigm”, as Shoffner (2008, p. 7) suggests. This encouraged them to draw upon theories and practical experiences (Shoffner, 2008; Caudle et al., 2017). Optional guiding questions were provided after each session to spark ideas, not prescribe content (see Appendix B).

The participants primarily used handwritten notes to maintain a natural reflective experience and usually handed their reflective journals in or sent them to me within the same week as the session. It is important to note that the participants did not share their Reflective Journals with each other due to ethical considerations. Although I analysed the entries later, the participants were assured of confidentiality throughout the process. Because they were not familiar with reflective journals, there were some challenges during implementation. One of these was them forgetting the session topic or activity.

Carroll et al. (2012) raises concerns regarding the authenticity of materials written by participants, as the content may be influenced by their memory and emotions, thus affecting the accuracy and honesty of their reflections.

Another primary concern highlighted in this research is the insufficient understanding of the reflective process among pre-service teachers, as evidenced in various studies (see, O’Connell & Dyment, 2011). Reflective practice is often not integrated in many teacher education programmes, including those in Saudi Arabia (Almalki, 2020). This deficiency in understanding can result in

reflections being merely descriptive, rather than serving as a tool for challenging assumptions and evaluating practice. Reflective practice must be taught and scaffolded to leverage journals effectively for teacher learning and qualitative understanding (Collin et al., 2013). Moreover, as I found, pre-service teachers can feel uncomfortable rigorously critiquing their own performance and may avoid thorough analysis in journals (Ho & Richards, 1993). Without proper guidance and practice in critical reflection, as discussed by Hatton and Smith (1995), this limitation persists.

Moreover, some participants viewed reflective writing as burdensome and time-consuming, particularly given that they already had many responsibilities as pre-service teachers. The issue of time may have negatively impacted on motivation and the quality of reflection. In addition, due to time constraints, I – as tutor of the sessions – was unable to provide specific feedback to the participants, which could have been facilitated more effectively through an online blog or platform than handwritten journals. According to the findings of several studies, the digital format allows for timely feedback, which can enhance the reflective experience for participants and enable more structured support (Norris, 2016; Eutsler & Curcio, 2019; Almalki, 2020; Cirak Kurt & Yildirim, 2021). Overall, while reflective journals can undoubtedly offer rich qualitative insights into pre-service teachers' experiences, it is essential to consider that this method has limitations, such as potential subjectivity and the need for careful guidance and support.

3.5.2 Focus Groups

Focus groups are considered one of the most common data collection methods for qualitative and action research (Berg, 2001). I employed focus groups for the pre-service teachers as a fundamental research method in combination with reflective journals because the focus group method is best used when conducting exploratory research (Vaughn et al., 1996), and this study aimed to explore and understand participants' experiences of the creative learning sessions.

Using focus groups helped to gain in-depth insights into the participants' views and understandings of the five main elements of creative learning. Morgan (1996) states that Prioritising perspectives involves integrating individuals' attitudes, opinions, and experiences to explore not just their stance on an issue but also the underlying thought processes and motivations behind their views.

There are many definitions of focus groups as a research technique, but they be described as informal discussions about specific topics (Morgan, 1996; Vaughn et al., 1996; Stewart &

Shamdasani, 1990; Adams & Cox, 2008). In this research, “focus group” refers to discussions prepared on a specific theme undertaken with the participants in a friendly, non-threatening environment, strengthening the atmosphere of group interaction as a catalyst for data collection (Barbour, 2008). A focus group typically comprises 8 to 12 participants (Stewart and Shamdasani, 1990) and is arranged to cover certain topics or issues but in a flexible way that allows the conversation to flow and the researcher to ask some questions to gain in-depth insights.

Moreover, focus groups make it easy to reflect on collaborative experiences. In this research, because the participants were generally from the same background and likely to have similar levels of knowledge and experience, using focus groups supported collaboration and the construction of meaning in less time than would have been possible in individual interviews.

During the pilot study, focus groups were conducted with the pre-service teachers after each session. There were three focus groups with an average of four participants and each lasted around 50 minutes (for more detail, see [3.8](#)). Generally, the focus group discussions in the pilot study typically took between 60 and 80 minutes. Due to the substantial amount of data generated and the effort required for transcription and subsequent translation into English, I made the decision to conduct only one focus group as a post-session tool in the main study. This adjustment allowed me to better manage the time required for the process of transcribing and analysing data. The focus group in the main study included 10 participants and lasted approximately 80 minutes. To ensure the internal reliability of the data, all discussions were recorded using an MP3 device, accurately storing all conversations.

Focus groups, while valuable for gathering in-depth data in qualitative research, are not without limitations. One common issue with focus groups, as was also the case in this research, is the time-consuming nature of interviewing, transcribing and analysing the data (Adams & Cox, 2008; Brinkmann, 2014).

Another prominent concern, given that there were 10 participants in the focus group, was the potential inadequacy of my research skills in managing the discussion, leading to issues such as losing control, introducing bias and obtaining shallow data (Vaughn et al., 1996). Therefore, based on Jones’s (2022) suggestion, I prepared a short presentation of the main questions to guide the discussion. I offered papers and pens and divided the participants into two groups at the start.

Although I did not strictly adhere to the two team approach during the conversation, it was helpful in the beginning to familiarise myself with the participants and encourage more active interaction through drawing and writing. Furthermore, one of the research goals was to empower the participants. To achieve this, I prioritised conveying my genuine interest in their ideas, emphasising the uniqueness and value of their thoughts. This approach aimed to boost their confidence, encouraging open thinking and sharing. I consistently reassured them that there were no right, or wrong answers and I welcomed all their opinions, including any negative ones (Lin, 2009).

In addition, there is a concern regarding the subjective nature of truth in focus group discussions, influenced by varying perspectives, which challenges the generalisability of findings to larger populations (Cohen et al., 2007). However, researchers can address this limitation by fostering a safe and trusting environment, engaging in regular self-reflection and acknowledging the contextual nature of participants' concepts and beliefs (Vaughn et al., 1996; Codó, 2009). Furthermore, the researcher's ontological and epistemological standpoints play a guiding role in this matter. Despite these challenges, focus groups remain a powerful tool for gaining multi-dimensional insights from various viewpoints (Cohen et al., 2007). See Appendix C for the question guidelines.

3.5.3 Semi-structured interviews

The individual interview is one of the most significant qualitative data collection methods employed in social science studies (Qu & Dumay, 2011; Brinkmann, 2014; Eatough & Smith, 2017). In the social sciences, interviews involve individuals exchanging information, attitudes and opinions through questions and answers (Kvale, 2007).

In this research, all available teacher educators (see [3.4.2](#)) participated in semi-structured interviews about creative learning and teaching, each lasting between 40 minutes and 60 minutes. This resulted in a sample of 12 out of 14 members due to the limited number of participants. The literature highlights that qualitative research, particularly in-depth interviews, can yield reliable data even with a small sample size (Creswell & Creswell, 2017).

Qualitative research often requires a smaller sample size compared to quantitative research and this is valid provided it is sufficient to describe the phenomenon of interest and address the research questions (Creswell, 2014).

Individual interviews can take three forms: structured, semi-structured and unstructured (Bernard, 2002). The structured interview follows a standardised series of pre-established questions, allowing only a few response categories (Brinkmann, 2014). In contrast, the unstructured interview is a type of open conversation that does not rely on a set of pre-planned questions (Qu and Dumay, 2011). The third form, the semi-structured interview, combines the advantages of both the structured and unstructured interviews and is the most commonly used form in human and social science studies (Brinkmann, 2014).

In this research, I chose to undertake only in-depth interviews as a fundamental research method with teacher educators to answer the second research sub-question. The aim was to understand the social world from the perspectives and experience of the interviewees in their own words. Thus, an exploratory approach was adopted to examine relatively unknown areas, consistent with the often open discussion with little pre-planned structure in such interviews, by introducing an issue to be discovered, following up on the responses concerning the topic and seeking additional and new angles on the topic (Kvale, 2007).

The semi-structured interviews benefitted from the approach outlined by Qu and Dumay (2011), namely following a short list of guiding questions within a fairly open framework that allows focused, conversational and two-way communication. These three features were deemed advantageous in gathering data from the teacher educators in this research.

The first feature is the focused nature of the interview. Semi-structured interviews hold the middle ground between structured and unstructured interviews and the questions have the nature of a planned and open-ended guide that allows the conversation to be flexible and focus on the specific topic (Brinkmann, 2014). In this instance, such an approach was potentially the optimal friendly way of gathering information from the participants, most of whom were colleagues of mine.

The second feature of semi-structured interviews is their conversational nature, which allows for follow-up questions. For example, after receiving their initial answers, I often asked “how?”,

“please explain more from your experience”, or “why do you think so?” to delve deeper into their responses. Denzin and Lincoln (1998) consider the research interview to be the art of asking and listening. The interpretive, constructivist approach has influenced the use of the interview method according to many studies (Arksey & Knight, 1999; Rubin & Rubin, 2005; Kvale, 2007; Qu & Dumay, 2011). Hence, the researcher should play an active role in listening to the interviewee’s answers, probing, supporting, empathising, clarifying, exemplifying, summarising and avoiding criticisms (Cohen et al., 2007) to encourage participants to express their thoughts freely, thereby gaining new insights into interviewees’ experiences. Furthermore, it is important to maintain the conversation, hence acquiring in-depth data through the interviews (Lincoln & Guba, 1985). Each conversation has a distinct set of experiences; thus, the researcher can create new questions based on that and the context (Rubin and Rubin, 2005).

The third feature of the in-depth interview is two-way communication. The semi-structured interview, compared to the structured and unstructured formats, better allows the researcher to explore the interviewees’ feelings and views and the interviewee to respond, ask questions or request clarification of any misunderstandings. Rather than a rigorous approach during the interview, the dynamic relationship between the interviewer and the interviewee is critical to capture the participant’s experiences. Brinkmann (2014) contends that the dynamic interaction can show that the researcher is very engaged in the participants’ experiences, which is necessary to be capable of credibly explaining and interpreting them. Ensuring understanding of the experience is required for significant meaning making.

Regarding the implementation of the semi-structured interviews, I conducted a pilot interview with an educator from the college who was on scholarship leave to reduce the potential for bias and increase the trustworthiness of the interview data. Piloting research procedures allows researchers to refine and validate their approaches (Kim, 2011; Malmqvist et al., 2019). The pilot interview provided an opportunity to gauge the clarity, relevance and sequence of questions prior to formal data collection. It also helped assess my interview techniques, including skills in following participant responses, probing for depth and clarifying vague statements. I gained insights into where I needed to improve my ability to fully comprehend and engage with the interviewees’ answers. This aligns with the findings of Malmqvist et al. (2019), which emphasise the importance of not neglecting pilot studies in qualitative research. Conducting a pilot study equips researchers

to address potential challenges proactively in the substantive study and establishes confidence in the selected data collection instruments.

Based on the pilot experience, I revised the wording and order of certain questions to optimise comprehension. Adjusting the guideline enhanced the instrument's validity in capturing high-quality data on fostering creativity relevant to the research questions. Moreover, I found the pilot process to be closely aligned with action research principles, as it involved planning the questions, conducting the interviews and subsequently observing and reflecting on the answers, which then led you to design the main study.

In the main study, which involved 12 teacher educators, the interview questions were formulated based on the study's theoretical framework. This guideline allowed me to focus and gave the opportunity to ask any additional questions as and when necessary. The interviews were conducted in Arabic, this being the native language of all the participants, while the data analysis was undertaken in English, meaning the data had to be translated following the data collection process. Table 5 shows the duration of the interviews, and Appendix D and Appendix E provide the outline of the questions in both English and Arabic.

All interviews were recorded using an MP3 device to increase the internal reliability of the data by storing all conversations accurately. Recording interviews helps the interviewer by allowing them to not get distracted by writing notes during the interview process (Bryman, 2016).

Participant (pseudonym)	Data collection	Duration
Amal	Semi-structured, in-person interviews with all participants in office	45 min
Hanaa		90 min
Hlaa		80 min
Joory		40 min
Mada		40 min
Mouna		45 min
Rahaf		40 min
Rana		45 min
Shams		30 min
Walaa		40 min
Wedad		60 min
Zahra		50 min

• The total of 12 interviews lasted around 605 minutes, approximately equal to 10 hours.
 • The average duration of the interviews was approximately 50.42 minutes.

Table 5: Duration of semi-structured interviews with teacher educators

This interview method, in this research, led to two distinct sets of findings related to teacher educators. Section 4.3.1 presents their views on creative learning and teaching, while Section 4.3.2 presents the factors that influence the preparation of creative pre-service teachers. While semi-structured interviews can provide valuable depth, conducting them has several potential drawbacks. A key challenge is the time-intensive nature of interviewing (Adams and Cox, 2008). Scheduling interviews of 60–70 minutes duration with each teacher educator required extensive logistical coordination. Transcribing and analysing the data from the lengthy discussions was also time consuming.

Moreover, interviews rely on participants' availability and willingness to share insights openly. Alnasib (2017) noted that in Saudi Arabia, some lecturers and educators might feel anxious about being interviewed, as it is not a widespread practice compared to surveys. Thus, researchers must reassure participants about ethical measures, such as securely storing data on a password-protected device and guaranteeing their anonymity and confidentiality. It is important to note that I was not just a researcher in their eyes; I was also someone most of them knew as a colleague (see 3.5). Significantly, in the Saudi culture, where hierarchy is valued, some educators may have felt uncomfortable critiquing policies or pedagogy honestly. The power dynamic between the interviewer and interviewee can also introduce bias (Roulston, 2010). As an insider researcher, my

collegial rapport aided openness, but the participants may have provided polite responses that hid their true perspectives on creative learning and teaching.

While the interviews generated rich qualitative data on educators' approaches and views, drawbacks such as time demands, unwillingness to share and social desirability bias potentially limited the completeness of the findings. However, addressing these issues through triangulation with other methods strengthened the study.

3.5.4 Researcher's Reflective Journal

This sub-section highlights my role as a reflective practitioner and discusses key aspects related to data collection. The adoption of self-reflective journals by researchers is well-established in various research areas, including qualitative research (Jasper, 2005) and action research (Berg, 2001; Postholm & Skrøvset, 2013), and in the context of fostering creativity (Lin, 2009; Alsahou, 2015).

Reflective journals represent common practice in clarifying “the researchers’ perspectives on their presuppositions, choices, experiences, and actions during the research process” (Mruck & Breuer, 2003, p.192). According to Jasper (2005), researchers’ reflective journals are a part of the research process that involves reflection-on-action (Schön, 1983), encompassing the recording of thoughts and interactions within the research process and data interpretation.

There were three reasons for adopting the researcher reflective journal in this qualitative action research. The first pertains to the nature of creative learning. Given the complexity of learning and creativity and the absence of one “right” approach to researching the phenomenon, recording and reflecting on creative learning activities might be likely to guide researchers in enhancing the process (Lin, 2009). Leitch and Day (2000) emphasise the importance of enhancing teacher educators’ capacities for reflection, particularly within action research, as it facilitates personal and professional development. Reflection involves probing questions, addressing “what I could know”, “my relationship to what could be known” and “how I might come to know it” (Guba & Lincoln, 1994). The unique aspect of journals is the researcher’s ability to revisit collected material and other information sources for in-depth reflection (Postholm & Skrøvset, 2013).

Second, reflective writing is linked to reflexivity, which involves a higher level of reflection (Finlay, 2008), and entails an introspective ability to reflect on and correct one's ideas, values and actions (Leitch & Day, 2000). Berger (2013) and Postholm and Skrøvset (2013) advocate the use of journals to help researchers become aware of their subjectivity since reflexivity is a key means of understanding and making the data analysis process as visible, accessible and transparent as possible in action research. Reflective writing facilitates the transparency of the process and the researcher's subjective role in addressing relevant issues (Jasper, 2005; Ortlipp, 2008).

Finally, reflection is a central concept in action research (Berg, 2001; Kemmis, 2009). Critical self-reflection considers the ethics of the power–knowledge relationship with participants (Ortlipp, 2008). The role of an action researcher is to be an instigator in the development process (Postholm, 2008), pointing to the growth of researchers as enquirers, collaborating with others to generate practice-based knowledge. Reflective journals play a pivotal role in this, as they document and facilitate the researcher's learning, conviction and counter-reflection (Postholm & Skrøvset, 2013).

Throughout this study, particularly during data collection and analysis, I diligently maintained a reflective research diary and took notes, mostly in Arabic. These documented critical reflections on aspects such as recruitment, interviewing, my positioning and emerging interpretations. Multiple scholars have emphasised the value of research journals in enhancing reflexivity, fostering insights and ensuring quality (Ortlipp, 2008; Orange, 2016; Dodgson, 2019).

My reflective records allowed a thorough examination of my actions, assumptions and relationships with participants. As Orange (2016) describes, this journaling aided deeper meaning making. I also reflected on micro-level dynamics, such as the balance of power between myself and the participants, ensuring an ethical approach (Ortlipp, 2008). However subjective these personal reflections, they helped me in understanding and recalling the details of the experience and I did not restructure or analyse them individually or construct themes based on them.

Overall, constant reflection and improvement through journaling facilitated a nuanced understanding of creative education and pre-service teacher growth. This aligns with Dodgson's (2019) point that reflective recording helps researchers gain self-knowledge and rich qualitative data to benefit the study. The next section explores my position as the researcher in the study.

3.6 Researcher's Position

This section critically examines my position in this research, particularly focusing on key themes such as the dynamics of my role, power relations and involvement in the action research process. In this action research, I took on multiple roles, serving as a researcher, lecturer, or tutor facilitator, as well as participant as a reflective learner (Cohen et al., 2007). Despite their apparent distinctions, these roles intertwine and overlap, blurring the boundaries between them. Mercer (2007) aptly expresses this dynamic nature: “The researcher’s relationship with the researched is not static, but rather fluid and dynamic, constantly fluctuating along a continuum of possibilities, shifting from one moment to the next...” (p. 13).

In my role as a researcher, one of my key responsibilities was to carry out the process of collecting qualitative data. According to Dwyer and Buckle (2009), the researcher’s position has a substantial influence on the outcomes of the study and so it is necessary to investigate the researcher’s position as either an insider or an outsider to the community that is being researched. When doing action research, the researcher is often an insider, directly linked to the community that is being investigated. This enables the researcher to generate live theories of practice (McNiff & Whitehead, 2010). However, the interaction between those considered insiders and those considered outsiders in action research may be complicated (Feldman, 2020).

My position in relation to this research positioned me both as an insider and an outsider (Mercer, 2007). I was more inclined to place myself in the latter category (Hellawell, 2006), since I was not employed by the college as a member of the teaching faculty at the time of the study and this outsider viewpoint potentially gave me some degree of impartiality and scope for critical thinking in the context of the social environment. However, I was aware that since I was an outsider, there was a possibility that I could not accurately portray the views of the participants (Berger, 2013). Therefore, my goal was to comprehend the experiences of the pre-service teachers and their teacher educators by actively interacting with them and obtaining in-depth insights into teaching and learning for creativity. However, Herr and Anderson (2015) state: “The roles of insider and outsider in action research are not discrete but rather porous and interpenetrating” (p. 40).

On the other hand, since I was part of the group, I was acquainted with many different elements of the identity, language and culture of the group within the Saudi setting. Because of this

familiarity, it was much simpler to approach the participants and gain acceptability among the members of the campus community (Berger, 2013; Dwyer and Buckle, 2009). Having said that, being an insider also created issues in terms of impartiality, reflexivity and the authenticity of the study (Kanuha, cited in Dwyer & Buckle, 2009). However, researchers from both insider and outsider perspectives are able to explore their beliefs, motives and biases through reflexivity (Hellawell, 2006; Cohen et al., 2007; Berger, 2013). As mentioned previously, writing in a reflective manner in a journal was one of the methods I used to attain reflexivity (see 3.4.7).

In addition to my role as a tutor, instructor and facilitator throughout the intervention, it was my responsibility to provide support to the pre-service teachers. In the context of action research, the role of the facilitator has particular significance, especially in managing power dynamics and decision making, as suggested by Avgitidou (2009). Despite my prior experience at the college as a teacher educator and mentor of pre-service teachers, it is crucial to clarify that my involvement in this study had no bearing on the students' academic grades whatsoever. This was done intentionally to maintain objectivity and prevent any potential bias from affecting their grades.

As noted by Cohen et al. (2007), expecting the participants to have complete control or authority in their roles as researchers would have been unrealistic. To avoid setting overly optimistic expectations, certain measures were taken. These measures aimed to balance the power dynamics and ensure a collaborative and balanced relationship between myself as the researcher and the participants. In essence, the interaction between the participants and me was characterised by collaborative discussions, joint decision making and a commitment to fostering a sense of ownership of knowledge and mutual trust, aligned with the insights provided by Avgitidou (2009).

In addition, the researcher has a role as facilitator (Cohen et al., 2007). Specifically, an action researcher has to be an instigator in the development process (Postholm 2008, cited in Postholm & Skrøvset, 2013). This role was based on my understanding of Dewey's (1859–1952) work, namely that students are actively involved, and the teacher has a fundamental role as facilitator and guide in supporting them, giving advice when needed and providing the necessary scaffolding and resources in terms of teaching skills. Overall, my involvement extended beyond mere observation (Berg, 2001), as I actively participated in the intervention as a teacher and learner-participant. This immersive approach provided a more comprehensive understanding of creative

education and its influence on students. By actively engaging in the intervention, I sought to create a safe space for the group to experiment with and refine ideas about incorporating creativity in the classroom. Combining my roles as a teacher and researcher helped me bridge the gap between theory and practice, contributing valuable insights to pre-service teacher education and the teaching of creativity. The process of constant introspection and improvement aimed to foster professional growth while enhancing creative teaching and learning approaches. The next section moves on to address the research intervention.

3.7 The Research Intervention: The Sessions of Creative Learning

The sessions of creative learning were an essential component of this research, designed to support pre-service teachers in their development. These sessions required active participation from the pre-service teachers, as previously explained in Section 3.3.3. The sessions were based on an adapted version of the Five-Dimensional Model of Creativity (Lucas et al., 2013; Lucas, 2016), comprising five sub-habits: imaginative, inquisitive, persistent, collaborative, and disciplined (see Section 2.3.7). It is important to note that this was not a direct application of the original model by Lucas et al. (2013), but an adaptation tailored to this specific research context. The model served as a structural framework guiding the design and implementation of teaching strategies within the research context. This adaptation aimed not to validate the original model but to utilise its principles to enrich the educational intervention designed for this study.

This section sets out the sessions from a practical perspective in two sub-sections: addressing the design and description of the creative learning sessions (3.7.1) and the structure of the creative learning sessions and methods applied (3.7.2). Taking into consideration the word length of this thesis, the detailed plans for the six creative learning sessions (research intervention) are provided in Appendix F.

3.7.1 Designing and Describing the Sessions of Creative Learning

Designing and implementing the intervention was a process that combined reflective and creative elements, involving a synthesis of existing research, theory, and practical knowledge (Fraser & Galinsky, 2010). This approach aligns with experiential and collaborative development, drawing support from Vygotsky's (1995) educational theories and his work on "productive" versus

“reproductive” learning, applied mostly in collaborative activities, “learning by doing” and the pragmatic perspectives of John Dewey (1933, 1934, 1938), the principle of reflection-on-action espoused by Schön (1983, 1987), and creative thinking and learning principles (Lucas et al., 2013; Lucas, 2016, 2019).

The research intervention aimed at developing a pedagogy of creative learning was designed as a journey entitled “Land of Creativity”, presented in Table 6. The intervention comprised six sessions, as follows:

- Session 1: Introduction to Creative Learning

This initial session set the foundation by introducing the concept and significance of creative learning, preparing participants for the subsequent sessions.

- Session 2: Imagination

This session focused on fostering imagination among participants, encouraging an understanding of imagination in learning and teaching, and promoting the generation of new ideas.

- Session 3: Inquisitiveness/Curiosity

This session aimed to stimulate curiosity, driving participants to explore and inquire, which is crucial for creative problem-solving in teaching and learning.

- Session 4: Persistence

The emphasis in this session was on developing perseverance, helping participants understand the importance of sustained effort in overcoming challenges as creative teachers.

- Session 5: Collaboration

Recognising the value of teamwork, this session enhanced collaborative skills, enabling participants to work effectively with others to achieve common goals.

- Session 6: Discipline and Teaching for Creativity

The final session integrated discipline with creativity, highlighting creative habits and teaching approaches to nurture creative potential and enable the participants to apply these principles in teaching contexts.

The use of the “journey” metaphor, rather than educational terms, added a creative and imaginative dimension to the sequential intervention activities, distinguishing them and making the

intervention stand out from other modules in the college where the study was conducted. Additionally, the intention was to create an engaging and dynamic learning experience for the participants. However, it is important to note that while the intervention used an imaginative journey title, this did not imply the adoption of a limiting view of creativity as merely a form of fantasy. According to Vygotsky (1995):

There is no opposition between imagination and reality. Imagination is a form of consciousness—an ability to combine—which is connected with reality in more ways than one. Imagination is based on elements taken from reality, which means that the creative activity is directly dependent upon the individual's experiences, and the extent and degree of variation of these experiences. (cited in Lindqvist, 2003, p. 248)

Given the dynamic complexity of the creativity field and creative pedagogies, creative teaching and learning must welcome opportunities for judicious risk taking (Tudor, 2008), or “sensible” risk taking (Sternberg, 1997), and unstructured learning (Sternberg, 1999). To achieve this within the intervention, two aspects were considered.

First, participants could suggest topics and build upon activities during the six sessions. A range of structured and unstructured opportunities were provided for learners to explore (Halsey et al., 2006), designed to be meaningful and linked to real life (Craft et al., 2014). Thus, it was important to link structured and unstructured parts (Baer & McKool, 2009), within the intervention sessions. I prepared activities and allotted free time for the participants to suggest their own activities based on their needs. Balancing rigour and openness in the sessions was crucial to support the pre-service teachers in engaging in creative teaching and nurturing their own creativity. This approach is in line with research by Sternberg (2003), Lin (2009), and Sawyer (2011, 2015), who highlight the importance of blending structured learning with creative exploration. This blend not only stimulates creativity but also enhances problem-solving, social engagement, and communication skills. Such a balanced pedagogical approach can significantly affect educational practices. For example, some participants suggested activities in sessions three and four, demonstrating their active involvement and investment in the learning process.

It should be noted that this strategy entailed some risks, such as the possibility of a lack of generation of creative ideas or topics, or the rejection of ideas by some or all of the participants. However, because this is an action research project, the collaborative nature between the researcher

and the participants is crucial for improvement and making meaningful changes (McNiff & Whitehead, 2011).

In action research, involving participants in decision-making processes not only empowers them but also enhances the relevance and applicability of the activities to their real-world contexts. By allowing participants to contribute their ideas and take ownership of their learning, the research becomes more responsive and adaptive to their needs and interests (Stringer, 2013; Kemmis & McTaggart, 2005). The decision to incorporate participant-suggested activities reflects the importance of flexibility in educational research and practice. It recognises that learners bring valuable insights and experiences that can enrich the learning process. This strategy not only mitigates the risks associated with unstructured activities but also enhances the overall effectiveness and engagement of the sessions.

Second, the andragagogical framework proposed by Knowles (1973) was instrumental in designing the methodology for this study, particularly since this intervention targeted pre-service teachers, who are adult learners. Knowles' framework, based on six key assumptions about adult learning, guided the structuring of the creative learning sessions tailored specifically for this group. According to Knowles, the six principles of andragogy are as follows:

1. Learners need to know
2. Self-concept of the learner
3. Prior experience of the learner
4. Readiness to learn
5. Orientation to learning
6. Motivation to learn.

Knowles et al. (2020) highlighted the importance of distinguishing the core principles of adult learning from the actual goals and purposes of specific learning events. Although these principles and the educational objectives may seem conceptually distinct, they often intersect in practice. This intersection was crucial in the research intervention. Understanding this overlap enabled me to design and conduct learning sessions that would not only adhere to andragagogical principles but also effectively meet the targeted educational outcomes of this study. How these principles were

integrated into the learning sessions and their impact on educational outcomes will be discussed further in the Discussion Chapter (see 5.2.1.2).

This sub-section has provided a general overview of the creative learning sessions. Detailed explanations and reflections on each session are presented in sections 3.8 (Pilot Study) and 3.9 (Main Study). The next sub-section addresses the structure, activities, and methods employed in the creative learning sessions.

3.7.2 Structure of Creative Learning Sessions and Methods Applied

The concept of creative learning helps explain why certain methods and structures were chosen, as the aim was to balance and integrate elements from both creative teaching and teaching for creativity (Jeffrey & Craft, 2006). Two aspects need to be considered to understand the structure and methods employed in the creative learning sessions to achieve the intermediary role of creative learning in this research:

First, flexibility was prioritised as much as possible during each session. Second, the session activities were heavily dependent on the participants and the topic.

To support this flexible and participant-centred approach, the intervention incorporated various creative learning methods, carefully selected based on their alignment with Lucas's et al. (2013) model of creativity. These methods aimed to create a conducive environment for fostering creativity among the pre-service teachers.

Regarding the structure of the sessions, each was structured around a specific theme, derived from Lucas et al. (2013) and designed to last about two hours. With six sessions in total, the combined duration was approximately 12 hours. As detailed in Table 6, there were four elements: ice-breaking, main activities, strategies and conclusion, explained in the following:

- Ice-breaker (15 minutes): The commencement of each session is instrumental in establishing an academically conducive milieu. The initial 15 minutes were allocated to an ice-breaking activity, meticulously designed to acclimatise the participants to the forthcoming intellectual discourse. This segment served a dual purpose: it introduced the thematic focus of the session and employed “possibility thinking” queries, such as “what

if?”, to catalyse cognitive engagement and prime the participants for the subsequent pedagogical activities.

- Main activities (50 - 65 minutes): The core of the session was encapsulated in the main pedagogical activities, spanning an approximate duration of 50 minutes. These activities, an amalgamation of individualised tasks and collaborative endeavours, were carefully curated to provide an in-depth exploration of the definition of the topic, its historical context and nuanced details. There was an emphasis on the integration of higher-order cognitive exercises, including problem-solving methodologies.

The participants were expected to engage in multifaceted tasks, such as the conceptualisation and creation of posters or slogans, culminating in erudite presentations and scholarly discussions. The overarching objective remained the elucidation of the process and outcomes, making explicit correlations with the tenets of creative learning pedagogy.

- Conclusion/final notes (20 minutes): The final stage of the session, spanning 20 minutes, was dedicated to synthesis and introspection. This segment offered a concise recapitulation of the salient points broached during the activities. It further elucidated the nexus between the session’s thematic focus and the overarching paradigm of creative learning.

The participants were appraised of any reflective assignments necessitating post-session engagement. Furthermore, the final segment was judiciously utilised to assess the efficacy of the session, giving participants an interlude for contemplative introspection and feedback.

In addition, in my role as a facilitator, it was necessary for me to employ diverse teaching and learning methods to foster creativity (Lucas, 2017). Thus, during the sessions, I utilised a variety of methods based on the situation, including discussion, brainstorming, and mind maps, as highlighted in Table 6. The methods most commonly used in the sessions included the following: play, brainstorming, problem-solving, discussion, and mind maps.

- *Play* was integrated into the learning activities to stimulate imagination, facilitate ice-breaking activities, and reduce barriers to creative expression. I used the term “activity” during the sessions rather than “play”, but the idea that playfulness contributes to creativity is well-studied and discussed in various psychological and educational theories. Lucas and Spencer (2017)

highlight playful experimentation as one of the five interconnected pedagogies particularly relevant to the cultivation of creative thinkers, aligning with Lucas et al.'s (2013) model. Researchers such as Craft (2001), Csikszentmihalyi (1996), and Runco (2014) have explored the relationship between play, playfulness, and creativity. In addition, Vygotsky (2004) supports the importance of play in cognitive development, highlighting that imaginative play allows individuals to transcend their immediate reality and explore new possibilities.

In the context of this research, the play activities were tailored to the needs of adult learners, fostering an environment in which pre-service teachers could freely explore and experiment without fear of failure. This aligns with Knowles et al.'s (1973) principles of andragogy, which stress the importance of providing adults with opportunities for self-directed learning and practical application. James (2019) argues that integrating play into higher education curricula can lead to more innovative and effective educational practices. This approach enables students to explore, experiment, and develop critical thinking skills in a supportive and stimulating context.

For example, the activity in Session Four, “The Paper Tower Challenge”, incorporated elements of fun, creativity, and imagination in the learning process. It encouraged the pre-service teachers to explore, experiment, and engage deeply with the material. I found that “play” during the sessions not only made learning enjoyable but also enhanced creative thinking by allowing the learners to approach problems from different angles and develop innovative solutions.

- *Brainstorming* is a widely recognised method for generating ideas and solving problems. According to Osborn (1953), it focuses on spontaneous idea generation within a group setting to enhance creativity and problem-solving. This technique involves group discussions, in which participants are encouraged to share their thoughts freely and build on each other's ideas without fear of criticism, fostering an open and supportive environment. Research indicates a strong association between brainstorming productivity and learning (Gogus, 2012). Paulus and Yang (2000) further support the effectiveness of brainstorming in enhancing creative performance through the collaborative generation of ideas.

During the sessions, brainstorming aimed to enhance participants' ability to think divergently and collectively. This approach aligns with creative learning and teaching principles, which highlight the importance of generating multiple solutions to a problem. For example, in Session Two, the participants engaged in an activity to construct a word cloud related to creativity. The benefits of brainstorming were multifaceted. It made the learning process enjoyable and enhanced creative thinking by allowing the learners to approach problems from different angles and develop innovative solutions. Integrating brainstorming into the sessions fostered creativity and problem-solving skills among the pre-service teachers. In addition, the collaborative nature of brainstorming helped build a sense of community, promoting a shared commitment to exploring and expanding creative ideas.

- *Problem-solving* is key in creative learning and teaching (Sternberg, 2003; Cropley, 2006). Treffinger et al. (2005) define creative problem-solving as a process that involves understanding challenges, generating ideas, and planning for action. This approach aligns with mini-c creativity, enabling participants to generate new ideas and find fresh perspectives, as discussed in Section 2.3.1. By presenting real-world challenges, these activities encourage innovative solutions, in line with Lucas et al.'s (2013) emphasis on applying creative thinking to practical problems.

An illustrative example is the “Motivational Slogan” main task in Session Four. In this activity, the participants faced the problem of motivating students during mid-term examinations. They worked in teams to create and design slogans that could inspire and encourage their peers. This approach not only required the participants to develop innovative solutions to a common problem but also enhanced intrinsic motivation, which Amabile (1996) identifies as essential for creativity.

Moreover, Craft's (2001) concept of “possibility thinking” was incorporated to develop flexibility in thinking and adaptability. For instance, the participants were presented with a challenging scenario: teaching in a resource-limited school with diverse learning needs. They were then tasked with generating multiple innovative solutions, encouraging them to think beyond conventional methods. These exercises promoted persistence and discipline, urging the participants to overcome obstacles and refine their ideas. The problem-solving activities

significantly sharpened the participants' critical thinking, enhanced creativity, and improved collaboration and resilience.

- *Discussion* is a common and flexible method employed in interactive learning. Discussions were used to foster a collaborative learning environment in which the participants could exchange ideas and reflect on their experiences. This method supported the development of creative habits, such as questioning assumptions, exploring possibilities, and considering multiple perspectives (Lucas et al., 2013). Throughout the sessions, discussions were employed to link the session's topic with the participants' experiences as pre-service teachers, connecting their current and prospective teaching practices.

The use of discussion as a pedagogical tool aligns with constructivist learning theories, which posit that knowledge is actively constructed by learners through social interaction and reflection on experiences (Vygotsky, 1978). In the context of creativity education, discussions serve multiple purposes. They facilitate the exchange of ideas, promote critical thinking, and encourage divergent thinking – all critical components of creative thought (Beghetto & Kaufman, 2014). During the sessions, structured discussions were designed to stimulate what Wegerif (2010) terms a “dialogic space”, one in which multiple perspectives can coexist and interact. In addition, some unstructured discussions were included. Both approaches foster cognitive flexibility, a key attribute of creative individuals (Runco, 2014).

For instance, in Session Five, the participants engaged in a discussion about the barriers to collaboration in terms of creativity in classrooms. This activity not only allowed them to share personal experiences but also to brainstorm solutions collaboratively, thereby practising both problem-identification and problem-solving skills. The discussions also incorporated elements of reflective practice, as advocated by Schön (1983). The participants were encouraged to reflect on their experiences and connect theoretical concepts to practical applications.

The benefits of incorporating discussion were manifold. The discussions enhanced engagement by making the learning process more interactive and participant-centred. They also promoted deeper understanding by requiring the participants to articulate their thoughts and defend their positions (Mercer & Littleton, 2007). Furthermore, the discussions helped develop the participants' communication skills, which are critical for effective teaching

(Danielson, 2013). In summary, the integration of discussions throughout the sessions provided a dynamic, interactive learning environment that fostered creativity, critical thinking, and reflective practice among the pre-service teachers.

- *Mind mapping* is a potent method in creative learning and teaching (Anderson, 1993). It is employed as a visual tool to help participants organise their thoughts and explore connections between different concepts. Mind maps were proposed in 1974 by Tony Buzan and their use in creative education is grounded in several key educational and psychological theories that highlight visual learning, cognitive development, and the facilitation of creative thinking processes (Buzan & Buzan, 1993). Mind mapping aligns with Lucas's (2013) model by promoting the synthesis of ideas and helping participants see the bigger picture, thereby enhancing their ability to generate creative solutions.

In the context of creativity education, mind mapping serves as a powerful tool for divergent thinking, a key component of creative cognition (Runco & Acar, 2012). Constructivist learning theories suggest that knowledge is constructed through active engagement and interaction with the environment. Mind maps facilitate this by allowing learners to organise and structure their thoughts actively, thereby constructing knowledge in a meaningful way (Vygotsky, 1978).

During the sessions, mind mapping was utilised in various ways. For instance, in Session One, the participants created mind maps to explore their understanding of creativity in education. This activity allowed them to externalise their thoughts, identify gaps in their knowledge, and stimulate curiosity about unexplored areas. In Session Six, mind mapping was used as a brainstorming tool for identifying creative teacher traits, encouraging the participants to consider multiple aspects of a creative lesson simultaneously.

The benefits of incorporating mind mapping were manifold. It enhanced visual-spatial thinking, which is needed for creative problem-solving, and promoted active engagement with the material, fostering deeper understanding and more effective learning (Hay et al., 2008; Machado & Carvalho, 2020). The collaborative aspect of mind mapping activities also contributed to the development of social creativity (Sawyer, 2012). In summary, the integration of mind mapping throughout the sessions provided a versatile, engaging tool that fostered

creativity, enhanced understanding, and promoted both individual and collaborative learning among the pre-service teachers.

The methods used during the sessions are discussed here from both theoretical and practical perspectives. However, this does not imply that they are exclusively those that are effective. Educators and researchers need to be selective and reflective in applying methods and activities that align with their specific goals, participants, and settings. Tomlinson (2017) asserts that differentiated instruction requires educators to adapt their teaching strategies to meet the diverse needs of learners. This approach recognises that learners have varying backgrounds, readiness levels, interests, and learning profiles, necessitating flexible and varied instructional methods.

Brookfield (2017) emphasises the importance of critical reflection in teaching, encouraging educators to continuously assess and adapt their methods to ensure they are effective and relevant. Critical reflection involves questioning one's assumptions and practices, seeking feedback from students, and being open to change. By engaging in reflective practice, educators can better understand the impact of their methods and make informed decisions to enhance learning outcomes.

In addition, Lucas and Spencer (2017) highlight the importance of teaching creative thinking to develop learners who can generate ideas and think critically. Emphasis is placed on the role of pedagogy and social interaction in cognitive development, suggesting that educators should create learning environments that foster collaboration and dialogue. This aligns with the use of methods such as discussion and mind mapping, which promote active engagement and social learning.

In line with these perspectives, it is necessary for educators to consider a broad range of strategies and continuously reflect on their effectiveness. By doing so, dynamic and responsive learning environments can be created, catering to the diverse needs of students and ultimately fostering deeper understanding and creativity.

Overall, this section has explained the research intervention, covering the design and implementation of the intervention, providing an overview of the creative learning sessions, and discussing the structure, activities, and methods. The next section discusses the pilot study.

Session/focus	Ice-breaker (Play activities) (15-20 minutes)	Main activities (50 minutes)	Conclusion/notes (20 minutes)	Methods /Strategies
Session 1: Introduction to creative learning and teaching	<ul style="list-style-type: none"> - Introduction activity to allow participants to talk about their personalities and discuss their motivations for attending 	<ul style="list-style-type: none"> - Craft activity: making a ‘creative ice-cream’ participants engage in hands-on creation Quick-Scan Reading and Discussion on Creativity in Education and its Levels - Link between the topic and their experience as pre-service teachers. 	<p>All sessions include:</p> <ul style="list-style-type: none"> - Mind map: a visual representation of the main points discussed - Reflective journals: a reminder for participants to pen their reflections - Feedback and open talk: participants sharing their thoughts on the session - Next session preview: a brief overview of the next topic - Resources: recommended readings and materials related to the discussion - Contact information: for any queries and questions - Thanking the participants for attending 	<ul style="list-style-type: none"> • Brainstorming • Play • Solving problems • Discussion • Mind maps
Session 2: Imagination	<ul style="list-style-type: none"> - Constructing a Word Cloud Related to Creativity - Recap: summary of the main points. 	<ul style="list-style-type: none"> - Making a ‘creative channel’. - Discussion on the topic. 		<ul style="list-style-type: none"> • Brainstorming • Solving problems • Discussion • Mind maps
Session 3: Curiosity	M&Ms Question Game	<ul style="list-style-type: none"> - Creating Questions Poster on Interesting Topics - Discussion on the topic. 		<ul style="list-style-type: none"> • Brainstorming • Solving problems • Discussion
Session 4: Persistence	<ul style="list-style-type: none"> - Recap - Team building towers from paper - Recap 	<ul style="list-style-type: none"> - Making a ‘Motivational Slogan or Project’ - Discussion on the topic. 		<ul style="list-style-type: none"> • Brainstorming • Solving problems • Discussion
Session 5: Collaboration	<ul style="list-style-type: none"> - Group Story Creation - Recap 	<ul style="list-style-type: none"> - A group discussion on creativity and collaboration. - Mind map using Six Thinking Hats - Quick-Scan Reading on collaboration and team-work in classroom 	<p>General notes:</p> <ul style="list-style-type: none"> • A 10-minute break will be provided. • After the conclusion, participants will be given roughly 10-15 minutes to jot down their thoughts. Following this, they have the option to either complete their writing within the next 40 minutes, with me available for assistance or to continue at their own pace and submit it at a later time. 	<ul style="list-style-type: none"> • Six thinking hats • Mind mapping • Brainstorming • Discussion
Session 6: Discipline and Teaching for creativity	<ul style="list-style-type: none"> - Game of True or False: Exploring Beliefs - Recap 	<ul style="list-style-type: none"> - Analysing Austen’s Butterfly - Exploring the Creativity Wheel - Build a creative activity - Open Discussion on the topic. - Final Conclusion of the sessions 		<ul style="list-style-type: none"> • Brainstorming • Solving problems • Mind mapping • Project-based learning

Table 6. Outline of The Sessions of Creative Learning

3.8 Pilot Study with Pre-Service Teachers

To ensure the validity and appropriateness of the research methods and the of creative learning, I conducted a pilot study to refine the procedures. This pilot study helped me better understand the data in the context of the setting or situation (Berg, 2001), addressing questions about what issues or problems were affecting the pre-service teachers regarding teaching for creativity and how these concerns affected teacher education programmes.

In the pilot study, I conducted only three interactive sessions of creative learning due to time constraints. The group comprised six pre-service teachers in the final stage of their college programme. The details of the participants and contributions/attendance are given in Table 7.

No.	Code Name	Age (years)	Major	Number of Sessions Attended	Number of Entries in Reflective Journals	Number of Focus Groups Attended
1	P1	22	Arabic	2 of 3	2 of 3	3 of 3
2	P2	22	English	3 of 3	3 of 3	3 of 3
3	P3	25	Islamic Studies	2 of 3	2 of 3	3 of 3
4	P4	22	Arabic	1 of 3	1 of 3	1 of 3
5	P5	22	Arabic	1 of 3	1 of 3	1 of 3
6	P6	21	Islamic Studies	1 of 3	1 of 3	2 of 3

Table 7. Participation in the pilot study

The selection of participants for this pilot was based on a random sampling approach facilitated by two teacher educators. The six participants were unable to be involved in the main study due to complex circumstances, including the need to attend courses from levels two and three. Moreover, one participant withdrew because of challenges in managing time.

To gather the data, I conducted an initial meeting, outlining the general objectives and significance of creative learning, supported by relevant translated knowledge from the literature. I highlighted the importance of engaging with the creative learning sessions through reflective journals and explained the nature of the research and their roles. Those interested in attending the sessions and participating in the study signed consent forms (see Appendix G).

In terms of the creative learning sessions, I delivered three focused on the following topics: (i) introducing and explaining the concepts of creative learning; (ii) Imagination as a creative habit; (iii) curiosity as a creative habit (see Table 8).

First meeting 28.1.22		Objective: to elucidate the research aims and nature, clarify the roles of the participants and obtain consent				
Session	Topic	Time	Date	Participants	Reflective journals	Focus groups
S1	Overview of creativity	90 min	1.2.22	6	1	Discussion around 40 min
S2	Imagination	60 min	6.2.22	6	6	Discussion around 45 min
S3	Curiosity	60 min	8.2.22	3	3	Discussion around 45 min

Table 8. Outline of the pilot study

After each session, the participants were asked to write entries in their reflective journals, after being offered guidance on how to approach reflective writing. In addition, I conducted three focus group discussions centred around specific topics to encourage open dialogue and gather collective perspectives, as detailed in Table 8.

The pilot study was instrumental in shaping the research methods, allowing me to gather valuable data and gain profound insights into the participants' experiences. Themes, codes, and categories that emerged from the thematic analysis of the pilot study are presented in Appendix I.

Notably, I observed that most pre-service teachers exhibited limited critical reflection, leading to significant variations in both the quantity and quality of their written reflections. Several factors could have contributed to this challenge:

- Lack of familiarity: Many pre-service teachers were not accustomed to engaging in deep reflective journaling during their academic studies.
- Limited constructive feedback: Pre-service teachers might not have received sufficient constructive comments and feedback to support their reflective development.
- Workload: Some participants indicated that their heavy workload, balancing their college studies and teaching responsibilities, affected their capacity for reflection.

- Time constraints: Pre-service teachers expressed the need for more time and thought-provoking questions to reflect deeply on their experiences.
- Preference for oral reflection: Some participants felt more comfortable engaging in oral reflections rather than extensive written reflections on their experiences and reasons for their actions.
- Desire for modelling: Pre-service teachers expressed interest in seeing examples of creative teaching to bridge the gap between in-class discussions and real-world implementation.

Based on insights from the pilot study, I believed that addressing these factors would enhance the effectiveness of reflective journaling. This tool has potential for fostering critical thinking and professional growth among pre-service teachers.

Moreover, the results of the pilot study provided valuable insights and guided the design of the action research. Based on the findings, several important aspects were taken into consideration to enhance the research process:

- Clarification of reflective journals: To address the limited familiarity with reflective journaling among pre-service teachers, a presentation was delivered at the beginning of the main research phase. This aimed to clarify the meaning of reflective thinking and writing.
- Qualitative questions: To support the pre-service teachers in engaging in deep reflection, qualitative questions were offered as guidance for their journal entries.
- Rescheduling and time management: The timetable constraints faced by the pre-service teachers were taken into consideration. As a result, the main activities in each session were rescheduled and effective time management strategies were implemented in setting up the sessions and conducting activities within them.
- Adjustment of session order: After conducting the pilot study, the order of the sessions was revised to ensure a more logical progression and effective learning experience. The sequence was changed from Session 3: Persistence and Session 4: Curiosity to Session 3: Curiosity and Session 4: Persistence. This change was made to ensure a more logical progression of topics, facilitating a more effective learning experience for the participants.
- Adjusting the frequency of focus groups: Instead of conducting discussions after each session, a single focus group was held after the final session.

- Ensuring the selected room for the session was adequately equipped. Not all classrooms or meeting spaces in the college come with built-in facilities for presentations, such as a projector and Wi-Fi. This consideration extends beyond merely affecting the delivery method of the sessions; it is intrinsically linked to the learning environment and the facilitation of creative teaching in teacher education. Additionally, both pre-service teachers and their teacher educators, as highlighted in the findings chapter, recognised the significance of this aspect. This alignment between the physical environment and pedagogical needs emerged as a key factor in the success of the educational process.

These aspects and insights from the pilot study were vital in shaping the methodologies and strategies implemented in the main study, as discussed in the following sub-section.

3.9 Main Study with Pre-Service Teachers

As previously discussed, the pilot study laid the foundations for the main study. It provided essential data and insights that informed further analysis and refinements in the action research process. The main study comprised six creative learning sessions conducted over eight weeks (see Table 9 for details of time, dates, participants, and data). It involved 15 pre-service teachers, whose active participation and insightful feedback were instrumental in fostering a supportive learning community and enhancing educational practices (cf. 3.4.1 for detailed information on the participants). This collaborative approach, anchored in the action research model of “plan, act, observe, and reflect”, was crucial in shaping and refining each session. Through the piloting process, I derived valuable insights that guided the development of the sessions. Particular focus was placed on key factors, such as the teachers’ presentation style, experiential learning, student engagement, and reflective practice. In the following sub-sections, I provide a comprehensive overview of the six creative learning sessions. I describe the main activities and offer reflections on each session to give a detailed understanding of the process.

It should be noted that the activities and examples in the sessions of creative learning were selected based on their endorsement following educational discussions with experts, including supervisors of this research and two of my colleagues who are senior educators. Their input ensured the selection of activities that are effective in demonstrating best practices in classroom settings. These activities and strategies are considered part of best practices because they align with Lucas et al.’s (2013) model and are further supported by Lucas and Spencer (2017). The innovative teaching

strategies, such as building towers, creating mind maps, and watching and analysing real examples, are widely recognised for their effectiveness in the field of education. These approaches not only showcase innovative and effective teaching methods but also provide practical examples that can be easily applied in classroom settings, thereby enhancing both teaching and learning experiences for pre-service teachers.

Session	Topic	Time	Date	Participants	Number of Entries in Reflective Journals
S1	Overview of creativity	90 min	23.2.22	13	11
S2	Imagination	120 min	10.3.22	15	15
S3	Curiosity	60 min	24.3.22	7	7
S4	Persistence	90 min	25.3.22	12	12
S5	Collaboration	120 min	31.3.22	12	11
S6	Discipline and Teaching for creativity	120 min	6.4.22	10	10
Data from a total of six sessions		11 hours	-	66 entries in reflective journals	
Focus Group	Discussion about the creative learning sessions	120 min	7.4.22	10 participants	

Table 9. Details of Time, Date, Participants, and data in the sessions of creative learning

During the first session introduced the concepts of creative learning and teaching. This session was divided into three main activities linked to the topic to enhance the participants' imaginative thinking and creativity. The first activity, "Creating a Creative Ice-Cream", was designed to stimulate participants' imaginative thinking and creativity. The second activity, "Quick-Scan Reading and Discussion on Creativity in Education", aimed to develop quick reading skills and facilitate a theoretical discussion on the role of creativity in education. Finally, a general discussion was conducted to link the session topic to the participants' experiences as pre-service teachers. The pre-service teachers provided valuable feedback, encouraging the inclusion of more visuals and suitable colours in PowerPoint presentations to cater to visual learners. These suggestions were taken into account and subsequent sessions were designed with these considerations in mind. In addition, support for reflective writing was highlighted and discussed in each session to assist participants in maintaining their journals.

Session Two explored "Imagination". This session was divided into three main activities linked to the topic. The first activity, "Making a Creative Channel" using materials provided (papers,

colours, etc.), aimed to foster creativity and imagination among the participants through the design of a concept for a new channel or broadcast to express their ideas and influence the community. Following this, an open discussion was held on the meaning of imagination and its connection to creativity. Finally, the participants discussed the role of imagination and creativity in Saudi education and wrote short advice for new teachers on how to be creative.

Feedback from the second session included comments on the timing of certain activities, prompting a reassessment and fine-tuning of the pace of the sessions. In addition, some participants noted my tendency to speak quickly and seek quick responses. This led me to reflect on the crucial role of a teacher's personality and traits and how these can profoundly affect students in various ways. Significantly, this indicates that action research is not just about the participants or the organisation; it also concerns improvement on the part of the researcher. This makes the action research approach highly appropriate for teachers and educators who want to be effective in their practice (Kemmis & McTaggart, 2005; McNiff & Whitehead, 2011).

In Session Three, the participants explored their ability to be inquisitive with confidence and how to harness this in learning. The activities encouraged each participant to explore and discuss an intriguing topic, promoting brainstorming and making connections between ideas. The session concluded with an open discussion in which the participants asked questions, shared insights, and proposed creative ideas. For example, after introducing Bloom's Taxonomy of Learning, the participants discussed how they might incorporate these skills into their lesson plans. This reflective discussion bridged the gap between theory and practice, enhancing the relevance and applicability of the concepts learned. Peer learning was also promoted as the participants shared insights and challenged each other's assumptions, contributing to a collaborative learning environment (Boud et al., 2014). I observed that collaborative discussions are vital in nurturing creativity as they encourage meaningful dialogues and the sharing of creative insights.

Session Four, focused on several activities linked to "Persistence". The participants worked in teams to create a "Motivational Slogan or Project", developing and designing a slogan to inspire and motivate students during mid-term examinations using materials provided to them. This activity aimed to enhance imaginative thinking and creativity through a practical and engaging

hands-on task. An open discussion followed, in which the participants shared their experiences related to the topic.

During the third and fourth sessions, I noticed fluctuations in attendance, highlighting the impact of class size on participant engagement. Some students expressed more enthusiasm when collaborating with friends, which decreased when working with unfamiliar peers. This observation led to fruitful discussions on creating a supportive and inclusive learning environment to encourage active engagement for all participants.

Furthermore, I incorporated short discussions based on the participants' suggestions. They shared ideas on making waiting time in primary classrooms more creative and engaging, recognising the potential for turning moments of downtime into valuable learning opportunities. These discussions fostered a sense of ownership and creativity among the participants and contributed to a collaborative and dynamic learning experience throughout the sessions.

Reflecting on these observations, I understood that pre-service teachers need more than just short training placements to become creative educators. The role of ongoing discussion and mentoring is crucial in their professional development. Continuous engagement in reflective practices, peer learning, and collaborative discussions help build a deeper understanding and application of creative teaching methods. Therefore, incorporating regular mentoring sessions and opportunities for reflective dialogue can significantly enhance the development of pre-service teachers' creative and professional skills (Schön, 1983; Brookfield, 2017).

Session Five focused on enhancing “Collaboration Skills”. This session was divided into three main activities linked to the topic. The session began with a group discussion to reflect on past sessions and explore ways of enhancing collaboration, with an emphasis on improving learning. The participants then created a mind map using the Six Thinking Hats method to capture the key benefits and challenges of collaboration. This was followed by a Quick-Scan Reading on collaboration and teamwork in the classroom, aimed at developing quick reading skills and summarising the key points in the session.

During the fifth session, I closely observed the progress of the participants in their collaborative efforts and realised the critical role of technology in supporting creative learning and teaching. In

addition, the substantial amount of data gathered during this phase highlighted the immense value of online reflective journals in facilitating feedback and efficiently tracking progress – an aspect not utilised in this study. I also noticed that while the participants expressed a desire to read more material, many did not read enough due to limited time. This feedback emphasised the need to balance the amount of reading material assigned with the time available to participants. Furthermore, I reflected on the importance of creating a safe teaching environment, especially for new teachers. As a result, I decided to make changes to the order of sessions, starting with a discussion of personal experiences, followed by ice-breaker activities to foster a more inclusive and comfortable learning atmosphere.

Session Six focused on “Discipline and Teaching for Creativity”. Due to the participants’ feedback on the importance of seeing and studying real examples of creative teachers, this session was designed to incorporate several activities. The first, creating a mind map entitled “Analysing and Reflecting on Austin’s Butterfly”, aimed to understand the impact of constructive feedback and disciplined revisions on creativity through the analysis of the Austin’s Butterfly short video on YouTube. In order to do the main task, the participants watched a video featuring Ron Berger, a teacher from Expeditionary Learning, demonstrating a teaching experience at a primary school in Boise, Idaho, US. Berger, known for his innovative educational practices, guided students through iteratively refining a sketch of a butterfly using constructive peer feedback (Berger, 2013).

Here, I used “Austin’s Butterfly” to exemplify the power of models, critique, and descriptive feedback in the educational process (Berger et al., 2016). I found that this experience demonstrated creative teaching by encouraging precision, challenge, and attention to detail through revisions based on peer critique (Boyle, 2019). This method underscores the importance of a supportive learning environment that motivates students to improve their work iteratively, a fundamental aspect of creativity. By discussing this real example, the participants could see how such approaches could be implemented in schools to enhance students’ creative capacities, empowerment, engagement, and critical thinking skills (Berger et al., 2016).

The second activity, “Teaching for Creativity: Exploring the Creativity Wheel”, explored the different facets of creativity and applying the aspects in the Creativity Wheel to personal and professional development. This was followed by an open discussion about the experience. The

session then encouraged the participants to open up their imagination by suggesting what creative projects in their school placements might look like, synthesising insights from the entire series of sessions to foster creativity.

As the sixth session unfolded, I noticed significant engagement among the participants, which was likely influenced by the less busy day and the incorporation of a video showcasing real-life teacher experiences. The session's focus on hands-on tasks and experiential learning underscored the importance of fostering creativity through practical application. The final part of the session included a conclusion and full group debrief, summarising the key points from all the sessions, highlighting the main elements discussed, and acknowledging the contributions of each participant.

Throughout the sessions, the pre-service teachers asked about studying at UK universities and schools, as well as the approaches and methods used in UK primary schools. Through these interactions, they expressed their perspectives on both Saudi and British education, showcasing their aspirations to drive positive change in the educational landscape. The active participation of the participants allowed insightful feedback and constructive criticism, reflecting the democratic nature of the action research approach (Berg, 2001; Kemmis, 2009). This democratic environment also highlighted the importance of valuing and incorporating students' voices in the learning process. It is essential to recognise that action research goes beyond mere problem-solving. It involves identifying and aligning actions with participants' values and justifying the choices made (McNiff & Whitehead, 2010). This reflective and iterative process not only enhanced the learning experience for the participants but also contributed to my professional growth as the researcher.

In conclusion, the main study phase comprised action research encompassing creative learning sessions and incorporating multiple elements that fostered a supportive learning community and encouraged critical engagement. This dynamic approach allowed for a deeper exploration of values and objectives, making the research more than just a means of solving problems; rather, it was a journey of growth and development. Figure 13 below, offers an overview of the main study and the whole data collection in this research.

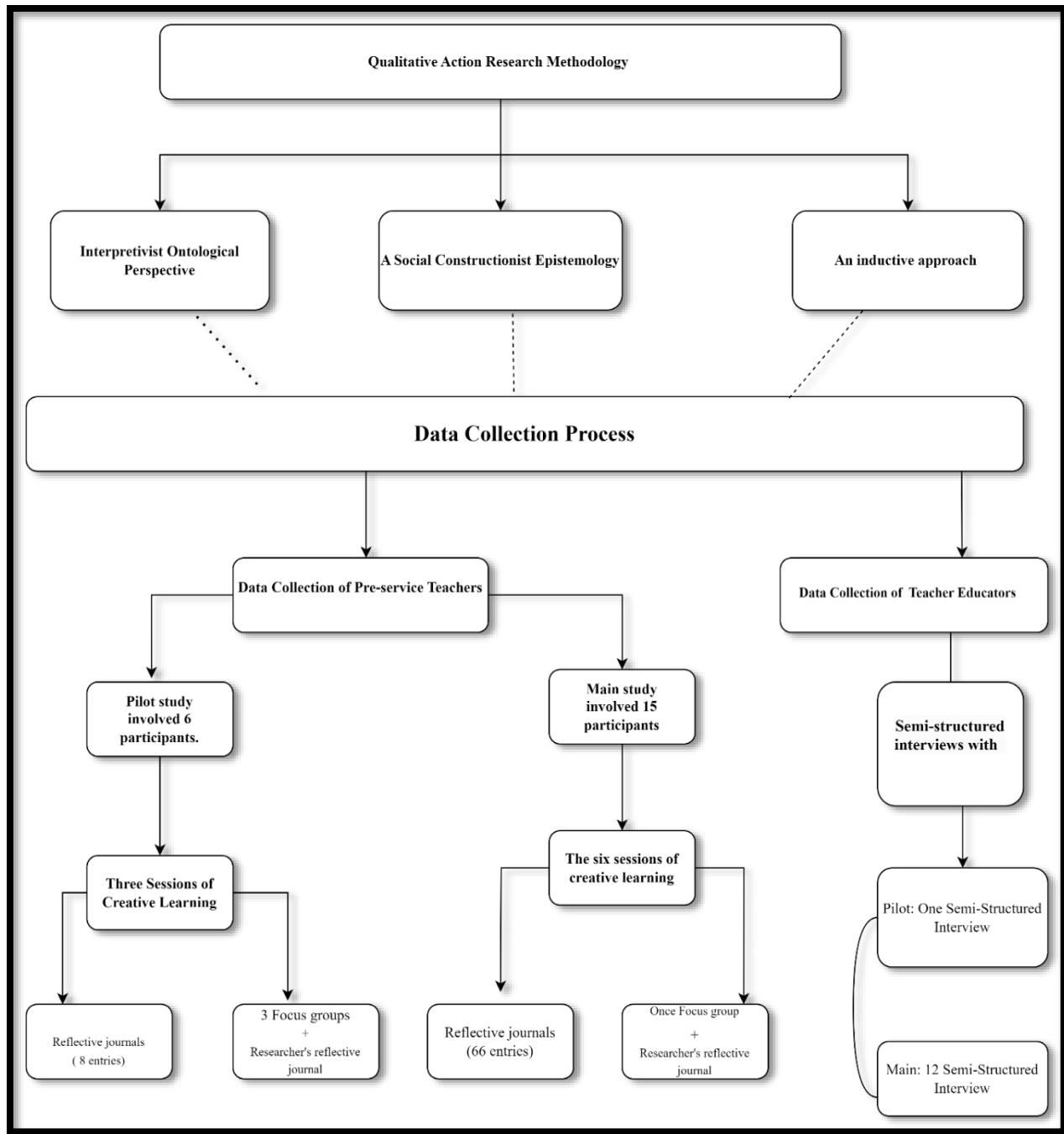


Figure 13: Overview of the action research approach, the research participants, and summary of data collection processes, and tools

3.10 Data Analysis

In qualitative field studies, data analysis involves gradually inducing meaning from raw data through interpretive transformation into structured findings (Lofland & Lofland, 1995). The researcher's organisation and examination of the data is guided by topics, questions and evaluative criteria aligned with the research aims. In this study, multiple forms of data were gathered using various research tools, including reflective journals, focus groups, interviews and my own reflections. This diverse collection of data was then meticulously analysed through a process of inductive coding to extract meaningful insights addressing the specific research questions, as outlined in Table 10.

Research sub-questions	Research tools	Participants	Methods of data analysis
1. How do the views of creative learning and teaching evolve among Saudi pre-service teachers during the creative learning sessions?	<ul style="list-style-type: none"> ○ Pre-service teachers' reflective journals ○ Researcher's reflective journal ○ Focus group with pre-service teachers 	15 pre-service teachers	Reflexive thematic analysis approach
2. How do Saudi teacher educators perceive creative learning and what factors influence the preparation of creative pre-service teachers in higher education?	<ul style="list-style-type: none"> ○ Semi-structured interviews 	12 teacher educators	

Table 10: Summary of the research questions and methods of data collection and analysis

This section discusses the procedures of data analysis in detail. The data analysis process involved four main steps, which were carried out in the following sequence: organisation and preparation of the raw data, including translations (3.10.1); selection of the reflexive thematic analysis approach as the method for analysis (3.10.2); use of NVivo as a tool to facilitate the coding and theme generation process (3.10.3); generation of codes and themes using NVivo, categorising the findings into two sections to address the research sub-questions (3.10.4). Each step is explained in depth to provide a comprehensive understanding of the data analysis process.

3.10.1 Organisation and Preparation of the Raw Data, Including Translation

According to Creswell (2007), qualitative data analysis essentially involves preparing and organising the data. In this research, the preparation of raw data involved transcribing the recorded interviews and focus group discussions into Microsoft Word. In addition, some reflective journal entries were handwritten and later transcribed into Word documents to maintain consistency and accessibility for analysis.

The process of transcription is both labour-intensive and time-consuming (Jenks, 2013). Transcribing focus groups can pose particular challenges, especially in trying to identify individual speakers. However, given that the primary aim of this research was to explore the fostering of creative learning and teaching rather than assessment or evaluation, pinpointing individual speakers was not prioritised during the transcription process.

The second step involved translating the transcriptions from Arabic to English. While there is no one-size-fits-all approach in research (Creswell & Poth, 2018), in this research, I took the view that translating the qualitative data into English before undertaking the analysis would be preferable to analysing the data first and then translating them for three key reasons:

1. Technological limitations: The current limitations of the NVivo software, which does not yet support Arabic, necessitated the translation of the interview transcripts from Arabic to English.
2. Consistency in analysis: Translating all the data into one language ensured consistency in identifying themes and concepts across all datasets. Sutrisno et al. (2014) highlight that having all data in one language simplifies the coding process, reduces potential misunderstandings, and ensures that researchers can work efficiently and cohesively.
3. Enhanced collaboration: Translating the data into English facilitated collaboration and the discussion of findings with the English-speaking supervision team (van Nes et al., 2010). This ensured that all team members could fully engage with the data, review codes and themes, and contribute valuable insights during the process of analysis.

While there are potential risks in terms of losing nuance in meaning or misinterpreting the participants' perspectives when analysing solely translated data, the translation process was

meticulously planned and executed to ensure methodological rigour. Following the guidelines suggested by Nurjannah et al. (2014), the process involved not merely converting text from one language to another but also carefully considering contextual interpretations and cultural nuances. This approach helped mitigate the risks associated with translation, allowing a more accurate and insightful analysis of the data. Birbili (2000) supports this approach, stating that collecting data in one language and presenting the findings in another involves researchers taking translation-related decisions that have a direct impact on the validity of the research. Therefore, he highlights the need for social researchers who translate data from one language to another to be explicit about their choices, translation procedures, and resources used.

To address this, I employed professional translators fluent in both Arabic and English to ensure the accuracy of the translations. To further validate the translations and maintain conceptual equivalence, a back-translation method was implemented. This involved a different translator translating a subset of the English transcripts back into Arabic to check for any discrepancies or misinterpretations between the original and the translated texts. This comprehensive approach to translation served not only as a necessary logistical step but also as an integral part of the analytical process, enhancing the depth and validity of the findings. As Nes et al. (2010) point out, having a common language between participants and researchers simplifies the initial stages of data gathering and analysis, allowing more straightforward and consistent coding. The systematic translation of transcripts before analysis highlighted the need for this approach in a multilingual research setting, ensuring that every phase of data handling – from transcription to the final analysis – was aligned with the overarching research objectives.

Reflecting on the challenges highlighted by Cormier (2018) regarding decisions concerning translation and the presentation of translated data in research, I took measures to ensure that the translations were edited and presented accurately in the final document. According to Temple and Young (2004), working in English can influence the analytical thought process; therefore, maintaining a high level of accuracy in translation was imperative to preserve the integrity of the analysis. I found that translation itself can serve as a step in analysis, as it facilitated multiple readings and the identification of initial codes and memos. Thus, it is worth noting that in certain instances, I referred back to the original Arabic text to ensure a comprehensive understanding of the context and to consider the codes within the broader data set. This approach allowed a more

nuanced and thorough analysis, as it enabled me to validate my interpretations and maintain the conceptual integrity of the data throughout the analytical process.

The raw data, including the pre-service teachers' journal reflections, and focus group and interview recordings, were carefully translated and transcribed with the assistance of professionals to ensure accuracy and linguistic precision. This process reflects an awareness of translation issues and demonstrates efforts to maintain reliability in representing the participants' voices across languages and cultures.

Then, following Creswell's (2007) guidance, I began with early data management as the initial step in the analytic cycle. I organised all the data, including reflective journals, into computer files and folders, ensuring a systematic approach for easy retrieval and analysis. Consent forms, information, and other sensitive documents were securely stored in a locked cabinet to protect participants' confidentiality. Digital files, including consent forms and reflective journals, were scanned, password-protected, and stored on an encrypted external hard drive. Regular backups were conducted to ensure data integrity and security throughout the research process. Access to these files was restricted to authorised personnel only, ensuring compliance with ethical standards and protecting participant privacy throughout the research process.

To protect the participants' anonymity, I assigned each a random identifier. These codes indicated the participant's name and the research tool used. For instance, "Ola, Entry 1, RJ" refers to data from the reflective journals of a particular pre-service teacher. Quotes from the focus group (FG) were labelled; since there was only one focus group, no number was added. For the semi-structured interviews with teacher educators, labels such as "Shams, Int" were used. This organisation of various datasets, including reflective journals, focus groups, interviews and my reflective notes, made systematic examination and comparison more manageable. All the raw data were imported into Word to initiate the coding stage.

3.10.2 Reflexive Thematic Analysis Approach

Various qualitative analysis approaches were considered to examine inductively the multi-faceted datasets in this study. Ultimately, reflexive thematic analysis was selected as it is flexible approach and aligns with the inductive, qualitative approach of this study. In determining the ideal approach, other common methods, such as interpretative phenomenological analysis and grounded theory,

were weighed but not selected due to their greater emphasis on theory building rather than the flexible analysis suited to this study's needs.

Braun and Clarke's (2020) articulate, reflexive thematic analysis emphasises the researcher's active role in coding and theme development through continuous self-reflection. This contrasts with their earlier 2006 framework, which had less of a focus on researcher subjectivity. The contemporary model's emphasis on explicit researcher reflexivity in the analytic process suited the purposes of this study. The steps for conducting a reflexive thematic analysis identified by Braun and Clarke (2020) are as follows:

1. Data familiarisation and writing notes: My first action was to read carefully the Arabic and English versions of the transcriptions to familiarise myself with the content and write down my initial thoughts and questions. This involved re-reading the data to become immersed and intimately familiar with the content.
2. Systematic data coding: This entailed systematically coding interesting features of the data across the entire dataset, while collating data relevant to each code.
3. Generating initial themes from coded and collated data: In this step, I collated codes into potential themes and gathered all data relevant to each potential theme. This involved making mind maps.
4. Developing and reviewing themes: I checked if the themes worked in relation to the coded extracts and the entire dataset. This might involve refining, splitting, combining, or discarding themes.
5. Refining, defining and naming themes: I undertook ongoing analysis to refine the specifics of each theme, the overall story the analysis told and the names of each theme.
6. Writing the report: The final step was to present the findings in relation to the research questions and the literature, providing a concise, coherent, logical, non-repetitive and interesting account of the story the data told.

Several key factors motivated this methodological choice. First, reflexive thematic analysis recognises the active, interpretive role researchers play in qualitatively analysing and assigning meaning to data based on their theoretical lens and subjective position (Braun & Clarke, 2020).

Rather than viewing subjectivity as problematic, this approach sees it as an analytical resource for rich engagement with data. Second, as Braun and Clarke (2020) note, reflexive thematic analysis is compatible with inductive logic, where themes emerge organically from the data. This resonates with Thomas's (2003) view of inductive analysis, in which findings arise from significant patterns within raw data, not predetermined theories. Similarly, Braun and Clarke (2006) emphasise not forcing the data into an established coding framework or being influenced by the researcher's prior analytical notions.

Moreover, reflexive thematic analysis provides flexibility rather than prescribing rigid procedures (Braun & Clarke, 2020). This enables creative adaptation based on the research goals and questions, rather than seeking a single correct answer. As Nowell et al. (2017) argue, thematic analysis involves "an integrated approach that includes both inductive and deductive coding" (p.3). Reflexive thematic analysis allows for this integration while emphasising inductive meaning making.

As a result, reflexive thematic analysis was selected for its emphasis on subjectivity, inductive orientation, flexibility and integrated analysis. With its focus on reflexivity and organic coding, this approach complemented the exploratory, qualitative nature of this research. The goal was to generate themes that would provide insight into the participants' perspectives, not test predetermined hypotheses. By selecting an analytic method aligned with the research paradigm, methodological coherence was enhanced.

3.10.3 Utilising NVivo for Qualitative Data Analysis

The NVivo qualitative data analysis software was chosen to support thematic analysis for this study. As Zamawe (2015) notes, NVivo represents a creative tool that can enhance qualitative analysis. Several key features influenced its selection. Firstly, NVivo allows efficient data organisation by consolidating transcripts, journals and other materials into one accessible platform (Bazeley, 2013; Zamawe, 2015), see Figure 14. NVivo proves essential as an analytical tool by displaying raw data next to its corresponding coding framework.

Teacher Educators' Interviews				
Name	Codes	References	Modified on	Modified by
N1- Hanaa	355	873	10/18/2022 3:17 PM	DH
N2- Hlaa	325	810	10/17/2022 5:07 PM	DH
N3- Shams	234	536	10/20/2022 5:58 PM	DH
N4- Zahra	242	481	9/22/2022 1:36 PM	DH
N5- Wedad	385	877	10/18/2022 4:05 PM	DH
N6- Rahaf	323	677	10/17/2022 1:00 PM	DH
N7- Mada	356	843	10/20/2022 12:31 PM	DH
N8- Amal	322	669	10/20/2022 1:00 PM	DH
N9- Mouna	224	401	10/17/2022 2:07 PM	DH
N 10- Joony	328	646	10/12/2022 8:18 PM	DH
N11- Walaa	253	525	10/18/2022 11:48 AM	DH
N 12- Rana	207	312	10/24/2022 6:04 PM	DH

Figure 14: Example of utilising NVivo for research data organisation, highlighting participant interviews with codes and references in this research.

This facilitated coding and theme development across the dataset, Figure 15 illustrates this feature. It empowers researchers to systematically organise, review and analyse qualitative data, thus aiding in the discovery of patterns, themes, and interrelationships within the dataset. Second, specific tools, such as source tracking, visualisations, memos and annotations, assisted in exploring relationships and patterns within the data (Andrade et al., 2022). As Jackson et al. (2019) point out, NVivo supports deep interrogation of qualitative data.

5. What do you think about using creative learning sessions to support pre-service teachers in their approach? What are the notable elements that you propose?

I do not suggest adding a course on creative teaching to university courses in order to avoid overburdening students with theoretical material. In light of several modern and effective teaching trends, so what I suggest we can add a module on 'modern trends' to discuss creativity and thinking skills. I have also observed that students in practicum copy the teaching practices of in-service teachers. As a result, instead of teaching courses, we should expose them to examples of creative teaching practices they can apply it in their own teaching.

For current courses, in the module of teaching methods, it is important to open up the way for trainee students to participate, to hear their needs, and to develop their educational trends from a practical perspective. A number of elements are important to consider, including:

CODES

- Creating an interest in teaching
- Third Theme- Faculty members and lecturers
- Developing higher order thinking in teacher education
- Developing curricula
- factors that hinder creative learning
- Second Theme- Educational curriculum and courses

Coding Density

N7- Mada Subtheme2: the gap between theory and practice

N1- Hanaa (3)	N2- Hlaa (2)	N3- Shams (4)	N7- Mada (2)	N8- Amal (1)
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Figure 15: NVivo as an analytical tool, displaying raw data with its corresponding codes.

Moreover, using NVivo is consistent with the reflexive thematic analysis approach. As Woods et al. (2016) found, qualitative data analysis software can support and enhance qualitative research by enabling the researcher to keep reflective journals, memos and logs to document insights, questions and decision making throughout the analytic process, as shown in Figure 16.

Moreover, its flexible coding and visual mapping features aid the inductive analysis process, aimed at deriving themes from raw data, see appendix J. However, due to time constraints and limited experience with these tools, I am not yet able to fully utilise these features. Consequently, I tend to prefer traditional methods such as hand-drawn maps and written reflections for my analysis. Additionally, I employ Word tables to illustrate the analysis process, as presented in Section 4.2.1.

Since NVivo was freely available through the university, it was a pragmatic choice that aided creativity, rigour and inductive exploration. Overall, NVivo provided an organised and intuitive platform for reflexive thematic analysis aligned with the research's qualitative methodology.

Name	Codes	References
Comment on participant Fouz S.1	22	26
Comment on participant Lina S.1	10	12
Comment on participant Huda S.1	12	16
Comment on participant Haifa S.1	15	30
Comment on participant Lama S.1	16	29
Comment on participant Bdoor S.1	12	13
Comment on participant Noor S.1	8	8
Comment on participant Nouf S.1	12	16
Comment on participant Manar S.1	12	14
Comment on participant Ola S.1	7	7

- This journal tends to focus on the following: 1) imagination, 2) teaching methods and the way to deliver the session.
 There is a suggesting that creativity could be as much about problem-solving and innovative thinking in lesson planning as it is about artistry.
 She examines her beliefs before the session. This reflective journey is a testament to the power of examining and re-examining our beliefs about teaching and learning. It underscored the necessity of creativity in education—not only for the sake of our students but also for the continuous growth and adaptation of us as educators.

Figure 16: An example of NVivo facilitating a researcher's reflective memos during the analysis process.

3.10.4 Process of Coding and Generating Themes

Reflective thematic analysis involves multiple iterative levels of coding to develop inductive themes from the raw data (Braun & Clarke, 2020). This study employed three main coding stages – open coding, selective coding and theoretical coding (Williams & Moser, 2019) – assisted by the NVivo software.

Open coding represents the initial phase of identifying first-level concepts, categories and properties in the data through detailed line-by-line analysis (Strauss & Corbin, 1990). In this study, open coding was conducted by engaging in a thorough reading of the full transcripts and journals to become intimately familiar with the data. Initial codes were then developed to capture elemental concepts and label relevant features of the data. As Saldaña (2016) notes, open coding produces an extensive range of undifferentiated codes that reflect the “varied phenomenon discernible in the data” (p. 115). This openness suited the exploratory inductive approach of this study.

Selective coding involved synthesising the open codes into categories and themes (Strauss & Corbin, 1990). This corresponds to the fourth and fifth steps of reflexive thematic analysis. Key open codes were compared and consolidated into higher order categories reflecting patterns and relationships. NVivo facilitated this inductive process through tools such as coding queries, making it possible to see code overlaps, and visual maps to conceptualise connections. In addition, selective coding required critically examining the open codes against each other and the full dataset. Through this constant comparison (Scott, 2004), selective codes emerged that captured thematic meanings.

Finally, theoretical coding involved integrating the selective codes into coherent theoretical constructs aligned with the research questions (Braun & Clarke, 2006). Themes were divided into main and sub-themes. This stage focused on conceptualising how the themes interrelated to form theoretical narratives about the dataset as a whole. The iterative use of NVivo supported flexible reorganisation of selective codes into theoretical constructs. However, as a novice in qualitative research, this process was intricate and ongoing, continuing up to the drafting of the findings chapter.

Throughout, coding was conducted through a reflexive lens, recognising my subjective position in interpreting and constructing knowledge from the data (Braun & Clarke, 2020). To focus the expansive set of initial themes and codes, I refined and reorganised them, setting some aside for future investigation. These focused themes were then grouped according to the key research areas. The final themes represent constructions of meaning that provide insights into the research objectives. These themes will be presented and discussed in Chapter 4. Extensive participant quotes are included to privilege the participants’ voices within the analysis. Overall, this staged

coding process allowed rigorous development of inductive themes rooted in the subjective meaning making between the researcher and the data.

3.11 Ethical Considerations

Upholding rigorous ethical standards is vital in qualitative research to protect participants and balance the pursuit of knowledge with respect for human dignity (Orb et al., 2001). Ethical considerations are primarily about finding the balance between the pursuit of truth and considering participants' rights and values (Cohen et al., 2011). Therefore, researchers must integrate ethics throughout the entire research process, from initial planning to final reporting.

I obtained ethical approval for the study from Newcastle University by outlining the research aims, sample and methods per guidelines. Moreover, the Faculty of Education at Newcastle University approved the ethical guidelines. I also obtained ethical approval and official permission to conduct the study from the college where the research was to take place. In line with the ethical guidelines of the British Educational Research Association (BERA, 2018), this study consistently upheld the principles of voluntary consent, anonymity, confidentiality and transparency. The BERA guidelines recommend that researchers consider the implications of not offering interventions to entire groups to prevent depriving the control group of potential benefits (BERA, 2018). In this action research, I invited all pre-service teachers to participate in the intervention. Importantly, the study did not compare a group that received an intervention with another that did not.

Ethical adherence is not just a preliminary step but an ongoing obligation (Orb et al., 2001). Building on BERA's principles and following the suggestions of Creswell (2007), the study was designed with an ethical approach from the outset. The chosen sample and methods minimised risk and disruption for participants. Informed written consent, emphasising voluntary participation and withdrawal rights, was secured from all participants before data collection. Only with explicit permission were the interviews and focus groups recorded. The participants' identities were secured using de-identification and pseudonyms. All data, securely stored, were solely accessible by me. The study ensured transparency concerning its purpose and procedures and the participants can request the study results.

In this study, my dual role as researcher and facilitator presented ethical challenges. The intricacies of this dual capacity required careful navigation. To address this, I kept a diary reflecting on my experiences, with further details provided in the “Researcher’s Position” (see 3.6).

An ethical concern that arose was the potential influence of the teacher educators’ involvement in the grades or mentorship of pre-service teachers. To address this, the teacher educators in the main study were not informed of the identities and numbers of the participating pre-service teachers in the creative learning sessions. Indeed, they did not attend these sessions at all. Furthermore, I did not ask about pre-service teachers’ school placement locations or mentors’ names.

I also took steps to reassure the pre-service teachers that withdrawing from the study would not adversely affect them. Recognising their potential concerns about participating, especially regarding their relationship with the teacher educators, I stressed from the outset that their involvement was voluntary, and I guaranteed them complete confidentiality.

Drawing on Lincoln and Guba (1985), key ethical considerations in qualitative research encompass aspects related to the quality of the study, such as trustworthiness, credibility, transferability, dependability and confirmability. These elements demand meticulous attention during both data collection and analysis to ensure the research findings are reliable and trustworthy. Each of these aspects is briefly explained in the following paragraphs.

1. Research quality (trustworthiness)

Trustworthiness refers to the rigour and integrity of the qualitative research process (Lincoln and Guba, 1985). Strategies such as triangulation, member checking and auditing help ensure the findings authentically reflect the participants’ perspectives (Merriam & Tisdell, 2015).

In this action research, multiple data sources (interviews, focus groups, documents) provided corroboration. All procedures were clearly documented for transparency. Establishing trustworthiness is an ethical obligation allowing readers to evaluate the soundness of the research (Korstjens & Moser, 2018).

2. Credibility

Credibility refers to the confidence one can have in the truth of the research findings. It ensures that the findings accurately represent the participants’ original data and their true perspectives

(Korstjens & Moser, 2018). Credibility means the researcher authentically represents the perspectives of participants (Nowell et al., 2017). Creswell (2014) suggests that researchers can determine the credibility of their findings by employing strategies like triangulation and member checking. In this research, some of the teacher educators reviewed their interview transcripts to confirm credibility. Representing the participants' voices truthfully, even when contrary to expectations, is an ethical priority (Creswell & Creswell, 2017). In addition, in the consent forms, the participants were informed of their right to receive a copy of the thesis when published.

3. Transferability

Transferability refers to providing sufficient detail for readers to evaluate whether the findings fit their own contexts (Korstjens & Moser, 2018). A comprehensive description of the research process and setting facilitates such comparisons. Given that this qualitative action research involved a small group of participants, caution must be exercised when generalising the findings beyond those studied (Merriam & Tisdell, 2015). McNiff and Whitehead (2002) argue that traditional research evaluation criteria, such as replicability and generalisability, may not be suitable for action research. The significance of such a study depends on its context-specific nature (Lattimer, 2012).

As mentioned in the rationale for action research (see Section 3.3.1), a critique of this approach is its generalisability (McNiff & Whitehead, 2002; Lattimer, 2012; Mills, 2018). I am aware of the tension between qualitative research and generalisability from an interpretivist perspective, particularly within educational studies (Payne & Williams, 2005; Larsson, 2009; Carminati, 2018; Maxwell, 2022). To avoid any misunderstanding about the scope and intentions of the study, I divided my research into two main types regarding generalisability:

First, transferability of the framework. This research aims to develop a framework for a pedagogy of creative learning that supports the development of Saudi pre-service teachers' understanding of teaching for creativity. This framework has the potential to be applied and adapted in various contexts beyond this study. Melrose (2001) argues that action research can achieve theoretical generalisability by enabling conceptual application across similar contexts. This aligns with Larsson's (2009) view that generalisation occurs not in a statistical sense, but through context similarity and pattern recognition, supporting the aim of nurturing creativity among pre-service teachers in their educational settings.

Second, context-specific findings, not generalisability. Due to the context-specific nature and typically small samples in action research, there is a perception that results may not be broadly applicable (Herr & Anderson, 2005; Lattimer, 2012). This study focused on an in-depth exploration of the experiences of a cohort of 15 Saudi pre-service teachers and their teacher educators within their programme context, rather than seeking broad generalisation across different populations. Contextual specificity refers to the unique, detailed understanding of the particular setting and participants involved in this study. Thus, the value of the results lies in providing the involved community with profound knowledge and insights (Myers, 2000). Consequently, the findings, including themes and individual analysis, are contextually bound to this group and should not be assumed to represent all Saudi pre-service teachers and teacher educators.

To establish broader transferability, further research involving larger and more varied samples across multiple university settings is necessary. I also address the inherent limitations of generalisability in this interpretivist research in Section 6.5.

4. Dependability

Dependability connotes that findings should be consistent and replicable (Guba & Lincoln, 1994). Achieving dependability can be challenging within the interpretive paradigm. To address this, I found employing tools like NVivo and adopting multiple cycles of coding in the analysis were beneficial. Coupled with the documentation of explanations and memos for the definition of each code, these strategies can facilitate the research process (Gibbs, 2007). Furthermore, such an approach provides transparency, enabling others to understand and critically evaluate the research methodology.

5. Confirmability

Confirmability ensures that findings reflect the participants' viewpoints rather than the biases of the researcher (Nowell et al., 2017). Enhancing confirmability was achieved through regular memoing, self-reflecting on assumptions and employing data triangulation, which further mitigated the influence of any single method (Creswell, 2014). The documentation of procedures strengthened the authenticity of the results. It is important to highlight that this also relates to the research's epistemology and ontology (see 3.2.1 and 3.2.2).

6. Consent forms and agreement

Prior to participating in the study, both groups – pre-service teachers and teacher educators – were required to sign an agreement sheet. This outlined the research aims, the nature of the research and the participants' rights, including the right to withdraw at any time and the right to confidentiality (see Appendix G and H). All participants willingly agreed to take part in the study and signed the consent form; there were no withdrawals.

As previously mentioned in Section 3.10.1, all data, including consent forms and reflective journals, were systematically organised and stored on my laptop. The physical copies of the consent forms were securely stored in a locked cabinet. Reflective journals were digitised and stored on a secure, password-protected computer with encryption. Another copy was stored on a flash memory for additional security. Regular backups were performed on an encrypted external hard drive, which was kept in a separate secure location at Newcastle University and during my travel to ensure data integrity and security throughout the research process.

7. Anonymity and confidentiality

Several researchers emphasise the importance of confidentiality and maintaining the privacy of research participants by excluding any identifying information from the study (Baez, 2002; Mertens, 2012; Bos, 2020). In line with this principle, confidential information such as the names of the pre-service teachers and teacher educators mentioned during the sessions, focus groups and interviews were not included in transcriptions or any reports. To ensure strict confidentiality, pseudonyms were used instead of real names and the participants were given nicknames. I also reminded the participants of their rights and my role in protecting their full privacy throughout the study.

3.12 Limitations and Issues

This section delineates the inherent limitations of the research methodology employed in this study, thereby providing context for understanding the scope and boundaries of the findings. These limitations, which should be carefully considered when interpreting the study's results, are outlined in the following seven points. I will highlight the main issues then move to methodological limitations.

- 1. COVID-19 Constraints:** The study involved a relatively small sample of Saudi pre-service teachers and educators and was conducted during a specific period marked by rapid

changes and circumstances brought about by the Covid-19 pandemic. Due to the pandemic's impact, data collection for this research had to be suspended for approximately one year. This change in the study timeline affected the progress and minimised the timeframe. Moreover, it is crucial to note that during this period, the Covid-19 pandemic imposed additional constraints on the educational context. Measures such as the need to maintain social distancing and provide sanitizers were implemented. These significant changes in the educational landscape undoubtedly had an influence on the dynamics of creative learning and teaching for both pre-service teachers and teacher educators. The restrictions imposed by the pandemic not only disrupted traditional educational practices but also reshaped the way learning and teaching occurred in teacher education.

2. **Temporal and Personal Constraints:** This study represents a snapshot in time; changes in attitudes, practices or policies could affect the relevance or applicability of the findings over time. Additionally, due to the constraints of being an international student and having to follow the guidelines of the Saudi embassy, the researcher faced time limitations for data collection, having only three months from January 2022 to mid-April 2022 to gather the data in Saudi Arabia. These time limitations may have impacted the depth and scope of the study.

The constraints posed by Covid-19 and the temporal and personal situation likely have links to the following limitations.

1. **Sample Size and Geography Constraint:** As previously discussed, this study's generalisability is limited due to its small sample size, including 15 pre-service teachers and 12 teacher educators. This research was exclusively carried out within the confines of a single teacher preparation program in Saudi Arabia. Although efforts were made to include a diverse group of participants, the sample size was relatively small. A larger sample size may have allowed for more robust conclusions and a broader understanding of the findings. It is important to note that the highly localised nature of the sample limits the direct transferability of the study's findings to the broader educational landscape in Saudi Arabia and to other geographic contexts. In essence, the findings may have limited generalisability, even within the broader Saudi educational context.

2. **Focus on Participants:** The study primarily investigated the perspectives of pre-service teachers and teacher educators. The inclusion of other stakeholders, such as mentors, in-service teachers, school administrators and students, could have provided a more comprehensive understanding of creative learning and teaching for creativity. Moreover, the study focuses on females' insights; however, incorporating males into the research could further enrich our understanding. By including both genders, we could have gained a more comprehensive perspective and better explored potential similarities and differences in their experiences and perspectives of creativity in education.
3. **Research Design:** This research employed a qualitative action approach, utilising the plan, act, observe and reflect framework. While this approach provides flexible, rich and in-depth data, it also comes with inherent limitations. For instance, the findings are subjective and rely heavily on understanding the participants' perceptions and experiences, which may be influenced by various personal and situational factors.
4. **Data Collection Methods:** The data collection process for this study primarily involved semi-structured interviews and reflective journals, which rely on self-reported data (Codó, 2009). Self-reported data can introduce social desirability bias (Collier & Mahoney, 1996), where participants may respond in ways they believe are socially acceptable or expected (Podsakoff et al., 2003). This bias can influence the accuracy of the responses. Additionally, the Hawthorne effect may come into play, wherein participants tend to overstate positive reactions due to the novelty or awareness of being observed, potentially affecting the reliability of their responses (McCambridge et al., 2014). To address challenges some participants faced with reflective writing, I conducted a focus group to gather additional perspectives and insights. While I made diligent efforts to ensure data quality and rigor, it's important to acknowledge that self-report data, social desirability tendencies, and the Hawthorne effect may have influenced the accuracy of the datasets to some extent. Nevertheless, it's crucial to emphasise that despite these potential limitations, the findings still make valuable contributions to our understanding of creative learning and teaching among Saudi pre-service teachers and educators.

5. Assessment Methods in the sessions of creative learning: A key limitation of this study concerns the assessment methods utilised during the sessions of creative learning for pre-service teachers. The study deliberately avoided formal mentoring and evaluation techniques to gauge the learning outcomes, instead opting for feedback gathered through oral responses and reflective journals. This decision was made to account for power dynamics in relationships and to mitigate any potential bias from the researcher. While this approach provides valuable insights, it may not fully capture the complete spectrum of the learning experience within the placement. Consequently, this limitation should be carefully considered when applying the findings from these sessions in other contexts.

3.13 Summary of the Chapter

This chapter has set out the methodological approach adopted for the study, encompassing various methodological concerns. It began by discussing the research paradigm, providing a brief description of the ontological and epistemological underpinnings, the methodology and the research design. The research was grounded in an interpretive, social constructivist and inductive approach, which underpinned the research design and methods. The adoption of the action research approach was explained, highlighting its alignment with the methodological assumptions of interpretivism and social constructivism. As a qualitative perspective, these frameworks offer valuable insights into the subjective and socially constructed nature of the research topic, allowing for a deep exploration of the participants' perspectives and experiences.

The chapter provided a comprehensive discussion of the research tools and samples. The chapter then provided a comprehensive discussion of the data analysis process and ethical considerations.

Overall, this chapter has critically explored the research methodology, showcasing the thoughtful selection of methods and the handling of data. Through these methodological choices, the study aimed to ensure the credibility and robustness of the findings while staying true to the interpretive perspective and action research approach. In addition, it aimed to clarify the methodological choices, providing justifications, examining advantages and acknowledging limitations. The study's overall limitations will be presented in the conclusion in Chapter Six. The upcoming chapter presents the findings.

Chapter Four: Findings

4.1 Introduction

This chapter presents the findings of the action research conducted, with a key focus on addressing the research question and the two sub-questions. As highlighted in the methodology section, reflexive thematic analysis was chosen as the method to derive meaningful results. Through the data analysis, essential themes were identified. These themes were then aligned with the central question and sub-questions, as follows:

What are the fundamental components of a pedagogy of creative learning that can enhance the understanding of teaching for creativity among Saudi female pre-service teachers?

- RSQ1: How did the views of creative learning and teaching evolve among Saudi pre-service teachers during creative learning sessions?
- RSQ2: How do Saudi teacher educators perceive creative learning and what factors influence the preparation of creative pre-service teachers in higher education?

This chapter is structured in two main sections, as illustrated in Table 11. Section 4.2 presents the findings concerning pre-service teachers' perceptions drawing on their reflective journals, the focus group, and my reflections. In 4.2.1, I set out the findings concerning the participants' developmental progress as a whole during the creative learning sessions. In 4.2.2, I focus on the findings based on individual analyses, highlighting the development of six specific pre-service teachers who attended all the creative learning sessions. Together, these sections aim to provide a more complete picture of the findings. For an overview of the research methodology, including the action research design, cycles, findings, and key themes, refer to Appendix A.

Section 4.3 presents the findings related to teacher educators, primarily drawing on the semi-structured interviews. In 4.3.1, teacher educators' views on creative learning and teaching are presented, while 4.3.2 discusses the factors influencing the preparation of creative pre-service teachers. Figure 17 illustrates the main findings.

It should be noted that to comply with the word constraints and avoid distracting the reader, I have illustrated the analytic process in tables within each part. Moreover, I have minimised the use of direct quotes and instead included brief examples of the participants' responses.

Section	Research sub-question	Findings' section	Data source
4.2. Findings for pre-service teachers	How do views of creative learning and teaching evolve among Saudi pre-service teachers during creative learning sessions?	Section 4.2.1 Findings from the action research cycles	<ul style="list-style-type: none"> Pre-service teachers' reflective journals Focus group Researcher's reflective journal
		Section 4.2.2. Key themes from individual analysis	<ul style="list-style-type: none"> Six participants' reflective journals Researcher's reflective journal
4.3. Findings for teacher educators	How do Saudi teacher educators perceive creative learning and what factors influence the preparation of creative pre-service teachers in higher education?	Section 4.3.1. Views on creative learning and teaching Section 4.3.2. Factors influencing creative pre-service teacher education	Semi-structured interviews with teacher educators

Table 11. Structure of Findings Chapter

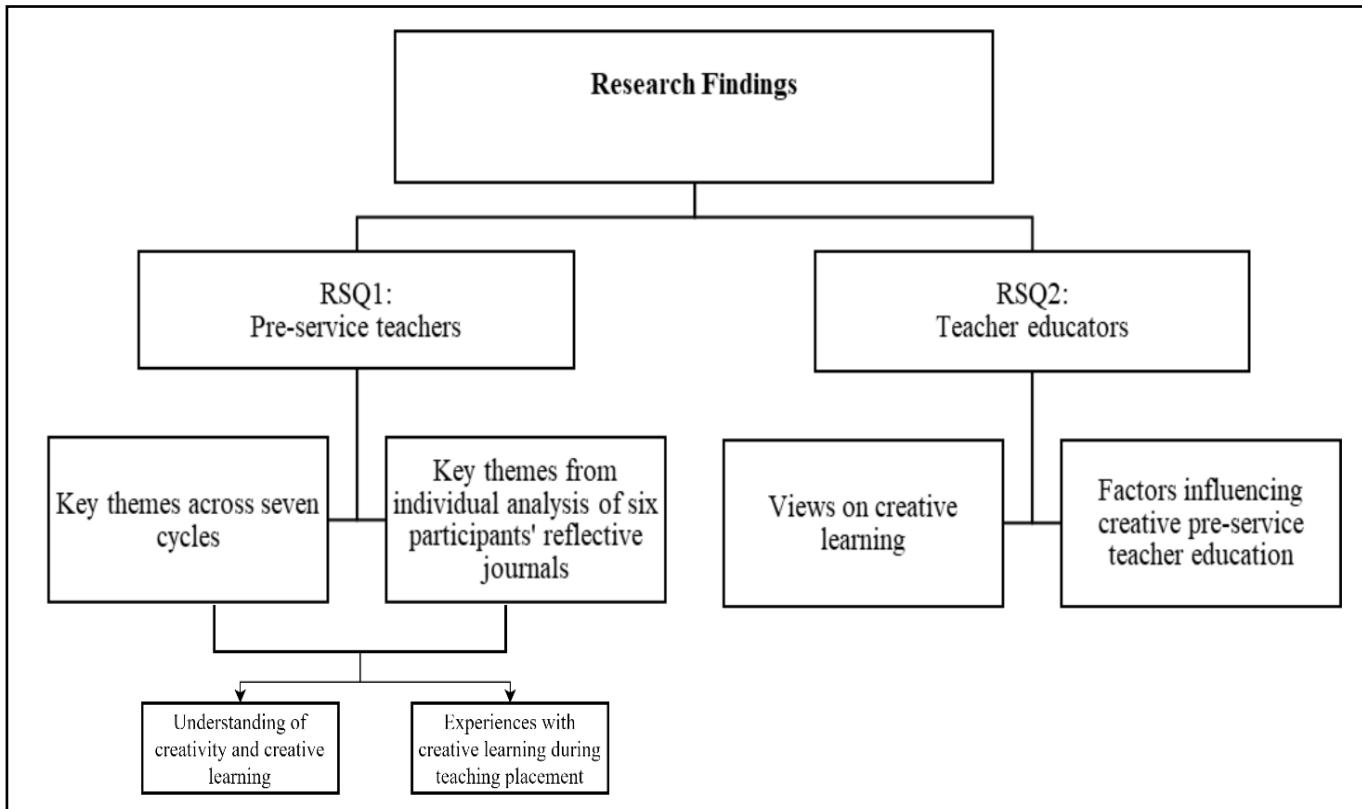


Figure 17: Outline of research findings

4.2 Findings Related to Pre-Service Teachers

This section presents the findings for the specific group of Saudi pre-service teachers who participated in this study answering the question: How did views of creative learning and teaching evolve among Saudi pre-service teachers during creative learning sessions?

This section is divided into two main parts for clarity and depth of analysis. Section 4.2.1 presents key themes identified across seven cycles of the intervention, offering a cycle-by-cycle illustration of the participants' learning progression. This approach facilitates a comprehensive understanding of the PSTs' understanding of creativity through the iterative action research cycles (see Appendix A). Section 4.2.2 delves into an individual analysis of six pre-service teachers' reflective journals, examining and presenting their developmental views and insights gained throughout the sessions.

The arrangement of these findings aims to provide a complete picture of the educational impact, first by analysing the collective experiences across sessions and then by focusing on individual reflections.

Data for both of these sections were gathered from the participants (pre-service teachers) through various qualitative methods, including reflective journals, a focus group, and my own reflections. Details on each data collection method can be found in section 3.4. By triangulating these sources, key themes emerged related to the group's experiences and perspectives on creative learning and teaching throughout the intervention. It should be noted that the findings in Sections 4.2.1 and 4.2.2 are based on data from the sessions of creative learning, as detailed in Appendix F. These sessions were designed as a research intervention following Lucas et al.'s (2013, 2016) five-dimensional model of creativity. The findings offer in-depth insights into this specific set of participants, rather than presuming generalisability beyond the scope of the sample. By specifying the data sets and bounded context, the intention is to underscore the situated and subjective nature of these qualitative findings, as explained in the previous chapter (see 3.3.1 and 3.10). Despite the use of multiple methods, resulting in a vast amount of data and some code overlaps, it was possible to generate meaningful results by maintaining a strong focus on the research question and incorporating reflections and thorough code reviews.

Details of the participants are given in Table 12 and additional information detailing the pre-service teachers' attendance of sessions, engagement in reflective journals and participation in the focus group can be found in Appendix K.

Participants (pseudonym)	Academic major	Creative learning session attendance	Number of entries in reflective journals	Focus group attendance
1. Ola	Arabic	6 of 6	6 of 6	—
2. Fouz	Language and Literature	6 of 6	6 of 6	✓
3. Huda	English	6 of 6	6 of 6	✓
4. Nouf	Language and Literature	6 of 6	6 of 6	✓
5. Noor		6 of 6	6 of 6	✓
6. Ranim		6 of 6	5 of 6	✓
7. Dima		5 of 6	4 of 6	—
8. Lina		5 of 6	4 of 6	✓
9. Haifa		3 of 6	3 of 6	—
10. Nawal		4 of 6	3 of 6	—
11. Lama		5 of 6	5 of 6	✓
12. Duaa		3 of 6	3 of 6	—
13. Joud		4 of 6	4 of 6	✓
14. Bdoor	Sharia and Islamic Studies	2 of 6	2 of 6	✓
15. Manar		2 of 6	2 of 6	✓

- Participants who attended all 6 sessions: 6
- Participants with full reflective journal entries (6 of 6): 5
- Participants who attended focus groups: 10
- The total number of reflective journal entries is 65.

Table 12. Summary of 12 pre-service teachers' information and data gathered.

4.2.1 Findings From the Action Research Cycles

This section presents the evolution of the pre-service teacher' perspectives on creative learning and teaching across the intervention. The data drawn on here were gathered from the participants' reflective journals, the focus group, and my reflective journal. To answer RSQ1, all the participants' data were coded and analysed using the reflexive thematic analysis approach (see section 3.10 of data analysis). Following this, the resulting themes were organised in alignment with the action research approach, see table 13. The intervention consisted of six creative learning sessions and one focus group discussion, with each session encompassing the action research cycle of planning, acting, observing, and reflecting (see Appendix A, Linking this Action Research Design and Findings).

The presentation of key themes, ordered according to their occurrence across the sessions and aligned with the action research design discussed in Section 3.3.3, offers a clear illustration of the learning progression throughout the iterative action research cycles, as shown in Table 13. This cycle-by-cycle approach enabled a comprehensive understanding of the pre-service teachers' development. For each cycle, I begin with an overview of the session, helping to contextualise the participants' reflections and denote connections between the activities and their reflective responses. This is followed by the primary findings, which are organised thematically. I conclude with a summary informing planning for the subsequent cycle. It should be noted that I have deliberately maintained a consistent order for the numbered themes across cycles. This approach ensures clear progression and minimises potential confusion. While each cycle has its distinct characteristics, maintaining continuous numbering for the themes serves to emphasise that all cycles form a unified continuum in addressing RSQ1.

Data from Analysing Action Research Cycles →	Cycle 1 11 entries	Cycle 2 15 entries	Cycle 3 7 entries	Cycle 4 11 entries	Cycle 5 11 entries	Cycle 6 10 entries	Cycle 7 10 participants
Session's Topic →	<i>Session 1 Overview of Creativity</i>	<i>Session 2 Imagination</i>	<i>Session 3 Curiosity</i>	<i>Session 4 Persistence</i>	<i>Session 5 Collaboration</i>	<i>Session 6 Discipline and teaching for creativity</i>	<i>Focus Group</i>
	↓	↓	↓	↓	↓	↓	↓
Main Themes →	<p>1. Understanding of creativity in education</p> <p>2. Engagement and perceived value of creative learning</p>	<p>3. Diverse perspectives on creativity in teaching</p> <p>4. Interplay between creativity and self-reflection</p> <p>5. Building creative learning habits in the classroom</p>	<p>6. An exploration of Bloom's taxonomy and inquiry</p>	<p>7. Behaviours of creative teachers</p>	<p>8. The complexities of collaboration in creative learning</p>	<p>9. Critical perspectives on teaching for creativity</p>	<p>10. Dialogue in creative learning sessions</p> <p>11. Limitations of creative teaching and learning</p> <p>12. Reflective thinking and writing</p>

Table 13. Outline of main themes across action research cycles (including the creative learning sessions, number of entries in reflective and focus group of pre-service teachers)

4.2.1.1 Cycle 1: Session 1. Overview of Creativity

The first cycle focused on the participants' reflective journals from the first session, which provided an overview of creativity. The objectives of this session were twofold: first, to establish a safe environment and good relationship; second, to introduce the five-dimensional model of creativity (Lucas et al., 2013) and creative learning. The primary themes identified from this cycle include the following: (i) understanding of creativity in education, and (ii) engagement and perceived value of creative learning (see Table 14). All the following participant quotations are sourced from the participants' first entry in the research journals (RJ Entry 1), unless otherwise noted.

Main themes	Definition	Codes	Examples
1. Understanding of creativity in education	This theme examines how participants perceive and understand the concept of creativity within the classroom context	Exploring Finding solutions/problem-solving New, original, smart, and useful Creative students Intelligent/gifted Gender Teamwork	“Creativity means when a person finds a new and attractive way of thinking, learning and problem-solving” “...new and attractive...” “...original and smart...” Teamwork is essential to creativity, ... with the Islamic principle of cooperation “Cooperate in righteousness and piety” Islamic culture and value “seek knowledge from the cradle to the grave.”
2. Engagement and perceived value of creative learning	This theme focuses on participants' levels of involvement in and enthusiasm for creative learning experiences. It also examines their assessments of the importance and benefits of engaging in creative learning methods	Future career significance Enthusiasm and participation Personal reflection and growth	“...significance to me as a pre-service teacher”, “...benefit me in the future as a teacher” “...eagerness to attend sessions”, “...praised the collaborative and optimistic atmosphere” “...encouraged me to think about my goals”

Table 14. Summary of Cycle 1 (S.1 Overview of creativity)

- ***Theme 1: Understanding of creativity in education***

This theme explores how the participants understood creative learning and its value. Their statements and expressions were influenced by their knowledge, reading and the sessions attended during the study. In Cycle 1, most of their interpretations were similar. At the beginning of the sessions, the participants used various terms to explain creativity, such as “exploring”, “analysing”

and “finding solutions”, leading to new, original, and positive products. For instance, Fouz remarked, “creativity means when a person finds a new and attractive way of thinking, learning and problem-solving”.

Most of the participants believed that every individual inherently possessed the potential to be creative. However, a minority were either neutral or doubtful. Lina added nuance to these perspectives, pointing out that self-reflecting on one’s creativity, especially when framed with a question such as “Are you a creative student/teacher?”, is far from simple. According to Lina, such a question invites multifaceted answers and suggests hidden meanings. It elicits complex responses because the concept of being “creative” can be interpreted in various ways and may carry deeper, underlying connotations. Essentially, what “creativity” means can vary greatly among individuals, making it a concept with many layers and interpretations.

This individual variation is nested within a larger cultural context, where beliefs, values and norms further shape the discourse on creativity. Noor, for example, stated “The concept [of creativity] is not exclusive to a country, community, religion, language or gender”. Then, she asserted “Creativity can exist within the Arabic culture. Everyone has the intrinsic ability to be creative to varying degrees, which can advance society”.

Noor’s statement, emanating from her position as a Saudi pre-service teacher, appears to be a multifaceted response to the sociocultural and educational context in which she is embedded. She might be challenging prevalent global stereotypes that perhaps undervalue creativity within regions perceived as traditional, like Saudi Arabia. As an emerging educator, Noor underscores the importance of nurturing universal creativity, a belief possibly shaped by her educational progression and future aspirations for her students. Her mention of gender in the context of creativity hints at the broader discussions about evolving gender roles in Saudi society, emphasising the creative ability of both genders. Furthermore, given the profound influence of Islam in Saudi life, her perspective might dispel misconceptions that religious adherence curtails creativity. Overall, Noor’s viewpoint, potentially shaped by personal experiences and a desire for a global educational perspective, champions the universality of creativity, irrespective of one’s background or identity. Indeed, Noor and most participants emphasised the universality of creativity, countering any biases that might confine its recognition to certain groups or cultures.

They viewed creativity as an innate human potential that – when harnessed – can lead to societal progress. However, they also acknowledged that the concept of creativity can be influenced by cultural factors.

The cultural influence, particularly from Islamic values, becomes more pronounced when considering the participants' emphasis on learning and teamwork. Most highlighted the pivotal role of teamwork in both learning and creativity. As Ola succinctly put it, "Teamwork is essential to creativity, which resonates directly with the Islamic principle of cooperation 'Cooperate in righteousness and piety' Surah Maidah (5:2 Quran)".

Through their emphasis on collaboration, the participants broadened the concept of creativity, moving beyond viewing it as merely an individual pursuit. They aligned it with religious values and established it as a notion deeply rooted in social interconnectedness.

Another aspect the participants discussed was the link between creativity and intelligence. It seems that against the backdrop of societal values, many believe one needs high intelligence to be truly creative. Mada stated it: "Creative thinking is influenced by factors like intelligence and personality". Some participants might see creativity as something reserved for those who are gifted and with exceptional intelligence. However, this highlighted a contrasting understanding within the same group of participants: while some believed that everyone inherently has the potential to be creative, they also emphasised the connection between creativity and intelligence. This contrast is not unique; such debates are also prevalent in educational literature. Furthermore, many participants felt that introducing the 4Cs model in the initial session underscored the concept of everyday creativity and its application across school subjects, potentially enhancing understanding of this issue.

- ***Theme 2: Engagement in and perceived value of creative learning***

The participants consistently expressed enthusiasm for and recognition of the value of creative learning throughout the sessions. The data highlighted their keen interest in and personal beliefs about the significance of creativity in education, especially for their future careers. For example, Ola mentioned how the session made her reflect on her goals and its importance to her as an aspiring teacher. When I asked them, "Where do you think the land of creativity will be? And

why?” and “Describe the journey from where to where”, the participants provided thoughtful and insightful responses.

Some of them linked Saudi Arabia as a land of creativity in the upcoming future, expressing their desire to contribute to this vision by becoming creative educators. These questions prompted them to consider the metaphorical journey of integrating creativity into their teaching practices and envision the impact of creative methods in their classrooms. Their responses revealed a deep appreciation for creativity's role in education and a commitment to fostering it in their future careers. Additionally, their active engagement was evident in their feedback. Bdoor, for instance, was eager to participate in further sessions focused on creative learning, while half of them appreciated the collaborative and optimistic atmosphere during the first session. This is interesting given that the term “creative learning” is not commonly referenced within the Saudi educational context. Haifa's reflection captures this sentiment effectively:

I was drawn to the term “creative learning”, which I like, yet its implications are profound. As educators – students, teachers, and researchers alike – we must harness elevated learning abilities. This includes exploration, connecting concepts, visualisation, problem-solving, questioning, idea generation, and, of course, creativity. I'm eager to explore this concept further to enrich my lessons... Continuous learning is a cornerstone of ambition. In our Islamic culture, we're reminded to “seek knowledge from the cradle to the grave”.

Haifa expresses a personal wish to delve deeper into the concept of creative learning to enhance her lessons. She recognises learning as an ongoing process, emphasising that there is always more to learn and applying aspects such as exploration, connecting concepts, visualisation and problem-solving. Then, she grounds her commitment to education in her cultural and religious values, suggesting that the pursuit of knowledge is not just a professional or personal goal, but also a spiritual one.

Building on Haifa's sentiment about the continuous nature of learning, it is evident that these pre-service teachers are not just considering traditional methods. Their focus on creative learning aligns with the global trend for prioritising 21st century skills. Lina underscores this connection, pointing to the importance of skills needed for the current era, especially in terms of fostering creative and critical thinking in learners.

In summary, the participants' journal entries provided deeper insights into their perspectives, often drawing on their socio-cultural backgrounds. Collectively, their reflections present a

comprehensive view of education that seamlessly blends the principles of creative learning, the educator's role, individual aspirations and cultural ethos. Their insights also highlight the pressing need for a more creative and ongoing learning approach, especially within the Saudi educational system, in which the emphasis on creativity is perhaps not traditionally dominant.

4.2.1.2 Cycle 2: Session 2. Imagination

This cycle focuses on the participants' reflective journals from the second session, which explored the topic of imagination as one dimension of Lucas et al.'s (2013) model. Three key themes emerged, as outlined in Table 15. diverse perspectives on creativity in teaching, the interplay between creativity and self-reflection and building creative learning habits in the classroom. All the following participant quotations are sourced from RJ Entry 2, unless otherwise noted.

Main themes	Definition	Codes	Examples
3. Diverse perspectives on creativity in teaching	This theme explores the varied viewpoints and beliefs held by participants regarding the concept of creativity in the context of teaching.	Arts, colours and crafts	“Creativity, for me, simply means the colours of life”
		Problem-solving	“...finds a new and attractive way”
		Thinking outside the box	
		Imagination and creativity	“...imagine the teaching steps before teaching to overcome fears” “To make interesting activities...”
		Artistic and emotional interpretation	“Arts in lessons”
4. Interplay between creativity and self-reflection	This theme focuses on the dynamic relationship between creativity and self-reflection. It examines how self-reflection can stimulate and enhance creative thinking and teaching methods	Awareness	“...impact their thinking and learning”
		Task and beliefs, and potential growth	“I imagined myself as a successful teacher and an expert educator, realising that imagination may play a role in improving our well-being and self-confidence”
5. Building creative learning habits in the classroom	This theme centres on the strategies and practices employed by participants to cultivate creative learning habits within the classroom environment.	Critique/limitations of traditional education	Issue of traditional approach Rote learning
		Nurturing creativity in classrooms	Fun learning, teaching methods, imagination in activities... “Creative learning commences with listening to ideas and fostering a safe and supportive environment” “...boosting both student motivation and creativity” Pre-service teachers introducing various strategies, e.g. using mind maps, stories, or problem-solving.

Table 15. Summary of Cycle 2 (S.2 Imagination)

- ***Theme 3: Diverse perspectives on creativity in teaching***

The participants conveyed diverse interpretations of creativity, with problem-solving emerging as a central theme. For instance, Fouz gave a direct definition of creativity as finding a “new and attractive way of thinking, learning, and problem-solving”. This presents creativity as a method or approach that stands out from the ordinary and emphasises novelty. In addition, three participants linked creativity to specific actions or processes, such as exploration, analysis and solution-finding. This indicates that, for them, creativity extends beyond mere innovative thinking; rather, it encompasses a dynamic process of exploration, dissecting issues and formulating solutions. This perspective on creative thought was further underscored by participants like Ola, Nouf, Fouz and Noor. They highlighted the importance of the ability to “think outside the box”, a phrase frequently used within the group to represent unconventional or non-traditional thinking. However, not all definitions were uniform. Some participants articulated a more artistic and emotional connection to creativity. Lina said, “Creativity, for me, simply means the colours of life that inspire our eyes, and it is how we can feel, add, mix or change the meaning of ordinary things to be new and surprising”. Similarly, Nawal perceived it as a means “to add beauty in life”.

Both Lina and Nawal describe creativity in artistic and emotional terms, suggesting it is about seeing everyday things in new and beautiful ways. This fresh perspective can inspire students and make learning more engaging. In addition, some participants believed using art in teaching can boost this creative approach. This is supported by the definitions provided by four participants, who described creative learning as a way to “make connections between concepts and learn in a fun way” (Joud). Here, two key elements emerge. The first concerns making connections between concepts. By introducing art, educators can facilitate a deeper understanding of topics. Artistic representations can help students visualise and draw relationships between disparate ideas, leading to more profound insights and better understanding. The second is about learning in a fun way. Art inherently brings joy and engagement to the learning process. When lessons are infused with artistic elements, students find the experience more enjoyable. Their increased engagement can lead to better retention and a more profound connection to the material. The detailed nuances of what constitutes “fun learning” will be elaborated upon in the next cycle. In this context, it is clear

that art can be a powerful tool to enhance the creative learning experience and making the process more enjoyable.

- ***Theme 4: Interplay between creativity and self-reflection***

While the session primarily focused on imagination, leading many participants to mention it in their reflections, there was also a notable emphasis on reflection or introspection. The participants were actively questioning their own creativity and considering its impact on their thinking and learning endeavours. Fouz highlighted the integral role of creativity, stating that “Creativity is intertwined with many facets of life... and with imagination being fundamental to creativity, it is imperative for us to continually refine our thoughts and perspectives to manage life’s complexities”. Here, she suggests that without the foundational element of imagination, creativity is elusive. The sentiment reflects the idea that nurturing our imagination and creativity might be key to understanding and addressing life’s challenges.

In a similar vein, Nawal reflected on her experience: “I took part in the imagination session, which stirred various ideas and thoughts. It made me question the place of creativity in my thinking and studying”. Her statement indicates that the session prompted introspection about the role of creative thinking in her learning.

Moreover, in a session activity, the participants were posed with the scenario: “Imagine yourself as a creative educator in the year 2040. What do you think you will do? What would be your advice for novices?”. The aim was to stimulate their imagination. The participants not only engaged in creative thinking to envision a future scenario, but also engaged in introspection about their current beliefs, aspirations and potential growth. Their responses both indicated a strong engagement in the session and highlighted the importance of imaginative activities to promote deeper introspection, even for university students. For instance, Ola mentioned “It is a nice way to think about our concerns and transfer them into useful advice”. Haifa appreciated the imaginative exercise, saying:

I liked the usage of imagination and limited experience in teaching in imagining our situation as experts and advising new teachers. This reduces my fears of classroom management, information delivery, and failure. I imagined myself as a successful teacher and an expert educator, realising that imagination may play a role in improving our well-being and self-confidence.

Haifa highlights the significance of using her imagination to visualise herself as an accomplished expert, which in turn improves her apprehensions related to classroom management, conveying information and the possibility of failure. This underscores the potential benefits of scenario-based activities in teacher education programs. Overall, several participants emphasised the transformative power of imagination in shaping a teacher's professional self-concept, overcoming fears and preparing for future challenges.

- ***Theme 5: Building creative learning habits in the classroom***

Building creative learning habits in the classroom is pivotal for fostering creativity. The findings suggest that pre-service teachers recognise the importance of instilling such habits early in students' academic studies. Therefore, there was a tendency to criticise the characteristics of traditional education and curriculum, which could indicate a high desire on the part of the participants to change such practices and value creativity in learning. For example, Dema indicated that "most of the school and college subjects had very little scope for imagination skills". Nouf's reflections echoed this, pointing out the limited opportunities to exercise imagination in her educational experience. She further critiqued the traditional educational landscape, stating that "schools are less concerned about students' imagination and thinking skills. The primary reason stems from an overemphasis on rote knowledge acquisition and exam-oriented processes".

This cycle revealed a collective enthusiasm for applying creative strategies, as evident in their journals. Bdoor, for instance, presented a nuanced perspective on the development of creative learning habits. She posited, "Creativity and creative learning commence with listening to ideas and fostering a safe and supportive environment". This insight underlines the importance of a holistic approach to nurturing creativity, emphasising the gradual nature of this transformative journey for both educators and students.

Moreover, after the second session, the participants transitioned from simply critiquing teaching practices observed in their placements and began actively experimenting with new approaches and sharing their insights. For instance, Noor described an instance where she added a creative touch to her lessons, saying "I prompted the students to depict their aspirations for the future using drawings or emojis. Their reactions showcased their inherent creativity and self-awareness". Noor's experience conveys an important idea: by motivating herself first, she was better positioned

to inspire her students. Such self-motivation often led teachers to adopt more engaging methods, thereby boosting both student motivation and creativity. In addition, the participants suggested various strategies based on their experiences, such as “Providing pictures and using mind maps” (Ola), “Using stories to clarify a concept” (Joud) and “Introducing problem-solving via drawing and brainstorming” (Huda). These examples demonstrate the participants’ solid grasp of pedagogical teaching approaches suitable for primary schools. However, they also hint that they may not have been fully conscious of the integral role creative learning plays within these methods.

The integration of art in lesson activities and the incorporation of diverse teaching strategies were also highlighted. Generally, the pre-service teachers in the school placement paid special attention to using different methods. However, this theme does not suggest that the participants used several creative learning methods, but rather their understanding of why such methods would be chosen and how they developed their knowledge of creative learning from the sessions with a view to putting it into practice.

In summary, this cycle explored three significant themes. First, there are diverse perspectives on creativity in teaching. Second, there is a notable interplay between creativity and self-reflection. Lastly, there is an emphasis on building creative learning habits in the classroom. These findings underscore the need for teacher education programmes to focus on nurturing creativity as a foundational educational principle in the classroom.

4.2.1.3 Cycle 3: Session 3. Curiosity

This cycle focuses on the participants’ reflective journals from the fourth session, which explored the topic of curiosity or inquisitiveness as one dimension of Lucas et al.’s (2013) model. The key theme concerned the examination of creative learning through Bloom’s (1956) taxonomy of cognitive learning objectives (see Table 16). All the participants’ quotations are from RJ Entry 3, unless otherwise noted.

Main themes	Definition	Codes	Examples
7. An exploration of Bloom's (1956) taxonomy and inquiry	The theme highlights the exploration of cognitive tools to understand and promote creative learning.	Cognitive progression	“Rote learning to deep learning”
		Curiosity-driven learning	“Open-ended questions”
		Teaching techniques	KWLH, mind maps
		Application of taxonomy	“Discussion in class to evaluate students' understanding and knowledge during exams”

Table 16. Summary of Cycle 3 (S.3 Curiosity)

- ***Theme 7: An exploration of Bloom's (1956) taxonomy and inquiry***

From the placement experience, the participants discussed the complexities of managing students' curiosity in the classroom setting. As pointed out by Huda and Dima, teachers often face the challenge of navigating unexpected topics and unplanned questions that arise from the innate inquisitiveness of students. The participants highlighted two distinct facets: (i) the structured and premeditated questions posed by teachers to their pupils, which are often the type that appear in examinations; (ii) the unanticipated queries or spontaneous questions posed by the pupils to their teachers. This sheds light on the importance of cultivating an environment that encourages student inquiry and equips educators with effective strategies to address such spontaneous curiosity, ensuring meaningful and constructive learning experiences in any subject.

Regarding the first aspect – structured and premeditated queries – several participants underscored their use to stimulate oral discussions, evaluate students' understanding and knowledge during examinations, or facilitate active tasks within lessons. Moreover, some (Nawal, Fouz, Nouf, Noor and Duaa) highlighted the interrelation between their understanding of Bloom's (1956) taxonomy for cognitive objectives and fostering creativity and curiosity in their lesson plans. Duaa stated, “I perceive a strong connection between Bloom's taxonomy for cognitive objectives and creative instruction. This session has been immensely beneficial for my teaching approach”. She further made a pivotal observation: “In my teaching, I've noticed my propensity to prioritise the quality of responses, often overlooking the enhancement of the quality of students' queries. However, the latter plays a crucial role in making learning engaging”.

This observation indicates a self-awareness from the teacher's perspective. It highlights that during teaching there is often a significant focus on the quality of answers or responses students provide. This might involve verifying if the answers are correct, comprehensive or well-articulated. Such

an approach might suggest the extent of freedom teachers have, whether limited to rote learning or encompassing a broader space to venture beyond that. However, by solely focusing on basic questions and evaluating answers, a teacher may unintentionally overlook the value of the questions that students put forward. In the context of creative learning, it is crucial to encourage students to ask deeper, more insightful and critical questions that challenge the limits of their understanding. These probing queries from students can signal active engagement and an authentic desire to learn.

Turning to the second aspect, i.e. spontaneous or unexpected questions from pupils, the participants suggested that self-confidence was a key element of being a creative teacher and also of teaching practice in their placements. Lina and Nawal, for instance, expected to implement the same lesson plan without any changes, which made developing their self-confidence vital to allow them to be creative in unplanned situations.

Ola emphasised the significant impact pupils' questions have on learning, stating:

This session prompted me to reflect on my school's educational principles. How might we enhance students' understanding using strategic questioning? The belief is that it's the questions, not just rehearsed answers, that truly drive the learning process.

Ola introduced the KWLH technique, an extension of the traditional KWL (Know, Want to Know, Learned) strategy used in education, as an effective and creative tool. This method incorporates four essential questions: What do we know? What do we want to learn? What have we learned thus far? And how can we further our knowledge? Ola underscored its applicability to both planned and spontaneous student queries. In her view, these questions effectively merge curiosity and persistence, which are indispensable for cultivating a creative learner.

From the examples provided in this theme, it is evident that the session's discussions empowered the participants in selecting activities. In terms of the KWLH technique, as mentioned during the session, it was interesting to observe how the elements of creative learning habits are intertwined and how the conversation between peers within the session influenced some of their pedagogical practices. Supporting this, Noor stated, "Many comments and shared experiences from participants proved beneficial in my lesson preparation".

In examining the potential obstacles to assimilating this method for pre-service teachers, several insights emerged. Lina pointed out that the success of curiosity-driven learning hinges on “the confidence of both the teacher and the student”. In addition, she identified “limited time” as a likely impediment. Huda also considered that effectively stimulating student curiosity is not straightforward and necessitates a teacher’s “creative touch”. These perspectives align with the complex creativity concept.

In summary, this theme underscores the participants’ efforts to deepen their grasp of creative learning and its inherent challenges through creative inquiry. The pre-service teachers actively sought to bridge theoretical knowledge and practical application. They emphasised the importance of curiosity-driven learning, the use of open-ended and engaging questions and the search for effective teaching methods that would encourage deep and creative learning. A recurring sentiment was the pivotal role of self-confidence and a safe environment, whether as a learner seeking answers or as a teacher evaluating students.

4.2.1.4 Cycle 4: Session 4. Persistence

This cycle focuses on participants’ reflective journals from the fourth session, which explored the topic of persistence as one dimension of Lucas et al.’s (2013) model. Moving to the data from Cycle 3, most of the participants linked the previous meanings with the process of creative teaching, which shows the development of their views and that they were involved in a process of extending their understanding of creative learning and its challenges. Therefore, the key theme was the behaviour of creative teachers from their perspectives, illustrated in Table 17. All the following participant quotations are sourced from RJ Entry 4, unless otherwise noted. It is noteworthy that this session had the lowest attendance due to the examination period.

	Main theme	Definition	Codes	Examples
6.	Behaviour of creative teachers	The focus on the actions, mindset, and qualities of creative teachers.	Motivation	“...when I teach and consider ways to motivate poor pupils”
			Role of intelligence	
			Persistence, resilience and not giving up	“I believe that perseverance is the key to success, excellence, and originality”
			school-related challenges	“...school-related challenges, be it systems, management, budget constraints, peer interactions, children’s issues, or communication with parents”

Table 17. Summary of Cycle 4 (S.4 Persistence)

- ***Theme 6: Behaviour of creative teachers***

Several participants addressed the identification of the behaviour of creative teachers from a practical standpoint. For example, Huda recognised the critical role of creative teachers, saying “The creative teacher must keep her motivation and good attitude to not give up in the face of challenges”. As Nour put it, “So, the question arises: how can I counter daily challenge as teacher? Setting small goals and fostering continuous self-motivation are vital”. Similarly, Fouz described the importance of perseverance for a creative teacher, stating:

I believe that perseverance is the key to success, excellence, and originality. While intelligence plays a role in success and creativity, perseverance, hope, and resilience are equally significant. A creative teacher should persistently pursue her goals and retain her enthusiasm amidst various school-related challenges, be it systems, management, budget constraints, peer interactions, children’s issues, or communication with parents.

This statement connotes that qualities such as perseverance and resilience are pivotal for teachers, enabling them to remain committed to their objectives and maintain a positive attitude even amid diverse challenges in the educational landscape.

Building on the previously mentioned qualities, understanding motivation – both intrinsic and extrinsic – is a significant aspect of the behaviour of creative teachers. Noor’s reflection on wanting to incorporate both these types of motivation in her teaching practices highlights the understanding that different students are motivated by different factors and creativity in teaching involves leveraging both. Doaa said, “As a student teacher, I would take these factors into account when I teach and consider ways to motivate poor pupils”. Commitment to considering these motivational factors, especially for students who might be underperforming, further signifies the dedication and adaptability expected of a creative teacher. Recognising these aspects and finding ways of minimising disruptions showcases a proactive approach, a hallmark of creative teachers. Together, these reflections emphasise that creative teaching is not just about “fun” lesson plans but also understanding, motivating and adapting to the diverse needs of students.

The study found that all participants believed that creativity can be demonstrated by both teachers and students in their behaviour and teaching methods, regardless of the subject. The three academic majors being studied also presented behaviours indicative of creative exploration. Notably, the participants from the Arabic major and English major highlighted the role of creative behaviours

in their lessons and acknowledged the positive impact that such creative teaching and learning had on their language skills during lessons. This insight suggests ample opportunities for integrating creative activities and behaviours in language instruction, which could potentially lead to enhanced learning outcomes.

In summary, this theme sheds light on the perspectives of pre-service teachers concerning creative learning. While persistence was the primary subject of the session, the participants notably expanded their discussions to encompass the broader behaviour of creative teachers. This focus can also be related to their roles during placements.

4.2.1.5 Cycle 5: Session 5. Collaboration

This cycle focuses on participants' reflective journals from the fifth session, which explored the topic of collaboration as one dimension of Lucas et al.'s (2013) model. The key theme concerned exploring the complexities of collaboration in creative learning (see Table 18). All the following participant quotations are sourced from RJ Entry 5, unless otherwise noted.

Main theme	Definition	Codes	Examples
8. The complexities of collaboration in creative learning	This refers to the multifaceted challenges and considerations involved in integrating teamwork and joint efforts within the framework of fostering creativity in classrooms.	Social creativity	“...teamwork or collaboration is a key...”
		Benefits of cooperation and collaboration	“Cooperative learning can improve students' performance and foster positive relationships...”
		Challenges of implementing collaboration	“It is difficult to divide tasks” “... can cause noise and disruption”
		Collaboration for new teachers' experiences	“... poses challenges, especially for new teachers at the beginning of their careers”
		Teacher's role in collaboration	“Supportive and mentoring...”
		Shift from traditional to progressive	

Table 18. Summary of Cycle 5 (S.5 Collaboration)

- ***Theme 8: Complexities of collaboration in creative learning***

From the discussion in the session, the terms collaboration and cooperation arose as synonymous and referred to students working together to achieve a common goal. Most likely, cooperation is

used for short tasks, for which it takes only a few minutes to activate the students, while collaborative methods are used for long-term projects (my reflection).

Several participants viewed collaboration as integral to the concept of creativity, developing the concept to extend from the individual to the social context. In essence, this evolution in creativity signifies a broader understanding of how creative ideas are generated and realised. It acknowledges that while individual prowess is valuable, there is immense creative potential in collaborative efforts, facilitated by teachers and experienced in group learning settings. Noor articulated this, saying that “teamwork or collaboration is a key element of creative learning. Creativity is about focusing on new ideas in a collaborative manner”. Similarly, Bdoor said, “Creativity entails thinking divergently and working collaboratively to produce original and useful outcomes”. Based on these responses, it seems creativity is not just about the end product but also about the process of ideation, discussion, debate and co-creation. Group learning experiences prioritise the collective generation of ideas, where the interplay of different perspectives can lead to more creative learning.

In terms of the benefits of collaboration, the participants acknowledged the advantages of incorporating cooperative learning in the classroom. Dima noted its capacity to enhance information retention, foster rapid learning and foster a joy of learning, among other benefits. Dima’s observations align with much of what educational research suggests about collaborative learning. Collaborative methods, by fostering an environment of active engagement, accelerate understanding and intrinsic motivation, not only supporting the learning process but also providing fertile ground for creativity to flourish. Therefore, most of the participants viewed the joy of learning as not merely a byproduct but as an essential catalyst in the creative process. When students enjoy what they are doing, they are more open to thinking, challenging and coming up with creative solutions.

Moreover, four participants mentioned that the *Six Thinking Hats*¹ technique (developed by Edward de Bono in the 1980s) can be used in creative learning and teaching, where the teacher is the guide, and the group of students is an important part of the process.

¹ There are six hats of different colours, each representing a different type of thinking or role. Each person in the group (or an individual) comes up with ideas that are framed by the type of thinking they represent. For more detail, see (de Bono, 2017)

While the benefits are evident, the participants expressed concerns about the practicalities of incorporating collaboration in the classroom to enhance creativity in the Saudi context. Nouf said, “Sometimes cooperative learning helps to raise pupils’ achievements and create positive relationships among them. But it is not always easy and manageable”. In her opinion, collaboration as a form of learning in both schools and higher education encompasses considerations of administrative decisions, curriculum design, teachers’ approaches and other socio-cultural factors.

Dima pinpointed a specific challenge in the Saudi context, mentioning difficulty in task division, supervision and feedback provision, especially in larger classrooms. Noor hinted at potential classroom management issues, stating collaborative activities could lead to “noise and disruption”. Echoing this sentiment, Nouf commented, “Cooperative learning can improve students’ performance and foster positive relationships. However, its execution isn’t always straightforward or manageable”. The consensus was that implementing collaboration as a cornerstone of creative pedagogy might be daunting for novice teachers.

The participants believed that introducing collaboration in creative pedagogy could pose challenges, especially for new teachers at the beginning of their careers. Ranim emphasised this, discussing the role of teachers in collaborative activities and contrasting traditional and progressive educational approaches. Her insights might stem from the fact that they were not guided on how to prepare a lesson plan based on a collaborative approach.

Some participants also noted that collaboration extends beyond student interactions, including fostering relationships with other teachers and pupils’ parents. Huda advocated the use of multidisciplinary activities, suggesting they allow students to demonstrate cohesion across subjects. Some participants showcased this by devising creative activities highlighting the interplay between different domains and subjects. Ranim, for example, suggested that integrating languages, culture and science in primary school projects could foster creativity. It was interesting to see that some comments supported cross-disciplinary approaches in the curriculum aimed at improving education and nurturing creativity.

In summary, the participants emphasised the significance of collaboration in interpreting creativity, highlighting the transition from an individual-focused notion to one that appreciates the collective process of ideation, discussion and co-creation. They also acknowledged the intricate

nature of collaboration as a vital element in nurturing creativity among both students and teachers in the Saudi context.

4.2.1.6 Cycle 6: Session 6. Discipline and Teaching for Creativity

This cycle focuses on participants' reflective journals from the sixth and last action research session, which explored the topic of discipline as one dimension of Lucas et al.'s (2013) model. A key theme was critical perspectives on teaching for creativity (see Table 19). All the following participant quotations are sourced from RJ Entry 6, unless otherwise noted.

Main theme	Definition	Codes	Examples
9. Critical perspectives on teaching for creativity	This refers to exploring both the positive aspects and the challenges or critiques associated with teaching for creativity.	Hard work & continuous efforts	“...the result of hard work and continuous efforts”
		Self-awareness	“...being patient, working hard” “...it's about a deeper exploration of oneself...”
		Risks in creativity	
		Role of discipline in creativity	“...repeat attempts and focus on a specific goal...” “Growth”
		Process over product	“Strengths and weaknesses”
		Concept of “teaching for creativity”	“Teaching creativity involves more than one creative habit, such as participation, imagination, perseverance and curiosity...”
		Mini-c level of creativity	
		Complexity in teaching	“Teaching is a complex process...”
		Creative methods	“...playful learning, making connections between prior learning and a new lesson, and creating interesting tasks with reflective thinking”
		Creative lessons	
		Language and feedback in the classroom	“It is important for teachers to also pay attention to the positive aspects of the work when giving negative feedback. Feedback can have an impact on the emotional side of the student”

Table 19. Summary of Cycle 6 (S.6 Discipline and Teaching for creativity)

- ***Theme 9: Critical perspectives on teaching for creativity***

This theme encompasses two facets: first, the critical evolution of participants' views concerning creative learning; second, an exploration of teaching for creativity. First, many participants identified a critical evolution in their views of creative learning. They stressed that “creativity is not merely a product of chance or spontaneity but emerges from persistent hard work and

continuous effort” (Noor). This perspective was particularly emphasised by Haifa, Jood, Bdoor and Noor, who highlighted the importance of self-awareness and self-evaluation for the creative learner. It is noteworthy that there was a perceptible shift in the participants’ views in this regard. Initially, they focused on the positive and enjoyable aspects of creativity, such as being imaginative and open-minded. However, by the sixth session, they pivoted to address the demands of creative pedagogy, including patience, perseverance and self-awareness. This shift suggests that the session equipped them with a more grounded and realistic understanding of creativity, urging them to think critically and value the process as much as the end product.

Moreover, the participants’ understanding of creative learning centred on the idea of continuous enhancement and growth. For example, Fouz said:

In my opinion, discipline is the focus on improvement throughout the semester; it could encourage creative students to practise, be patient, repeat attempts and focus on a specific goal.

Fouz’s statement offers a tangible example of the broader shift in understanding that creativity is not just about the end product but also about the disciplined and iterative process leading up to it. This perspective aligns with the views of other participants mentioned previously, stressing the importance of patience, practice and repetition to achieve specific goals. Similarly, Jood said, “Achieving small goals is not the definition of creativity”. She posited that creativity is not about ticking off tasks or reaching minor milestones. Instead, “it’s about a deeper exploration of oneself – understanding individual tendencies, recognising one’s motives, strengths, and acknowledging weaknesses”. Together, these insights showed the importance of self-awareness in creative learning and painted a comprehensive picture of creativity as both an external and an internal effort.

In line with Jood’s view, Noor quoted from the session slides: “Being disciplined is about reflecting critically, developing techniques, crafting and improving” to emphasise that “creative teachers and learners need time to develop their thinking techniques and a strong sense of positivity to overcome obstacles”. Here, Noor clearly makes a connection between the concepts of persistence, curiosity and collaboration – topics discussed in previous weeks – and the theme of discipline. Similarly, Ola reported that discipline is essential for being a creative teacher. Based on this, she also argued that teachers need to continue their professional development throughout

their careers (see Ola's reflection, Section 4.2.2.1). Interestingly, some participants also discussed professional development for teachers and the limitation of time in the focus group, which will be addressed in the next cycle.

Second, in terms of exploring 'teaching for creativity,' the last session featured activities designed to foster creative thinking and practical application. A notable highlight was the analysis of a video showcasing a teaching experience by Ron Berger from Expeditionary Learning (see section 3.9). This example underscored the importance of a supportive learning environment that motivates students to iteratively improve their work, which is a fundamental aspect of creativity. By discussing this real example, participants could see how such approaches can be implemented in schools to enhance students' creative capacities, empowerment, engagement, and critical thinking skills (Berger et al., 2016).

Consequently, the participants in this cycle delved deeper into the intricacies of teaching for creativity, examining its core concept, the roles of teachers and learners and feedback processes. Due to space constraints, I confine myself to using only a few pertinent examples here. Bdoor stated:

I learned this after attending the sessions, teaching is a complex process. While, at the same time, we should view teaching as an organised process that develops the learner... Creativity is an integral part of teaching, not something separate or earmarked for some teachers or students.

In essence, Bdoor points to the inherent complexity in teaching and the need for structure and organisation. Moreover, she advocates the universal integration of creativity in teaching, ensuring it is not sidelined or seen as exclusive to certain educators or learners. Moreover, Bdoor suggested that teachers should consider "playful learning, making connections between prior learning and a new lesson, and creating interesting tasks with reflective thinking", putting this at the heart of creative learning to develop the approach to teaching for creativity.

The previous extract also strongly argues that everyone has creative potential, as discussed in the first session. Many participants before the sessions recognised that creativity is a major part of gifted education but also then articulated a mini-c level of creativity that can be incorporated in the teaching process for everyone at any stage.

Furthermore, Ola shared her perspective as an Arabic teacher:

Teaching creativity involves more than one creative habit, such as participation, imagination, perseverance and curiosity... We have to focus on two areas, 1) allowing students and teachers to develop knowledge and proficiency in their field, and 2) encouraging thinking skills development.

Ola, like most pre-service teachers, had imagined that good lessons are all about the teacher, but then realised that students have an important role in creative lessons. Perhaps the prevailing perspective among pre-service teachers is due to the considerable emphasis placed on the teacher's role and the lack of adequate explanation of metacognitive approaches to teaching in their academic studies. In this regard, Huda identified some critical questions for evaluating practice:

After teaching each lesson, I ask myself: in what ways does creativity play a role in this lesson? Do my teaching methods encourage pupils to be creative? It prompted me to consider and evaluate all the activities, tasks and other resources I use in the classroom.

This indicates a form of self-evaluation that supports "reflection on and in practice". Huda illustrated the value of ongoing self-evaluation in teaching, with a special focus on the role and impact of creativity. By continually questioning her methods and their outcomes, she aimed to refine her approach, ensuring that creativity would not just be present but actively nurtured and promoted in her classroom.

Another aspect related to this theme was the teacher's language in the classroom as it affects the pupils. This point emerged from watching the video of the teaching experience. While the participants were watching, it was interesting to observe a significant influence on their expressions. According to Bdoor:

I see that the teacher selected the right words and body language when giving negative feedback and ensured that the learning goal is achieved with a positive influence. As well as developing the discussion, encouraging participation and encouraging the shy students. I enjoyed the group task of summarising the video with a mind map and finding the significant elements of the creative teacher's traits.

Bdoor stressed the importance of promoting the psychological and emotional development of learners by encouraging participation, especially from shy participants. Also, to support emotional growth, Noor explained the importance of balancing both the positive and negative aspects of the work:

It is important for teachers to pay attention to the positive aspects of the work when giving negative feedback. Feedback can have an impact on the emotional side of the student.

Similarly, Ranim stressed the importance of discussing work with pupils in a gentle manner and carefully choosing stimuli and rewards:

I see the teacher used motivating words, such as “great”, “well done” and “good”. He also avoided over-the-top language since it was unnecessary. Some teachers said “you are creative, great and wonderful for simple tasks”.

This view highlights a shared understanding among pre-service teachers of the value of genuine and balanced feedback to foster a positive and constructive learning environment.

Feedback plays a pivotal role in creativity. For the pre-service teachers, however, feedback presented challenges. In their reflective journals, they recounted that they often found themselves sensitive to criticism from other educators, including teacher educators and schools. In addition, when they provided feedback to students, there was a tendency to predominantly highlight negative aspects. There was an awareness that the teacher’s language in dialogue and feedback has a considerable impact on the teacher–student relationship in terms of teaching for creativity. The views they expressed can be classified in relation to two foci: (i) as teachers in school and (ii) as students at college.

First, as teachers who were giving feedback, it was interesting to observe a significant influence on the participants’ expressions during the session discussion and in their journals. Following the fifth session, Ranim said, “Despite my busy schedule, I try to speak with pupils gently and select stimuli and rewards carefully”, stressing the importance of using a reasonable number of rewards to stimulate students because giving either too little or too much can be detrimental. There is no doubt that feedback relates to creativity and Bdoor noted the importance of promoting the psychological and emotional development of learners by fostering participation.

Second, as students who receive feedback, the participants reported that mentor feedback on their teaching placement played a significant role in encouraging their creativity. For instance, Lama said it was crucial to have support from the schoolteachers and college mentors in the preparation of lessons and assessments for students. She added, “Their belief that we can do our best, take risks and accept our mistakes is the basis for the development of the practice” (focus group [FG]). Even though the mentors’ beliefs were implicit, it should be noted that the participants reported understanding their beliefs and expectations from their comments. Also, the participants confirmed that the mentors’ feedback, including formal and informal comments, affected their performance

and attitudes towards teaching. Overall, even though receiving feedback was sometimes difficult, they tried to take advantage of it. Haifa said:

Whether we are teachers or learners, we should not be too sensitive about criticism and should separate the ideas of criticism and ourselves.

In summary, this theme demonstrates the participants' evolving critical perspectives on "teaching for creativity" that emerged during the intervention. It emphasises the significance of hard work and sustained effort, underscoring the pivotal role that discipline plays in creative endeavours. Furthermore, it elaborates on the concept of "teaching for creativity", highlighting the creative methods adopted by teachers, the importance of reflection in their creative endeavours and the intricate relationship between feedback and creativity. As the participants considered creativity an intended and internal process, there is still a need to ensure that understanding of concepts and their academic majors are linked with practice to improve their comprehension and creative teaching approach. As Haifa commented, "After these sessions, I felt like I needed more sessions..., giving me a better understanding as a teacher".

4.2.1.7 Cycle 7: Focus Group

This cycle centres on the views of participants expressed in the focus group, which was conducted after delivering the six action research sessions. The aim was to gather and record their views, evaluations and oral explanations. This was especially necessary since I did not incorporate the session discussions in the data analysis. Notably, the dominant themes that emerged concerned dialogue, the limitations of creative teaching and learning, and reflective thinking and writing (see Table 20).

Main themes	Definition	Codes	Examples
10. Dialogue	<p>This refers to exploring participants' experiences of expressive and interactive communication among themselves, promoting open discussion, idea exchange, and collaborative learning within the sessions of creative learning.</p>	<p>Interaction with educators</p> <p>Open expression</p> <p>Listening</p> <p>Constructivist pedagogical approach</p> <p>Safe and supportive environment</p>	<p>Seminars and events</p> <p>Weekly discussions for pre-service teachers</p> <p>“listened to each other's suggestions ...”</p> <p>“.. had a chance to speak and be heard, it sparked new ideas...”</p> <p>draw from our own experiences and prior knowledge...</p> <p>reducing fear of failure...</p>
11. Limitations of creative teaching and learning	<p>This theme focuses on the challenges and constraints faced in the process of being a creative teacher or implementing creative teaching and learning methods.</p>	<p>Course content</p> <p>Technology in teaching and learning</p> <p>Demand of creative teacher</p> <p>Comfort zone</p> <p>Students' needs</p> <p>Resources and library</p>	<p>Wi-Fi, on-line learning, network</p> <p>Time and effort</p> <p>Friendly relationships...</p> <p>Traditional teaching approach and routine.</p> <p>Change and development.</p> <p>Books and material</p> <p>“...talk to yourself”</p>
12. Reflective thinking and writing.	<p>This theme addresses the participants' experiences of introspective writing after each session.</p>	<p>Definition</p> <p>Benefits</p> <p>Challenges</p> <p>Link to creative teachers</p>	<p>Analytical and critical thinking, self-awareness</p> <p>Limited time</p> <p>Confusion</p> <p>New experience</p> <p>Selecting creative methods</p> <p>Reflecting on teaching experiences</p>

Table 20. Summary of Cycle 7 (Focus group)

- ***Theme 10: Dialogue in the creative learning sessions***

In the creative learning sessions, dialogue and discussion played a critical role in fostering a connected and empowering environment. Dialogue stimulated the participants' engagement and learning, as seen in the individual analyses (e.g. Fouz's and Nouf's extracts), where it went beyond learning to encompass aspects such as thinking and culture.

During the focus group, direct disagreement was infrequent, possibly due to cultural norms and the perception that open discussions are not typical in college activities, as explained by the participants. However, encouraging respectful disagreement is essential for an active community or discussion. The participants felt that interaction and discussion with both college and school

educators would be beneficial in preparing them for success as novice teachers. Joud and Ranim highlighted the significance of workshops, optional seminars and educational events within the college as ongoing training opportunities for creative teaching preparation. These activities would not only contribute to their readiness as teachers but also offer a chance to explore their hobbies and interests. Ola echoed this sentiment, supporting the value of attending activities and optional courses to motivate pre-service teachers. These views align with the significance of building a community of inquiry to support the pre-service teachers' development of a creative approach, explored further in the discussion in Chapter five.

Most of the participants suggested that having weekly discussions for pre-service teachers could empower and support them in their creative learning and teaching:

Researcher: What do you think is the most effective method to foster creativity in both kids and older students?

Bdoor: I support weekly discussion groups that focus on educational concepts with examples and implementations in the field.

Noor: It is wonderful and beneficial to support trainee teachers in this way. In such sessions, I hope everyone can express their opinions freely and work cooperatively.

Unknown participant: I agree with Bdoor and Noor. Weekly discussions can be extremely valuable, not just for pre-service teachers but also for students of all ages. It encourages active engagement and critical thinking, which are fundamental skills for effective teaching and learning.

Furthermore, the experience heightened participants' sense of listening. Bdoor noted that creativity and creative learning start with actively listening to ideas within a safe and supportive environment, fostering understanding and support among those involved. This led to positive collaborative performance, exemplified by Lama's newfound enjoyment in participating in the group and engaging in designing and creating tasks.

Lama revealed in her third entry that she was not keen on collaborating with others, but by the focus group, her perspective had changed:

... I thought creativity was just about being artistic. I enjoyed participating with the group to design and create small products, which were some of the most enjoyable moments. However, I now see creativity as a way to approach any problem with an open mind and a collaborative approach.

This shift likely reflected the importance of dialogue and discussion not only for effective problem-solving but also for fostering enjoyment and deepening the learning experience. In addition, Manar, who worked with Ola for two sessions, recounted:

The most beautiful moments were in dialogue, exchanging ideas and opinions, seeing different perspectives between us, and working with Ola supported me to improve my thinking.

The foundation provided by engaging in dialogue offered opportunities to exchange ideas and opinions and also to understand and appreciate diverse perspectives. This reflects the constructivist perspective, which lies at the core of such discussion. Furthermore, it is worth noting that several participants constructed their pedagogical teaching approach with insights gathered from their colleagues during the discussions, as evident in their reflective journals and in-class comments.

Although this study only held one focus group with the participants, they were comfortable with the process of discussion and recording, which could be because each session included a discussion that encouraged participation, and the expression of opinions and criticism without fear of judgement. Also, the participants engaged fully in discussion, interacting based on previous replies rather than just adding their own opinions. This study did not aim to examine discourse within the discussions in any way, but I would say the participants' answers in the first session lacked consistency and depth. In other words, each participant discussed her ideas or experiences with me without considering others as listeners, whereas consistency and interaction became apparent during the latter sessions and the focus group.

- ***Theme 11: Limitations of creative teaching and learning***

This theme examines some aspects related to the limitations and challenges of teaching for creativity that emerged as a form of development for the participants. The participants openly shared a wide range of opinions, expressing both positive and negative sentiments regarding the session activities and their preparation programmes. Although they discussed many topics, upon closer examination of the data, four primary limitations in relation to creative teaching and learning were identified for further analysis.

The first aspect relates to the course content. The participants mentioned the importance of developing knowledge in the college curriculum and staying up to date with new developments. For example, Manar suggested that designing curricula for teacher preparation programmes should

consider the classroom context and emphasise 21st-century skills, including creativity in education. Fouz shared a similar perspective and advocated the creation of a curriculum that would foster enthusiasm and genuine interest among students in their studies. While Fouz did not provide explicit details regarding what she meant by “a creative curriculum”, her suggestion likely encompassed creative and innovative approaches regarding both content and instructional methods. Such approaches are designed to engage pre-service teachers and ignite their passion for learning.

The second aspect concerned lack of exposure to subjects or studies related to the use of technology in teaching and learning. While most participants considered the role of technology role in teaching and learning crucial for supporting creativity in education, it is important to note that they considered their limited exposure to subjects related to using technology in teaching and learning to be a notable constraint. Hence, they believed that developing digital skills is crucial, as mentioned by Lama and Joud, for example:

Lama: I think incorporating technology into teaching methods is also significant, especially for older students. It keeps them engaged and introduces them to the digital tools they'll encounter in the modern world.

Joud: I found that technology enhances both the teacher's and the students' creativity. They can use different apps and tools to make something new, valuable and original. Unfortunately, we did not study any courses about the use of technology in [the classroom], but this could be one of the most essential factors in the future.

The first and second aspects are related to the third challenge: limited access to library resources and teaching materials. For example, both Joud and Noor recounted that “there is a lack of teaching materials in Arabic for novice teachers”. Several participants noted this challenge with respect to primary schools, pointing to the adverse impact on the development of creative teaching. This also highlights their willingness to learn about teaching and creative practices.

For Saudi pre-service teachers, this limitation could be particularly pronounced given the country's ambitious Vision 2030 plan, which has a key focus on educational reform and modernisation (see 14.1). Access to comprehensive resources will be critical in ensuring that these reforms are grounded in the latest educational best practices. There is a risk of failure to offer pre-service teachers a range of exciting resources, which can be a valuable way of fostering their curiosity and are a part of their creative learning and preparation.

Fourth, the participants discussed the challenge of implementing creative roles in practice. Ola described these roles as follows: “the role of the teacher as a guide and facilitator of the learning process and the positive role of the student in discovery, research and cooperative learning”. However ideal, it is not as simple to put these roles into practice in reality. Fouz examined why pre-service teachers or in-service teachers prefer not to be creative teachers or ignore creativity in the classroom, saying:

In my opinion, creativity is not easy for teachers, especially pre-service teachers, because it mostly requires greater effort and extra thinking. There is extra work involved, and it takes a long time to see results. Also, several students or teachers want to stay in their comfort zone and use the regular way even if it is not easier.

Fouz acknowledges that fostering creativity in teaching is commendable but demands significant effort. She explains that one of the primary reasons both teachers and learners tend to overlook creativity is the time and deep thinking it requires. A second reason is the perceived workload; many feel they already have enough on their plate. In addition, as previously discussed in Cycle 3, some individuals prefer the familiarity and comfort of traditional methods to avoid uncertainty and because of fear of new results.

Moreover, some extracts made it clear that creativity in the classroom is not always easy for pre-service teachers. Specifically, the challenges of a teaching career along with the study load for student teachers can both affect creative practice in the classroom. Overcoming resistance to change and inspiring teachers, especially pre-service teachers, to embrace creative teaching is a complex challenge that necessitates support, confidence, professional development and a steadfast commitment to long-term improvement.

In addition, they identified a challenge in nurturing creativity based on their understanding of the human and psychological aspects of their students. This included the time to listen to students and learn from their opinions of what they are learning, as well as demonstrating respect and kindness towards them. Three participants in the study emphasised the significance of friendly relationships within the classroom for promoting creative learning. Specifically, a kind, honest and smiling teacher plays a crucial role in this regard:

Unknown participant: Well, I see that teachers become creative by considering the human and psychological aspects of students that directly affect their creative abilities and the students' love for the subject. For example, take the time to listen to students and learn from their opinions about what they are learning. It shows them that you are respectful and nice to them.

Reflective thinking and writing were also factors that affected the participants. As these aspects encompass both positive and negative sides and represented a new experience for the participants, I will present their views under a separate theme.

- ***Theme 12: Reflective thinking and writing***

The final theme is about reflective practice resulting from writing reflective journals regarding teaching for creativity (see Section 3.5.1, Chapter 3). While the participants highlighted several general points and benefits related to writing reflective journals, here the focus is on examining reflective thinking with regard to creative learning and teaching. Specifically, I present the extent to which the participants developed their reflective thinking when they engaged in weekly reflective journals and then how the reflective journals influenced their view of teaching for creativity, plus some challenges from their experiences.

Most participants noted that maintaining a reflective journal was a new academic experience for them. Even though their writing was mostly descriptive, covering the session activity, it should be noted that the participants' reflective journals comprised different levels; however, this is not an aspect evaluated in this study. Five of the fifteen participants completed all their reflective journal entries, which allowed me to discover more concerning their thinking and development. This is a noteworthy indicator of their active engagement in the study in terms of exploring the influence of reflective thinking and writing.

Manar and Lama described the process of reflective writing as "talking to myself". In addition, most of them agreed with Manar's view that "it seems easy, but it's not". This was perhaps a common perception among the participants at the start; then, in the focus group there was an opportunity to explore the participants' experiences and they raised several points. The following extract serves as a useful example:

At first, I did not understand what was intended by the term "reflective note", and I did not like to commit to it weekly. But it helped me after each session to be focused and have an analytical mind.

The extract shows that a crucial part of reflective thinking is analytical ability, which goes beyond journaling being just “a beautiful tool to record what happened to explore why it happened” (Fouz). According to Bdoor, it develops “the ability to present a problem and discover solutions”. Moreover, Jood said it “sometimes helped me to organise my thoughts and thinking as the teacher”, demonstrating the multifaceted benefits of reflective thinking.

These examples support the premise that reflective thinking equips teachers with the cognitive tools necessary for teaching for creativity. Some participants indicated that through reflective writing about their teaching practice, they gained skills in critical thinking and analysis that enabled them to pay attention to detail. In this regard, some participants said they became more mindful and selective in their teaching in order to meet the needs of their students. For instance, Fouz stated “I understand it is important to consider the methods of [teaching]. Now, when I have to implement an activity, I think about my practice and why I do what I do”.

This example demonstrates a form of self-evaluation and critical thinking that supports “reflection on and in practice”, ultimately promoting creativity in the classroom. Similar issues arose in previous cycles, indicating that these perspectives evolved as the participants explored teaching processes and approaches in greater depth. In essence, the participants shifted from merely implementing activities to becoming reflective practitioners, consistently questioning the “why” and “how” behind their teaching choices. This shift towards thoughtful and deliberate pedagogy underscores the profound impact of reflective thinking on enhancing teaching practices. Consequently, it can be inferred that reflective thinking plays a crucial role in developing creative teaching and learning strategies.

Furthermore, several participants expressed positive feelings and identified a variety of benefits associated with reflective journals, highlighting their support for reflective thinking on both personal and educational levels. Noor pointed out that this practice heightened her self-awareness. Lama found it to be a supportive task for creative learning, defining it as an open task without constraints. Similarly, Bdoor mentioned the benefits of privacy, freedom and flexibility in word count, which encouraged her to express her opinions freely. Fouz also endorsed this perspective, stating that writing was the optimal means of expressing her opinions comprehensively and enhancing her writing style.

In addition, Huda's suggestion to create an online platform for trainees to share their reflective journals is noteworthy. This could enhance collaborative reflection and critical thinking among participants. However, it would be crucial to design such a platform with care to ensure that it fostered a supportive and ethical learning environment. The potential benefits of increased interaction and shared learning must be balanced with safeguards to protect participants' privacy and prevent any negative consequences.

However, there were various challenges discussed in the focus group. These shed light on three important aspects of reflective writing in the context of teacher education:

1. Confusion and writing skills: The struggle to translate ideas into writing is a common challenge at the beginning of reflective writing. This difficulty can hinder the effectiveness of reflective journals as a means of expression.
2. Complex feelings: Difficulty in describing complex emotions highlights the need for participants to develop their ability to articulate nuanced thoughts and feelings. This suggests that reflective writing can serve as a tool for improving one's emotional literacy.
3. Time constraints: Time limitations, as expressed by Lina, present a practical challenge. For the participants, the pressure to balance reflective writing with other academic and personal tasks could hinder the depth of their reflection.

Addressing these challenges is crucial to enhance the effectiveness of reflective writing as a tool for personal and professional development in teacher education. Overall, these challenges and suggestions demonstrate the complexities and nuances involved in using reflective writing as a tool for enhancing critical thinking and fostering a sense of creativity.

In summary, Cycle 7, based on the focus group, primarily focused on empowering the participants and having their voices heard. They provided an opportunity to explore views that emerged in oral discussions, as opposed to previous cycles. The focus group included dialogue, which started by creating a safe space for discussion and enabled the free expression of ideas, disagreements and critiques. The cycle then transitioned to the challenges faced in fostering creativity in the classroom from the participants' perspectives. It also considered reflective writing and thinking, examining the connection between reflective practice and becoming creative teachers.

4.2.1.8 Summary of the cycles

Having presented the seven cycles, it is evident that the participants' sociocultural backgrounds played a significant role in shaping their views. Each cycle explored various themes, offering a comprehensive exploration of creativity in education. Cycle 1 focused on understanding creativity in education, as well as engagement in and the perceived value of creative learning. Building upon these concepts, Cycle 2 further explored diverse perspectives on creativity in teaching, highlighting the interplay between creativity and self-reflection and the significance of cultivating creative learning habits within the classroom.

Turning to Cycle 3, the study examined the behaviour exhibited by creative teachers and included an exploration of Bloom's (1956) taxonomy and inquiry. In Cycle 4, the focus shifted to a closer examination of the teacher's role from more a realistic practical perspective. Cycle 5 explored and presented the complexities of collaboration in creative learning. Then, Cycle 6 continued the discussion with critical perspectives on teaching for creativity. Finally, in Cycle 7, the exploration extended to encompass dialogue within the sessions of creative learning, addressed the limitations of creative teaching and learning and investigated the role of reflective thinking and writing in fostering creativity.

The cycles started with a broad exploration of creativity and its value, then proceeded to consider more specific aspects, such as diverse perspectives on teaching creativity, the role of reflection and collaboration. This progression highlights how the participants' views evolved and became more nuanced as they engaged in deeper discussions and explored various dimensions of creativity in education. It also underscores the importance of considering sociocultural background in shaping these developing perspectives.

In addition, the data indicate that aligning the sessions with the placement period had a significant influence on the participants. Specifically, Cycles 4 and 5 demonstrated how the participants benefited from the synchronisation of academic and collaborative activities during the sessions with their teaching experiences during the placement, coinciding with the data collection period. These findings shed light on how the pre-service teachers seamlessly integrated the creative learning sessions in their teaching practices during their placements.

The themes across these cycles offer detailed insights into creativity in education, highlighting both the challenges and opportunities for pre-service teachers. As one progresses from one cycle to another, there is a deepening understanding of creativity within the educational framework. These cycles also reveal the positive effects of creative learning sessions for participants, influencing their perspectives, teaching methods and overall engagement in the creative learning process. These aspects will be discussed in the next chapter.

Moving forward, I will focus more specifically on the perspectives of the six participants who attended all the creativity sessions to explore the key themes in greater depth.

4.2.2 Key Themes from Individual Analysis of Six Participants' Reflective Journals

To comprehensively answer RSQ1 and gain a deeper understanding of the participants' views, this section explores individual analysis of the journal entries of only six participants. It examines and presents the participants' development, with a focus on tracking and exploring insights from their reflective journals throughout the sessions. From a reflexive thematic analysis perspective, this is pivotal in closely examining "change over time" within the data (see section 3.10).

A total of six participants were selected for individual analysis based on their consistent attendance across all six sessions and their submission of reflective journals after each session, except for one with five entries (see Table 12). This subset comprises two students with an Arabic major background and four with an English major background.

Given the nature of reflexive thematic analysis, this section ensures that the interpretation of each participant's ongoing experience is transparent and firmly rooted in the data. Here, I wish to provide further insights and offer a detailed account of the experiences of the six pre-service teachers from my personal perspective. As a first step in this analysis, I made notes and sketched several mind maps to gain a comprehensive understanding of their reflective journals. Subsequently, I worked on a coding process to delve deeper, aiming to identify themes and find patterns among the entries. This process facilitated a richer exploration and enabled the identification of related ideas and themes (see Appendix L for details).

It is worth noting that the emphasis was on understanding and interpreting the nuances, not on representing all participants. Furthermore, the objective was not to depict an "ideal type" of their

session experiences but to discern the progression of their thought processes concerning creative learning and teaching. Due to space constraints, I have used minimal excerpts, rather highlighting the participants' progression. I present the findings for each participant, including a brief view from my own diary, followed by a summary to explain and understand the similarities and differences between the six participants. It should be noted that the recruitment method for this study was based on voluntary participation, leading to a diverse array of motivations among participants. Although all showed a level of enthusiasm for creativity, some were driven by curiosity or academic interest, while others participated to achieve course requirements. This variation in initial attitudes provided a rich context for exploring the reception and impact of creative pedagogical strategies. I will revisit these aspects in the Discussion chapter (see Section 5.1) to emphasise their potential consequences and applicability in developing teaching strategies across diverse educational settings.

Figure 18 identifies the six participants and Figure 19 provides the percentages for the word counts in their reflective journals.

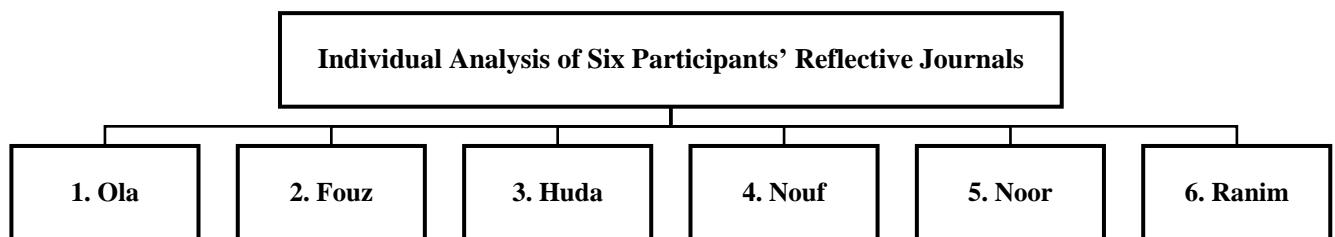


Figure 18: Participants' names in the individual analysis

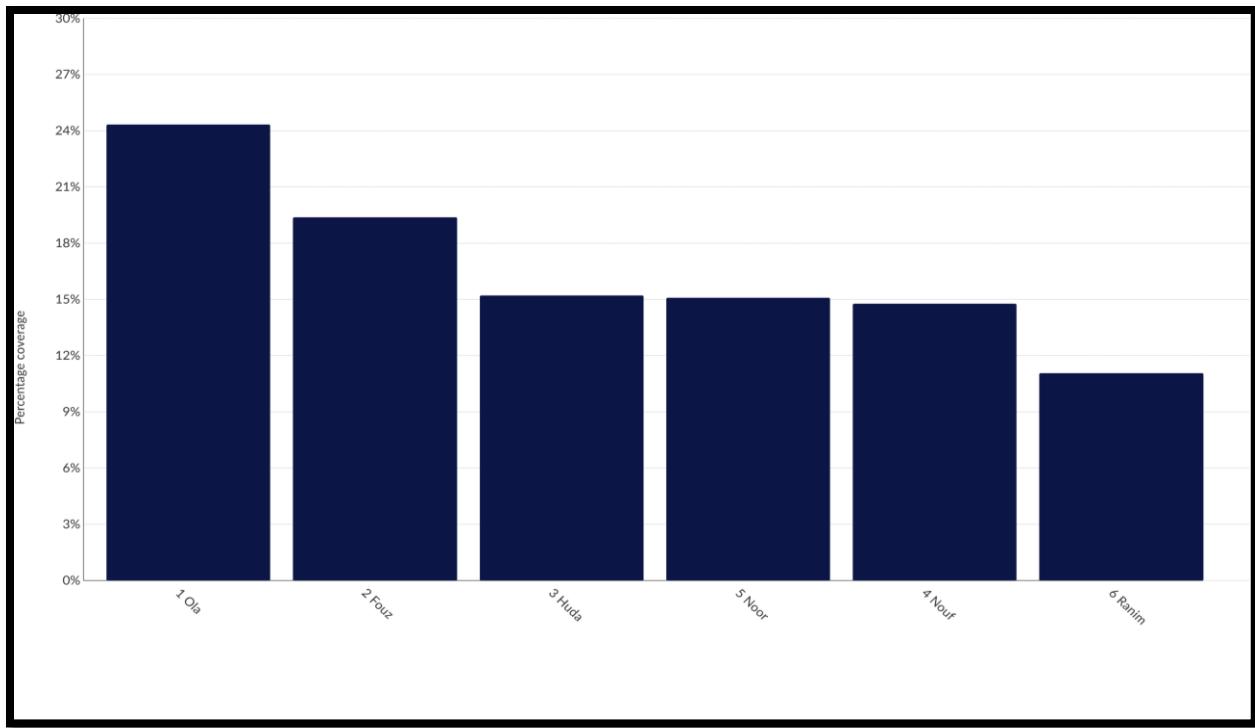


Figure 19: Percentage word counts in participants' reflective journals, extracted from NVivo

4.2.2.1 Ola: How does one teach Arabic lessons that foster a positive and creative personality?

Ola is a pre-service teacher of Arabic, and her academic major clearly influenced her understanding of the sessions. Her journal was the longest, representing 24% of the total for all six participants in NVivo as shown in Figure 19). Ola's journal was also most comprehensive compared to the other participants, as she described and argued what happened in the sessions. For example, in her second entry, she stated that:

In general viewpoints, women's contributions to creativity often seem overshadowed. After engaging with my classmates and reflecting on what I've seen and experienced, I believe women play a significant role in moulding educational approaches. They frequently introduce innovative ideas and teaching methods and foster creativity in ways that might not always be acknowledged. Our discussion about women being "sources of creativity" truly struck a chord with me. It's made me consider and appreciate the diverse ways in which women contribute to and often pioneer creativity in life. (Entry 2)

Ola's offers insights into her evolving understanding of the concept of creativity in teaching, especially within the context of Arabic lessons. The primary theme identified is her perspective on creativity in teaching Arabic. Furthermore, her approach closely aligns with the role of a teacher

as an action researcher, as she underscores the significance of tailoring practices based on personal observations and reflection.

Examining Ola's perspective on creativity, she starts by recognising the multifaceted nature of the concept and noting its inherent subjectivity. She indicates that perceptions of creativity can vary significantly based on an individual's position, highlighting the diverse viewpoints that exist within this domain. She wrote: "I saw that our notions of creativity differed depending on the person's position" (Entry 1). Her understanding of creativity seems to vary based on an individual's role or status. Essentially, people from different backgrounds or with varying responsibilities might hold unique views or interpretations of what creativity entails. This perspective signifies her open-mindedness and eagerness to appreciate diverse viewpoints and she notes the subjectivity inherent in perceptions of creativity throughout her entries.

Moreover, she displayed a strong appreciation for reflection in practice, emphasising the importance of being a reflective practitioner and the need for continual growth in teaching. For instance, after the first session, she wrote:

Discussion, idea sharing, ... this is how we learn and grow our ideas. ... Learning can be fun. I recognise there are different types of imagination in activities but how can these be used in Arabic lessons? ... It shifted my perspective in various ways by allowing me to share my thoughts and experiences. Because teachers keep learning, that altered my perspective on how to encourage creativity in the classroom. (Entry 1)

She accentuates the value of continuous learning, sharing experiences and evolving. She also considers how to apply these creative practices in Arabic lessons to make them more enjoyable. Ola suggests that teachers should move beyond mere theoretical knowledge or advice from mentors. She advocates that educators shape their pedagogical viewpoints based on their own classroom observations and evidence, for example:

To be effective educators, we must be able to form our practices based on our observations. In order to use cooperative work, for example, we must apply it and analyse the results. (Entry 5)

This extract strongly resonates with the role of a teacher as an action researcher. The emphasis she places on forming practices based on personal observations and analysing the results of specific teaching strategies suggests an iterative process of trial, observation, reflection and adaptation – hallmarks of action research.

In addition, in the final entry, Ola explained her perspective on teaching creativity:

As an Arabic teacher, teaching creativity involves more than one creative habit, such as participation, imagination, perseverance and curiosity... We have to focus on two areas, allowing students and teachers to develop knowledge and proficiency in their field, and encouraging thinking skills development. (Entry 6)

This likely reflects a multifaceted understanding of creativity in teaching. Ola emphasised not only the variety of creative habits necessary for effective instruction but also the dual importance of subject mastery and the cultivation of thinking skills. This approach suggests a holistic view, such that both content knowledge and critical thinking are valued and integrated in the teaching of Arabic.

The final theme revolves around professional development and creativity. Ola made a connection here, saying: “Teachers continue to develop throughout their careers. Therefore, discipline is a part of being a creative teacher” (Entry 6). Throughout her journal, Ola emphasised the significance of consistent professional growth, the pursuit of academic qualifications, honing research skills and the essence of discipline in cultivating a creative teaching approach.

Ola’s development from recognising the multifaceted nature of creativity to understanding its practical applications in teaching, especially in Arabic lessons, is striking. The narrative shifts from theoretical understanding to the practical implementation of creativity in teaching, underscoring the importance of continuous learning and development. Overall, Ola’s enthusiasm can be seen in her extracts, which illustrate her willingness to participate, discuss and creatively teach from the very first session.

Therefore, “How to teach Arabic lessons that foster a positive and creative personality” aptly reflects Ola’s primary focus on implementing creativity in her Arabic lessons and her intention to nurture a positive, creative attitude among her students.

4.2.2.2 Fouz: What does a creative teacher look like?

Fouz is a pre-service teacher of Arabic who was very interested in the field of education. For example, she asked me to hold a webinar to openly discuss topics related to the placement. The primary theme emerging from Fouz’s reflections centred on the teacher’s role as a creative model for students. In her reflective journals, she consistently highlighted the creativity of teachers across

three distinct roles: my role as the session tutor (Entries 1 and 3); the role of teacher educators within the college staff (Entries 2 and 3); the pivotal role of schoolteachers (Entries 1, 4, 5 and 6). Throughout her entries, her perspective evolved, unveiling multiple facets of what it means to be a creative teacher.

Fouz was of the belief that creativity can be nurtured and developed by an “effective and creative teacher” in the classroom setting (Entry 1). She perceived a creative teacher as someone who creates an attractive classroom and “finds a new and attractive way of thinking, learning, and problem-solving” (Entry 1). She believed that a creative teacher plays a crucial role in fostering student’s creativity, indicating a symbiotic relationship between them. Moreover, she underscored the importance of dialogue in activating cognitive functions and bolstering creative thought. For instance:

Dialogue was good way to encourage our thinking, and I believe that there is a close relationship between the use of dialogue on different topics in a positive way and creativity... It was great to see the tutor being constructive and interested in hearing our opinions and providing equal time to each participant. So, it was very enjoyable to discuss things in a fun atmosphere. (Entry 1)

Fouz’s reflections stress the central role of “dialogue” in nurturing creativity. Yet, its significance goes beyond that. Dialogue, characterised by interactive, open-ended discussions, is vital for establishing classroom relationships. It not only encourages students to share, challenge and refine their ideas but also promotes mutual respect. Furthermore, Fouz argues the importance of ensuring that learners feel their voices are acknowledged and valued by their teachers. She also highlights the value of experiential and collaborative learning approaches. These teaching strategies will be elaborated on in the discussion in Chapter 5.

In addition, Fouz acknowledged the challenges teachers face, particularly within the constraints of the Saudi educational system. She noted the importance of traits such as perseverance, hope and resilience to achieve success and foster creativity, especially in challenging environments, as highlighted in Cycle 3.

In addition, she illustrated how the creative teacher’s personality and approach, including body language and a smile, affect participants’ attitudes:

This session was rewarding and beneficial to me. The tutor explained what curiosity is in teaching. Because of exams, there were fewer participants, but she encourages us with her smile

and positive attitude throughout all the activities. In my experience, the behaviour of a teacher, their voice, body language, and smile, can deeply impact the way students perceive and engage with the lesson. Therefore, a creative teacher must be mindful of these aspects to foster a positive learning environment. (Entry 3)

In addition, Fouz indicated that college tutors should be exemplars of creativity in their teaching methods to influence their students, who will be the teachers of the future. This underscores their significance in the students' learning experience. She acknowledged that teaching for creativity is not limited to school education and "even teaching staff in higher education can form learning teams, brainstorm, pose intriguing questions and create a student-centred approach" (Entry 5). This also denotes the role of creativity in higher education.

Moreover, Fouz described how the experience of the sessions shaped her views of the role she wished to take on as a future schoolteacher:

After these sessions, I realise the importance of the teacher in a school as creativity does not flourish without a teacher's endeavour. I am seeking a significant role as a teacher who wants to be creative and fosters creative students. Creative teachers must maintain enthusiasm and attain their goals despite the several challenges in the school environment. (Entry 6)

These points are prominently showcased in her entries. Fouz conveys her epiphany that creativity is not innate but is something that can be cultivated and taught. The creative approaches and methods she mentioned in her entries – from brainstorming and discussion to the Six Hats approach – indicate her conviction in teachable creativity. Furthermore, in places she noted the importance of the environment as a foundational element in nurturing learning and creativity (Entries 1 and 3).

In summary, Fouz holds the belief that creativity can be cultivated in the classroom and within higher education and that creative teachers have a significant influence on students' creativity. I found the question "What does a creative teacher look like?" encapsulated her exploration and understanding of the characteristics and methods of creative teachers, especially considering her reflections on the role of teachers in influencing student creativity, the importance of dialogue in the classroom and the value of a positive learning environment. These insights reflected her developing understanding of creative learning and teaching.

4.2.2.3 Huda: What else is included in creativity?

Huda is a pre-service teacher of English and was eager to participate in the sessions. She described her enthusiasm after the second session.

Even though I have a mid-term exam, I attended this session enthusiastically to complete my creative journey with my friends. (Entry 2)

Huda's journal revealed a progressive understanding the concept of creativity. From the analysis, three distinct facets emerged. First, she identified the multifaceted nature of creativity, acknowledging its intricate dimensions. She then explored the dual nature of creativity, recognising its advantages and challenges. Finally, Huda identified the sociocultural factors that influence creativity, showcasing a nuanced comprehension of the concept.

Regarding her multifaceted understanding of creativity, through her journal, she offered different insights into the meaning of creativity, more so than the other participants. A first impression is that creativity is not a gift, but a skill that can be stimulated. She stated, "I discovered that creativity is not a gift that few people are born with" (Entry1), which is a common misunderstanding within Saudi social context. Moreover, she recounted:

This session may reflect some theoretical components of educational courses in which we discussed "learning" as a process of behavioural change. I found this to be close to the definition of creativity. I would say, it is changing behaviour in order to solve problems or explore solutions in an enjoyable way. (Entry1)

From the extract, it is apparent that she linked her prior knowledge from the previous modules to the current session and placed creativity at the core of learning. In essence, this extract presents an integrative perspective on learning and creativity, suggesting that both fundamentally involve a change in behaviour. While learning pertains to the acquisition and application of knowledge, creativity, in Huda's view, represents an enjoyable experience of modifying one's behaviour to address challenges and discover solutions. One intrinsic attribute of creativity is its problem-solving capability. This viewpoint was further echoed in her fifth entry, which showcased her evolving comprehension of creativity, emphasising its dynamic and active role in the learning process. These insights are pivotal and will be further discussed in Chapter 5.

Moreover, she considered that "creativity, imagination and the use of colours are related" (Entry 2), consistent with several participants who considered creativity to be something colourful.

Delving further into the multifaceted nature of creativity in education, Huda highlighted that it is not always straightforward or entirely beneficial, saying:

... It could be a beneficial experience that enhances a student's cultural knowledge and understanding, but it could also be a negative experience, wasted effort and time, and without achievement. Thus, not all creative tasks are positive. Especially, many creative students tend to overthink. (Entry 4)

Huda importantly acknowledges here that creativity, including the five creative habits, does not always yield positive outcomes. She recognises the dual nature of creativity, encompassing both positive and negative facets. She elaborates on the potential pitfalls of creativity, especially when it arises from inappropriate teaching methods or the misuse of creative processes. Specifically, she identifies overthinking as a potential drawback, which, while stemming from creativity, can impede progress and lead to stagnation. Without appropriate guidance and structure, this aspect of creativity can result in unproductive ventures and cognitive overload.

In addition, concerning sociocultural influences on creativity. Huda wrote:

Teachers must keep in mind that creativity can be rejected in a variety of situations; sometimes the product or the process is not creative because of social or cultural reasons. (Entry 6)

Huda explained the intricate relationship between creativity and the sociocultural context. She pointed out that while creativity is often championed as a desirable attribute in education, it is not always perceived positively or accepted. Rather, it is contingent on the societal and cultural fabric in which it manifests. This revelation has significance for educators, indicating the need for a broader understanding of the external forces that might shape the reception and endorsement of creative endeavours.

Furthermore, Huda posits that sociocultural determinants not only influence the perception of creativity but also inform the criteria for its evaluation. She discusses the importance of feedback, suggesting it acts as a barometer for gauging the effectiveness and alignment of creative output within a given sociocultural framework. For example, she shared her prior personal experience of collaborating as a student:

After the session discussion, I discovered that I had participated in several group study assignments [outside the sessions], but I had received very little effective feedback from my peers or the course tutor. Hence, the students' performance was not developing, and they did not know what their strengths and weaknesses were in teamwork. (Entry 5)

Huda's observation underscores the indispensable role of feedback in learning and development. Effective feedback functions as a guiding compass, steering learners towards areas needing improvement while reinforcing their strengths. It hints at a potential gap in the pedagogical approach, where collaboration, rather than fostering collective growth, becomes a mere formality.

Concerning the last theme, reflecting on teaching approaches, Huda expressed her appreciation for the creative learning sessions, noting both the pleasure and value they brought to her professional development. These experiences provided more than just enjoyment; they sparked profound introspection regarding her role and practices as a future teacher. Through these sessions, she began to see the importance of giving good feedback to students.

In conclusion, Huda's journey throughout the sessions exhibited a profound exploration of the dimensions of creativity in education and showed a major step in her growth as a teacher, moving from just teaching content to really thinking about how her methods might inspire creativity in her students.

Her progression highlighted several key themes: the multifaceted nature of creativity, the significant role of sociocultural factors, the importance of feedback in creative processes and a deep reflection on teaching methods. As a testament to her in-depth exploration and desire to grasp the expanse of creativity in greater depth, I pose a thought-provoking question: "What else is included in creativity?".

4.2.2.4 Nouf: Is creativity pursued for fun, or is fun found in the creative process?

Nouf is a pre-service teacher of English. According to her journal, she is a visual learner (Entry 2) and therefore she found mind map activities enjoyable (Entry 6). This preference for visual learning illustrates the significance of designing teaching methods and activities to cater to diverse learning styles within the classroom. Such diversity ensures that educators can effectively engage and address the unique needs and preferences of each student, enhancing their learning experience.

In Nouf's journal, her reflections centred on two themes: first, the significance of collective exploration and deep thinking; second, the attributes of a creative learner. Additionally, a recurring motif throughout her journal was the place of fun learning within creativity. Collectively, these themes shed light on her understanding and appreciation of creativity in education.

Concerning the first theme, the value of collective exploration and deep thinking, Nouf reflected on the discussion aspect of the sessions and pointed out the importance of using logical arguments to conduct effective debates in lessons. In her opinion, developing this skill among students could contribute to creativity. Specifically, she discussed her first experience in the session:

It was a wonderful experience to work together in this session. We discussed the history of creativity over the years and the role of women in general, as well as the Arab world and Saudi Arabia in particular. Four members of our team explained the reasons and provided examples to help provide a logical argument. ... The responses were short and were not convincing because the subject was tricky and required deep thinking, but, from this debate, I learned the value of devoting time in the classroom to talk and encouraging everyone to listen and participate. Also, if there are unfamiliar aspects, it's okay not to be able to draw a conclusion. (Entry 1)

As shown in this excerpt, Nouf emphasised the value of collaborative discussions even though she was dissatisfied during the activity due to time constraints, the complex topic and lack of familiarity with some participants. She highlighted the importance of dedicating time to in-depth conversations and noted that the essence of the activity was to bolster participation. Importantly, she indicated tolerance for ambiguity and dealing with complicated subjects, which are essential elements for creativity.

Participation appeared again as a core concept within dialogue in her fifth entry, when she said:

In the classroom, it is wonderful to encourage pupils to develop opinions through debate. There are usually two sides to every debate, but if you use "six thinking hats", it can be different. The six hats strategy was discussed today, as well as the roles allocated to team members based on the hat colour. ... The green hat represents creativity, which includes possibilities, alternatives and new ideas. This can be linked to participation and creativity. It's an opportunity to express new concepts and new perceptions. After the discussion about the collaboration experience, my view of myself improved and I realised mistakes can be inevitable. (Entry 5)

This extract demonstrates how Nouf developed her creative teaching approach by integrating the Six Thinking Hats strategy in discussion and teamwork. Furthermore, she expressed her improvement in self-assessment and self-confidence, without elaborating. Therefore, improvement may come from listening to other people's stories and working together.

Moreover, participating in dialogue enabled her to gain insights and benefit from others' experiences. She recounted "a number of comments and participant experiences were useful to me in preparing lessons" (Entry 4). Consequently, she uncovered the link between planning a good and enjoyable lesson and creativity. Nouf's journal entries stressed the joy of learning implicitly and explicitly. For instance, she expressed her feelings as a participant in the first session, saying

“this session helped me to enjoy teaching” and “I enjoyed what was discussed in the first session” (Entry 1). Moreover, she explained that as a teacher teaching and learning should be enjoyable (Entry 2) and “educators must inspire students to love learning, flourish and strive for excellence” (Entry 3). Further, she suggested using problem-solving activities to promote creativity. In addition, she pointed to the importance of arts-based teaching in developing students’ visual skills (Entry 6).

These examples relate to another prominent theme in her reflective journal: the attributes of a creative learner, encompassing both teachers and students. This theme is crucial as it highlights the soft skills and interpersonal attributes a creative teacher or learner should possess to foster an environment conducive to learning and creativity.

In conclusion, Nouf’s reflections across these entries highlight her evolving understanding of collaboration, discussion and creativity. She found the sessions were an opportunity for “putting the skills we had learned to use”. Plus, she indicated that creative teachers could motivate their students to learn. According to her, “we still need to improve our reading and teaching about creative pedagogy” (Entry 6).

Consequently, I found her journey showcased a thoughtful progression in her understanding and appreciation of creativity in educational settings, reflected in the question: “Do we discuss for the fun of it, or do we discuss to find the fun?” Here, I consider especially her emphasis on the value of discussions, participation and exploration in learning.

4.2.2.5 Noor: How do I become an optimistic, confident and creative teacher?

Noor is a pre-service teacher of English. During the sessions, she was very sociable and demonstrated a sense of humour and optimism. In Noor’s reflective journal, several themes emerged that shaped her perceptions of creative learning: first was the meaning of creativity; second was the pivotal role of discussions in deepening understanding, correcting misconceptions and enhancing practical teaching; third was self-confidence as key element of creative learning.

Regarding the first theme, the meaning of creative learning, her six entries showed consistency and development in her understanding. For example, she contended that creativity is identified through unique ideas, solving problems and peer evaluations:

Every person has unique thoughts and approaches to solving problems that set them apart from their peers. This got me wondering: Are kids generally creative?... creative work is not accidental. (Entry 1)

In her next journal entry, she again stated that creativity is about solving problems, saying “finding smart solutions using imagination” (Entry 2). Following a later session, she stated that “creativity means the focus on new ideas in a simple and collaborative way” (Entry 5). It is clear from her emphasis on collaboration that her understanding was further enhanced, this also highlights the importance of creativity for kids. Additionally, she gave her perspective on creativity in the last entry:

Creativity is the result of hard work and continuous efforts, not by accident or luck. The creative teacher or learner requires time and strong positivity. (Entry 6)

This extract reveals a nuanced understanding of creativity as a deliberate, cultivated process rooted in hard work and persistence. Her emphasis on “hard work”, “continuous efforts” and “strong positivity” highlight the importance of resilience amid creative challenges. This insight showcases her evolved perspective, suggesting she has embodied and considered creativity more as a developed skill than mere chance or inherent ability.

In the second theme from Noor’s journal entries, she frequently highlighted the significance of discussions during the sessions. This recurrent mention pointed to their pivotal role in deepening understanding, correcting misconceptions and enhancing practical teaching methods. For example, after the first session, she stated, “The discussion touched on several areas of my thinking” (Entry 1). Then, she analysed and criticised the misunderstanding of creativity, such as viewing it as synonymous with intelligence. In another example, Noor reported that listening to the discussion helped her to gain knowledge when planning lessons and finding teaching methods:

During our discussion of “Bloom’s taxonomy of cognitive objectives”, I found that some comments and experiences of participants are useful in preparing lessons. [For example,] telling stories, like “Alice in Wonderland”, I learnt how to attract interest, present the lesson content and pose questions. (Entry 4)

This extract further signifies the practical implications of such discussions in a teaching context. It is evident that the discussions provided Noor not only with conceptual clarity but also practical means of enhancing her creative teaching approach.

The last theme revealed in Noor's journal was the crucial role of self-confidence in creative learning, both for pre-service teachers and within creative pedagogy (Entries 3, 4 and 6). She noted how self-assurance is not just a personal attribute but a fundamental component in the repertoire of a creative educator. This theme shows Noor acknowledging that the ability to foster creativity in the classroom is intricately linked to the teacher's self-confidence, which in turn influences their willingness to explore innovative teaching methods and engage students in creative learning processes. In particular, Noor's perspective was influenced by the "five-dimensional model of creativity":

According to my observations and comments from several participants, I understand that creative learning in our schools could be accomplished by first incorporating the lesson's subject into everyday life, using both imagination and real examples. Second, delivering academic deep content with crafts, arts and digital tools..., and third, offering opportunities for collaborative tasks. Teachers need to be smart and creative in order to teach for creativity. I can say it is not an easy practice, but as educators, we can accomplish it! (Entry 6)

Even though creative practice is not an easy undertaking, Noor was confident in her abilities as the last sentence showed high self-confidence and optimism, signs of a creative teacher. She made a similar point when she said teachers need to "have faith in both [their own] skills, as well as their students, to think creatively and beyond the box" (Entry 4). Most likely, confidence is a natural characteristic, part of her personality, that was influenced by the sessions.

In conclusion, Noor showed progression in her understanding and appreciation of creative learning as evidenced by her reflective journal entries. She underscored the significance of discussions in refining understanding, rectifying misconceptions and bolstering teaching methodologies. Noor expressed her desire to become a creative teacher and was keen to learn more about creative learning (Entry 6). As a result, I consider the question "How do I become an optimistic, confident and creative teacher?" reflected her desire to combine optimism, confidence and creativity in her teaching approach.

4.2.2.6 Ranim: What if we turned our teaching worries into creative and reflective directions?

Ranim is a pre-service teacher of English. Generally, Ranim perceived the sessions to be supportive on her path to becoming a teacher in the classroom. Although she attended all sessions and actively participated in all discussions, she only wrote five reflective journal entries. Based on the analysis,

two elements were identified as particular salient to present here: a positive attitude and the value of sessions and the pedagogy of creative teachers.

The first theme concerns the role of reflection in the teaching experience. Ranim acknowledged the anxieties many pre-service teachers often feel when transitioning into the practical aspects of their profession, as most pre-service teachers in Saudi education colleges do not engage in teaching practice until their final year. Like many pre-service teachers embarking on their professional lives, Ranim grappled with the common fears and anxieties of teaching in a real-world classroom setting. As she prepared to stand in front of pupils and mentors, she recognised the importance of overcoming her apprehensions. She reflected:

I realised that I shouldn't be frightened to explain the first lesson or evaluation in front of the schoolteacher and the placement training mentor. ... that by reflection, I am able to analyse, understand, and refine my teaching practices. Every classroom experience, interaction with students offers invaluable learning opportunities. By consistently reflecting on these experiences, I can identify areas of strength and aspects that need improvement (Entry 1).

This continuous self-evaluation enhances personal growth and optimises the educational experience for students, turning teaching into a constantly evolving practice. This insight exemplifies Ranim's determination and commitment not only to acknowledging her fears but also confronting them head-on, embodying the spirit of a teacher-in-the-making.

Interestingly, she identified two elements to counter her negative feelings, especially early on: "critical thinking abilities and a sense of risk for a creative learner" (Entry 2). She supported this notion by stating the importance of tracking teaching progress through recording teaching performance: "it is crucial to write a description of my thoughts both before and after the session". Her notion of recording the teaching experience could be a positive sign of "reflection in and on action", which stimulates reflective practice. This is not just about facing one's fears but also transforming them into constructive experiences. Overall, these points indicate her commitment to self-improvement and the iterative process of learning from one's own experiences.

Furthermore, she demonstrated the power of self-reflection and the impact of collaborative feedback on professional development. For example, she said:

Despite the complexity of the issue, I appreciated my peers' comments about how questioning fosters creativity, imagination and tenacity. I will work to discover activities that foster each of these traits. ... As a new teacher, I continue to make an effort to carefully design the class activities... (Entry 4)

This extract connotes Ranim's approach to actively integrating peer feedback and insights in her practice as a means of applying teaching for creativity in her lessons. Her acknowledgement of the intricacies surrounding teaching practice highlights a positive and reflective attitude.

The second theme concerns the role of collaboration in creative teaching. Ranim's journal entries reflected the evolution of her understanding about what truly constitutes creative teaching. She did not just identify the traits of a creative teacher or the tools that could be used but delved deeper into the very philosophy behind them. In Entry 5, she highlighted the depth and dynamism of collaboration in teaching – it is not just about teamwork but also about understanding the nuances, critiquing ineffective practices and championing student-centred methods. This also hints at the broader implications of collaboration, encompassing both the interpersonal traits of a teacher and the teaching techniques they employ. Consequently, she expressed the intention of applying collaboration in her lessons:

I plan to do cooperative learning with imaginative tasks not because it was mandated by the school administration but to improve learning, foster social connections and hone abilities. (Entry 5)

In terms of the traits of a creative educator, Ranim recognised the value of being supportive and friendly with pupils (Entry 5) in her collaborative approach. This underscores the human element of teaching, whereby the relational bond between teacher and student can be a catalyst for learning. Her pedagogical approach was based on the belief that the teacher's role is crucial to nurture students' creativity. This was clearly stated in Entries 1, 4 and 6.

When it comes to creativity and learning, what part do the family and parental styles play? ...These factors were significant, but in my opinion, from a young age, the teacher played a significant part in the students' feelings and enjoyment of learning. (Entry 1)

She also highlights creative teaching practice, for example stating "use stories" (Entry 2) and "mind maps" (Entry 6) in order to support pupils' creativity.

The following excerpt from her conclusion of the last session shows the extent to which she thought the subject of creativity could relate to the social context and influence one's life, in addition to the pedagogical aspects.

These sessions helped me to realise the creative potential for teaching and learning 21st-century skills, particularly in the Saudi context, and about Vision 2030 and the change in the country. There is an increasing emphasis on fostering collaboration in classroom learning. My enjoyment of creativity and challenge is increased by my roles as a teacher and learner. (Entry 6)

This reflection highlights Ranim's heightened awareness of the importance of creative teaching for contemporary skills, especially within the evolving Saudi educational landscape.

In conclusion, Ranim's reflections consistently highlighted the transformative impact of the sessions and underscored the essence of pedagogy for creative educators. Through her reflections, Ranim progressively deepened her grasp of what truly embodies creative teaching, emphasising the imperative of meaningful collaboration. Thus, I found the question "What if we turned our teaching worries into creative and reflective directions?" captured the essence of taking worries and challenges and using them as catalysts for creative growth.

4.2.2.7 Reflection and summary of individual analyses

The analyses presented above offer insights into each participant's experiences of creative learning and teaching. Although many extracts from the six participants' reflective journals suggest developmental progress, two considerations are crucial when interpreting this analysis. First, the analysis depends solely on written reflective journals, which might have inherent limitations. These include interpretative and subjective perspectives and the fact that sometimes they might result from quickly writing up points rather than deep reflection (see section 3.9). Second, to reduce bias in selecting excerpts, I employed a systematic, reflexive thematic analysis process, as detailed in Chapter 3 (see section 3.10). This method entailed rigorous coding of the full datasets and evaluation of emerging patterns to select representative extracts capturing the themes and insights present in the participants' narratives.

While the excerpts highlight key themes, they account for only a portion of the extensive qualitative data that informed the study conclusions. These limitations underscore the importance of contextualising the analysis within the overarching inductive and reflexive process, ensuring transparency regarding data sources and the researcher's positionality. Additional research with more datasets could further refine insights into individual impacts over time.

Close analysis of the six participants' perspectives revealed certain patterns concerning the evolution of their creativity through learning. Three central themes emerged, which are presented here and then discussed in Chapter 5.

First, a common theme that emerged from their reflections was the inherent relationship between learning and creativity. They unanimously identified creativity as pivotal to the learning process, with a distinct emphasis on its role in enhancing the joy of learning. Ola, Fouz, Nouf and Huda consistently stressed the significance of weaving fun into the educational experience. Furthermore, Ola and Noor explored incorporating arts in teaching, addressing the dynamic interplay between learning and creativity. Notably, Ola, Huda, and Noor viewed creativity as a multifaceted concept. This evolution in their understanding is especially significant as most of them initially perceived creativity and learning as separate concepts.

The second theme was the value of creative teaching approaches, with collaboration and discussion seen as fundamental in fostering creativity. In relation to this, the roles and qualities of teachers were prominently discussed, as observed in the reflections of Fouz, Nouf and Ranim. When it came to collaboration, Ola and Huda highlighted its importance in terms of teamwork. Fouz remarked on how creativity flourishes in collaborative activities, particularly in higher education. Nouf addressed the significance of collective exploration and deep thinking. Noor discussed collaboration in the context of problem-solving. Ranim provided insights into implementing collaborative methods in her lessons and stressed the growing need for such approaches in the Saudi educational context.

In terms of employing discussion as an effective teaching method, all six participants unanimously acknowledged the value of these sessions in enhancing their comprehension of diverse creative practices. These discussions, embedded within the sessions, afforded participants the opportunity to delve deeply into the topics, promoting a richer understanding and collaborative exploration of various viewpoints. This engagement was evident in their reflective journals, in which they frequently referenced session discussions, reflecting on their critical engagement with the content. For instance, during the initial session, Ola and Nouf sparked a conversation on gender-related influences on creative thinking, leaning towards the feminine perspective. In the fourth session, Nouf, Noor, and Ranim had a lively debate about managing unexpected questions during creative

tasks, illustrating their eagerness to consider diverse perspectives and deepen their understanding of creative methods.

In addition, the participants refined their perspectives on the crucial role of feedback within creative approaches, with Huda exemplifying this insight particularly well. It is important to note, however, that while they discussed teaching processes, activities and behaviours, there was little mention of assessments in the context of creative learning. Their primary emphasis was on classroom teaching. This omission might be attributed to the sessions not covering assessments due to time constraints.

Third, their perceptions evolved concerning the role of reflection in creativity and professional development. Ola highlighted the link between enhancing teachers' creativity and ongoing learning, reflection and professional advancement. Both Nouf's and Fouz's reflections illustrated the value they derived from their reflective engagement.

What is more, the participants also underlined the potential of reflection to boost confidence, with several indicating its effectiveness in addressing anxieties about teaching. Noor emphasised the critical role of confidence for pre-service teachers and in effective creative teaching, suggesting it can be enhanced through consistent reflection. Similarly, Ranim pointed out that reflection could help alleviate fears and anxieties associated with teaching in real-world classroom settings.

When it comes to confidence and creativity, their journals clearly demonstrated their assurance in conveying their views on the subject. Given the free format of reflective journals and their varied educational backgrounds, the participants presented unique insights. For example, Huda explored the potential negative facets of creativity, whereas Fouz discussed the role of creativity in higher education, all while acknowledging the specific nuances of the Saudi social and educational context. However, while acknowledging that reflective journaling is multi-dimensional, this is not the primary focus of evaluation in this study.

In conclusion, all participants displayed an earnest desire to further their knowledge in creative education. The sessions evidently facilitated their exploration of varied creative facets, enhancing individual growth within specific areas. For example, Ola incorporated her newfound insights in planning Arabic lessons, while Fouz honed her creative teaching methods. Similarly, Huda, Nouf,

Noor and Ranim each made notable advancements, enriching their respective teaching experiences and attitudes. Their reflective journals consistently illustrated this growth, illustrating their evolving beliefs and practices regarding creativity. In essence, all six participants demonstrated a high level of engagement in this study, specifically the topic of creative learning and teaching. Their optimistic attitude potentially reflects the wider enthusiasm of Saudi pre-service teachers for developing their creative pedagogical approach.

However, while these sessions had a notable impact, they should not be seen as exhaustive or flawless in their exploration of creativity in education. Moreover, the themes should not be interpreted as representing the participants as paragons of fully realised creative pre-service teachers, especially since the sample size of six participants may not fully represent the diverse perspectives and experiences of all pre-service teachers. In addition, a direct comparison of the participants' teaching practices and their beliefs was not conducted.

4.2.3 Summary of Findings: RSQ1

The findings related to RSQ1 were presented in two main parts. The first part explored the participants' perspectives on creative learning and teaching as a whole, with themes organised into seven cycles based on the action research approach. This structured approach allowed a progression from broad understandings of creativity to more nuanced examinations.

The second part focused on an individual analysis, exploring the evolving perspectives of six participants who actively engaged and participated in all sessions. Their journals consistently demonstrated their growth and changing views on creative learning and teaching.

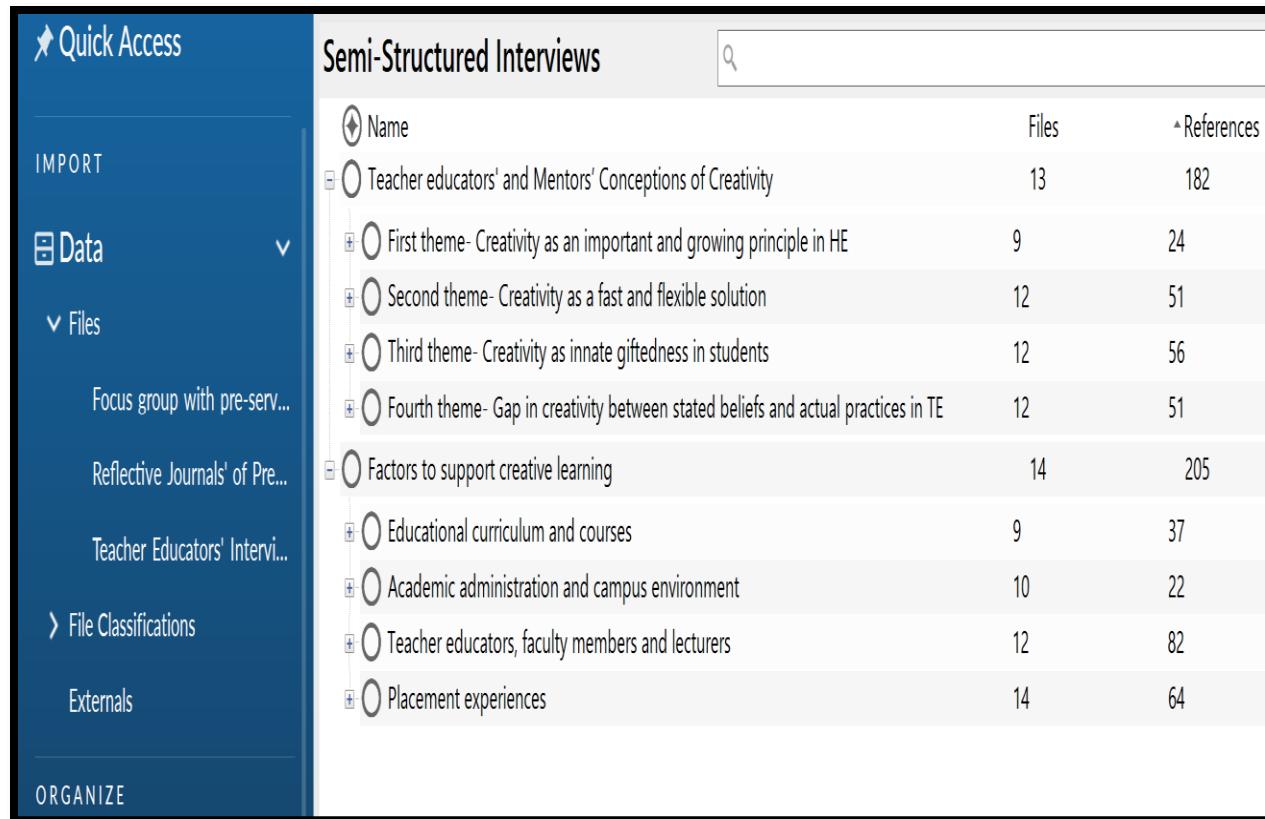
Collectively, these two parts illustrated a holistic journey from generalised concepts of creativity to intricate explorations. It became apparent that the participants' sociocultural backgrounds played a vital role in shaping their perspectives on creativity in education. In addition, the interrelationship between learning and creativity was highlighted as playing a vital role in enhancing joy within education and the view of creativity as multifaceted. Significantly, the value of creative teaching approaches was evident, with an emphasis on the salience of collaboration and discussion in nurturing creativity.

Reflection also emerged as a key component in professional growth and the understanding of creativity. It was deemed essential for enhancing teacher creativity, learning and professional development. Such insights underscored a deep commitment to comprehending and assimilating creativity in education. However, it is important to examine the findings critically and consider the limitations of the study (see Section 6.5 in Chapter 6). These points are addressed in depth in Chapter 5, which provides a critically discussion of the findings from both the thematic analysis of the cycles and individual analyses.

The following section considers the teacher educators' perspectives on creative learning and the factors influencing the preparation of creative pre-service teachers.

4.3 Findings from Semi-Structured Interviews with Teacher Educators

This section presents the primary findings from the semi-structured interviews with the teacher educators (see Section 3.4.2 for their information), aimed at addressing RSQ2: How do Saudi teacher educators perceive creative learning and what factors influence the preparation of creative pre-service teachers in higher education? The focus was on exploring their conceptions of creative learning and identifying factors influencing pre-service teachers' creative learning and pedagogical practices in classrooms. Initially, as outlined in 3.10, the coding of the 12 interviews generated a substantial number of codes, as illustrated in Figure 20.



The screenshot shows a software interface for managing research data. The left sidebar has sections for 'IMPORT', 'Data' (which is expanded to show 'Files', 'Focus group with pre-serv...', 'Reflective Journals' of Pre...', 'Teacher Educators' Intervi...', 'File Classifications', and 'Externals'), and 'ORGANIZE'. The main area is titled 'Semi-Structured Interviews' and contains a table with the following data:

Name	Files	References
Teacher educators' and Mentors' Conceptions of Creativity	13	182
First theme- Creativity as an important and growing principle in HE	9	24
Second theme- Creativity as a fast and flexible solution	12	51
Third theme- Creativity as innate giftedness in students	12	56
Fourth theme- Gap in creativity between stated beliefs and actual practices in TE	12	51
Factors to support creative learning	14	205
Educational curriculum and courses	9	37
Academic administration and campus environment	10	22
Teacher educators, faculty members and lecturers	12	82
Placement experiences	14	64

Figure 20: Number of references (codes) regarding RSQ2.

Through a comprehensive review and analytic process, the final themes were formulated. These themes are now presented in two main parts: 4.3.1 presents the teacher educators' views on creative learning in teacher education; 4.3.2 sets out the teacher educators' perceptions of factors influencing pre-service teachers' creative learning and teaching in teacher education (see Figure 21).

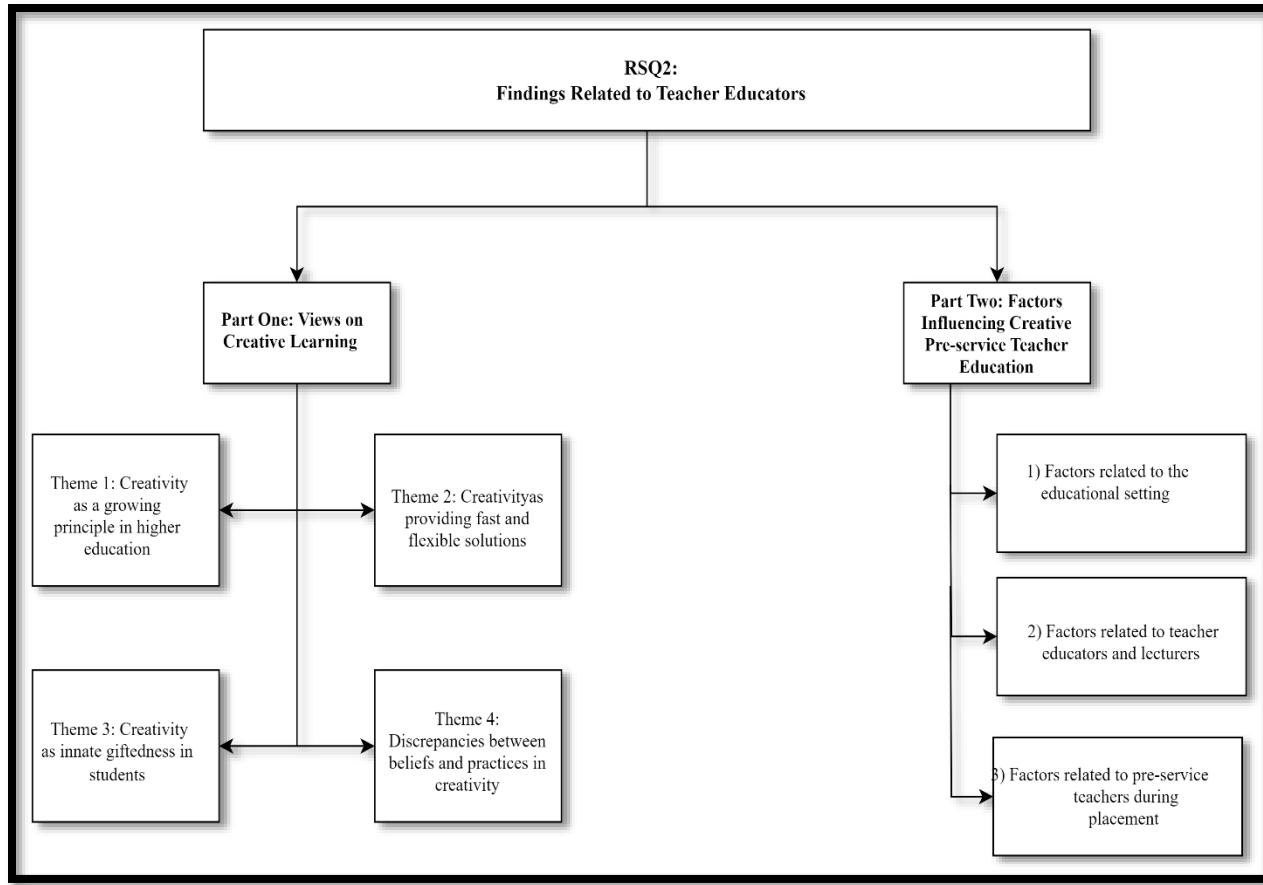


Figure 21: Outline of findings for RSQ2

4.3.1 Views on creative learning and teaching

This part encompasses four themes: Theme 1: Creativity as an important and growing principle in higher education; Theme 2: Creativity as a fast and flexible solution; Theme 3: Creativity as innate giftedness in students; Theme 4: Navigating ambiguities between stated beliefs and actual practices in creativity.

4.3.1.1 *Theme 1: Creativity as an important and growing principle in higher education*

For half of the teacher educator participants, creativity was a rapidly expanding topic within higher education, extending beyond just teacher education programmes and colleges. It offers significant benefits and outcomes within the Saudi educational context. Mada indicated that “many new aspects of creativity are emerging, such as creative leadership” at the university level. She pointed out that creativity can have multiple facets and is connected to educational leadership; for example,

it enables leaders to make creative decisions. In addition, some contended that creativity in higher education can have real outcomes for society. Rana, for example, said:

Yes, creativity is generally a part of the learning process. Creativity in universities is related to research and the quality of the output. Recent policymakers have emphasised the importance of integrating society's local needs, economy, and the academic field. Hence, universities and higher education can be viewed as creative places and a source of original ideas and products for the future.

Rana described creativity as a skill that is having a more significant impact on the economy and other aspects of life today and will continue to do so in the future. Similarly, Joory said, "Creativity refers to the creation of new ideas that solve several societal problems positively and beneficially". The value of creativity and its benefits lie in contributing to the development of society and its ability to face economic and social challenges. For example, according to Mada, "the ability to solve problems leads to changes and outcomes". These examples show the significant role of creativity in universities in the Saudi context and the priority placed on creativity as vital for the development of life skills.

In addition, the teacher educators shared a common belief about the significant role of the creative approach within the education system in the modern world. According to Hana:

Creativity is the starting point based on the philosophy of the educational system. The field of creativity in traditional education is limited and codified. At the same time, the scope for creativity in modern education should be broad and open to include the learning process.

Here, it should be noted that several teacher educators emphasised a supportive environment, openness and freedom of choice regarding creativity without providing any details, but perhaps referring to both their roles as lecturers and their students' performance. In addition, some teacher educators used the term "modern learning" to indicate the importance of the creative teaching approach in preparing university students for the future.

4.3.1.2 Theme 2: Creativity as providing fast and flexible solutions

The data showed the teacher educators viewed creativity at the general level as generating ideas and products based on uniqueness and novelty. Thus, the term "creativity" was used frequently by the teacher educators as a synonym for something original, distinctive, unfamiliar, unusual and not repeated. Moreover, these attributes were frequently linked with the notion of promptness in action. According to Shams, "Creativity is many new and useful ideas in a short time" and "A

creative approach involves being flexible and clever in solving problems”, which aligns with the concept of quick and agile thinking to produce innovative solutions. This was also mentioned by Zahra and Mada, who associated problem-sensing and solution-finding with creativity. In this sense, creativity is both a process and a product. The linkage between the attributes of creativity and the importance of acting promptly may stem from the belief that creative and unique ideas often require quick and agile thinking to seize opportunities.

In addition, the teacher educators viewed creativity as a process of thinking, believing that creativity can be taught and developed as a way of thinking and learning at the college level. Zahra, for instance, said that “creativity can be learned”. Further, Mada noted that “the field of languages, especially Arabic, can be one of the most creative subjects”. However, most teacher educators clearly considered creativity to exist across all curricular subjects, including Arabic subjects and studies in the humanities.

4.3.1.3 Theme 3: Creativity as innate giftedness in students

Four teacher educators directly linked creativity with gifted education, emphasising the correlation between talented students and exceptional behaviour. For instance, Hala asserted, “In my perspective, creativity and giftedness are closely intertwined. Gifted students inherently lean towards innovative thinking and pushing boundaries”. This perspective suggests a convergence between giftedness and creativity, implying that every gifted individual possesses creative traits. Moreover, creativity assumes greater significance for these students compared to others.

Furthermore, the educators highlighted the role of the Saudi Ministry of Education. It is important to mention here that the Saudi Ministry of Education administers “The National Program for Gifted Identification”, a widely recognised initiative in the Saudi education landscape that aims to identify gifted students. In this regard, Walaa pointed out:

The Saudi Ministry of Education prioritises creativity through various programmes in gifted education, which is instrumental for holistic development. This approach acknowledges and nurtures each student’s creative abilities, fostering their creative potential alongside academic excellence.

This underscores the emphasis on creativity within the gifted education field and the significant attention dedicated to nurturing gifted students and their academic achievement. Moreover, the teacher educators predominantly focused on a heightened level of creativity leading to concrete

outcomes, rather than merely the potential for creativity present in all students. This focus might indicate negative effects for creativity at an everyday level. In addition, it is evident that the roles of the social, political and educational spheres in Saudi Arabia are intertwined when addressing creativity in education. This could explain the nuances and dimensions in terms of how creativity is valued, promoted and implemented in a distinct educational landscape.

4.3.1.4 Theme 4: Gap between beliefs and practice in creative learning

While the teacher educators provided definitions of creativity as outlined earlier, the findings indicate a lack of alignment between their beliefs regarding creative teaching and learning and their practical implementation. Although they engaged in discussions about different facets of creativity, when I asked them “What is creative learning in your course?” they faced difficulties in translating the notions they identified into actionable strategies.

For instance, Wedad’s response appeared somewhat disconnected from her actual teaching practices. She said as “I said before, creativity is generating original ideas…”, yet failed to link this definition to her instructional methods, even after the question was restated. In contrast, Joory’s answer directly shed light on the challenges of integrating creative learning strategies in the educational context. She emphasised that while creativity is pivotal, large class sizes and time constraints often hinder its practical implementation. Joory’s focus on the pragmatic aspects of content delivery underscores the complexities of matching creativity with real-world higher education constraints. In a similar way, Mada also noted the constraints but expressed her commitment to effective teaching methods and the importance of openness to new ideas in teacher education. Therefore, I found most of the teacher educators said creative learning in practice involved “encouraging students to think and be active”, without elaborating on key elements such as novelty, originality and utility based on clear and real examples.

Interestingly, Hana’s perspective deviated from the others in that she offered a more comprehensive understanding of creative learning drawing on her courses in teacher education. According to her, creative learning involves carefully choosing teaching methods to suit her students, allowing for different solutions and focusing on developing their critical and creative abilities. Hana’s approach aligns well with the idea of teaching for creativity, which emphasises both teachers and students playing active roles in fostering creativity.

However, despite their beliefs about creative teaching practices, there was limited practical information on how to define the concept of creative teaching precisely in higher education. While some teachers linked their views to teaching methods in primary schools, they did not do so for college subjects. Although the teacher educators recognised the importance of an enjoyable learning experience for students, they did not provide specific details about what enjoyable learning might look like at the university level. Some used general statements to describe effective teaching; however, they could explicitly define the notions of ease or attractiveness. Moreover, even though teacher educators shared similar beliefs regarding creative teaching practices, there was a gap between their perceptions and actual classroom practices within higher education contexts. It is important to note that this study aimed to understand what they meant by creative teaching methods, rather than to distinguish between their beliefs and actions.

As a result, while they expressed general support for creativity, their disparate responses suggest potential gaps in understanding of the core components of creative learning and how to model it effectively for their students. Without a firm grasp of the key elements of creative learning, they are unable to provide clear, focused definitions tied to practical implementation. This view will be discussed further in Chapter 5.

4.3.1.5 Summary

In summary, the themes identified here shed light on different views of creativity in education. The teacher educators pointed to the growth of creativity as a topic in higher education, highlighting its role in providing fast and flexible solutions, exploring creativity as innate giftedness in students and addressing the challenges of aligning beliefs with practical implementation in creativity. While the teacher educators generally supported creativity, their varied responses indicate potential gaps in understanding its core components for effective modelling. They recognised creativity as involving both novel products and a thinking process and acknowledged differences in levels and types of creativity among students. The teacher educators believed creativity to be vital for education and that it could be taught across subjects, whether in schools or colleges. Therefore, creativity was seen to be influenced by many factors that will be presented in 4.4.2 in relation to pre-service teacher education.

4.3.2 Factors influencing creative pre-service teacher education

The findings identified key factors regarding creative learning and teaching. These are grouped into three categories: (i) related to the educational setting, (ii) related to college educators and lecturers, and (iii) related to pre-service teachers during placement. Each category signifies a primary influence on pre-service teachers, with multiple sub-themes. However, while certain aspects may seem general, the participants identified them as pertinent to the creativity of pre-service teachers.

4.3.2.1 Factors related to the educational setting

The teacher educators highlighted three key aspects of the educational setting in teacher education as crucial for developing creativity: i) leadership and administration, ii) the physical and social environment, and iii) the curriculum and courses in teacher education.

1. Leadership and administration

Although some teacher educators did not specify practical solutions, they indicated that academic administrators, policymakers and university leaders play an important role in fostering creativity by setting educational policies, strategic priorities and aims, and implementing admissions and academic plans. Zahra stated that:

Institutions of higher education, including administrative, staff and facilities elements play a key role in fostering the growth of students and creating an environment that encourages a positive learning experience.

The participants also mentioned the administration's role in developing an understanding of learners' needs, emphasising learning values and designing an effective policy.

According to Mada, education colleges must develop “creative leadership”:

In terms of leadership, the creative administration goes beyond admissions, projects, recruitment, and finances. Furthermore, education colleges need creative leaders who understand learners' needs, highlight the values, and design a policy that contributes to a positive learning environment.

Zahra and Hlaa also added a second priority, namely that administrators must motivate the teaching staff in terms of creativity and encourage faculty members to strive for excellence. Furthermore, Hlaa said positive feedback can develop motivation based on her personal experience of how

receiving feedback from the college dean affected her motivation. Therefore, she pointed out leaders' encouragement motivates teachers to demonstrate creativity in education colleges.

Moreover, as part of the administration's efforts to foster creativity, Shams proposed that openness to opinions and democracy must be increased, saying:

Conducting surveys and holding regular meetings with departmental leaders/directors, practicum supervisors and trainee students help to understand the realistic situations and identify suggestions, and obstacles from their perspectives.

This highlights the need for an atmosphere of open discussion and participation, both of which are associated with creating a positive environment, as discussed next.

2. Physical and social environment

The teacher educators pointed to the pivotal role of the educational environment in shaping creative learning and teaching, a cornerstone of the learning process. This positive setting encompasses diverse elements, uniquely tailored to each context. Within this theme, insights from the educators coalesced around two focal points: the principles guiding a positive environment and the presence of supportive facilities.

First, seven educators highlighted the indispensability of a positive environment for fostering creativity in teaching and learning. Zahra aptly pointed out:

Higher education institutions, encompassing administration, staff engagement, and well-equipped facilities, play a decisive role in nurturing student growth and fostering an environment conducive to positive learning experiences.

Halaa's perspective on a positive environment aligns with fostering an atmosphere of idea exchange, experience sharing, active listening to suggestions and constructive critiques of current practices – elements that are closely linked with creative learning and development.

Second, the significance of conducive facilities surfaced prominently. Most of the teachers and educators stressed the vital role of technological resources in creating a dynamic and positive learning space. Furthermore, three educators emphasised the crucial role of a well-equipped library, catering to the research, teaching and learning needs of the college community, a testament to the essential connection between facilities and creative learning and teaching.

3. The curriculum, syllabus, and courses in teacher education

The teacher educators were generally optimistic about the recent changes in the learning objectives of courses for Saudi teacher preparation programmes. Most believed the latest syllabuses and learning objectives would support their creative teaching as well as their students' creative learning. Joory, for example, talked about her course syllabus, saying:

Creative thinking is part of the course learning objectives in order to prepare students to become teachers of the Arabic language. This term, my course "curriculum and teaching methods" involves some creative elements, such as teaching instructions and criteria for student outcomes.

Rahaf noted that most of the new syllabus documents at the college placed considerably more emphasis on creativity skills than the previous ones. This might reflect a more progressive approach in Saudi education. Likewise, Hanaa noted the current syllabus includes creativity as one of the "key competencies of the 21st century". Nonetheless, she stressed that the most important consideration was to translate the theoretical objectives and written plans into actual teaching practice, which is challenging. For example, Wedad noted that the syllabus must have flexibility and freedom for teacher educators to deal with the course content instead of following strict guidelines that limit their creativity. Wedad here indicated an important point but without any further explanation.

Moreover, when we discussed the recent scheme for teacher education in the individual interviews, eight out of twelve teacher educators mentioned challenges related to the content of several courses within the teachers' preparing programme. These concerned four issues: demanding content, limited time, the gap between theory and practice, and the absence of creativity.

First, most teacher educators mentioned that some courses contained demanding content that increased the focus on the delivery of topics rather than the quality of learning. According to Hlaa:

It was challenging as there are a lot of heavy subjects to cover in each term, it is also common that there is more attention to quantity of teaching than quality.

Specifically, three of them talked about the overload in the final year at college related to the tension between the course requirements and the placement period. Shams pointed out that both tutors and pre-service teachers are negatively affected by the number of traditional courses that

cover a wide range of topics. The large amounts of information that need to be conveyed may prevent deep learning and critical thinking.

In addition to the negative effects of a large amount of content, Rahaf and Wedad found that understanding content could be challenging and stressful because there were so many subjects, and there were more reading materials, tests and assignments. Moreover, Hanaa said from her experience at the college that there was a greater focus on conducting course topics and delivering module content. She added that “consequently, there is less attention to the development of creative thinking, teaching, and learning as stipulated in the curriculum”.

In the teacher educators’ opinions, the intense nature of the courses resulted in a second challenge, namely the limited time available. Hanaa, Hlaa, Wedad and Shams reported that lack of time was an obstacle to teaching their modules creatively. Likewise, Walaa argued that teaching and learning any course creatively could not be accomplished without providing time for active learning. In addition, Amal asserted that in the Saudi context, schoolteachers and teacher educators are often faced with time constraints, especially unplanned holidays that result from unexpected events or disruptions due to the weather. If these delays occur, it can change the timeline of lesson plans and affect creative teaching. That might result in traditional lectures and teacher-centred methods being used to deliver as much content as possible.

The third issue was the gap between theory and practice. This point relates to experiential and applied learning. Five teacher educators indicated the importance of linking the theoretical and practical aspects of courses and subjects. Hanaa stated that there is not enough practical experience in courses to prepare student teachers for the teaching environment they will face. Therefore, several teacher educators pointed out the need to improve the curriculum by including practical examples, recent studies and integrating theoretical and practical aspects. For example, Shams recounted:

Although the Multiple Intelligences Theory and play are acknowledged as pedagogical methods meant to infuse joy into learning, their practical application is hindered by content constraints and time limitations.

This suggests a gap between theoretical ideals and their practical implementation, which may impede pre-service teachers’ understanding of how to foster enjoyment and engagement.

The fourth and last point was that there is no specific topic or subject focused on creativity in teacher education. Despite the agreement among the teacher educators about the importance of creative learning for pre-service teacher development, their opinions on including creativity in the curriculum varied. Indeed, none of them had specific modules or courses about creativity in education, nor did any of the three departments investigated in this study include any optional or compulsory modules on creativity within the teacher preparation programme. Considering this, the teacher educators identified three approaches to incorporating creativity in teacher education. The first approach involved integrating creative concepts within existing pedagogical and modern teaching courses, rather than creating a separate course solely focused on creativity. Most teacher educators expressed concerns about adding an extra module due to limited time and curricular constraints. For instance, Mada explained:

I do not suggest adding a course on creative teaching to university courses in order to avoid overburdening students with theoretical material. In light of several modern and effective teaching trends, so what I suggest, we can add a module on 'modern trends' to discuss creativity and thinking skills. ... As a result, we should expose them to examples of creative teaching practices they can apply it in their own teaching.

The second approach involved including an optional practical module focused on creativity. Amal supported this perspective, suggesting a course that would be both practical and optional, with a broader scope for discussion and enjoyable activities related to creative learning. This aligns with the notion of creative learning as enjoyable. However, it is crucial to note that an optional practical module should include examinations and grades to ensure measurable academic achievements. It is worth noting that the specifics of how creative assessments would be integrated were not elaborated upon in this context. In contrast, the third approach involved integrating creativity education through workshops as part of student activities. Half of the participants, including Hanaa, Walaa, Zahra and Wedad, supported this idea. They believed such workshops would offer a platform for open discussions and hands-on learning, with a more informal approach that did not typically involve examinations or grades. Joory saw workshops as a way of igniting interest in the teaching profession. However, Hanaa warned that workshops might fall short if they focused solely on theoretical knowledge without practical application.

Overall, it can be said that the teacher educators did not want extra academic hours, but they strongly supported dialogue and practical activities to encourage pre-service teachers' creativity.

In summary, the teacher educators highlighted that creativity in education begins with the establishment of educational policies and regulations by academic administrators. This underscores the crucial role of leaders and policymakers in motivating and promoting creativity. In addition, they emphasised the significance of cultivating a positive campus environment rooted in respect and equipped with appealing facilities. Notably, technology and the library emerged as essential resources that could enhance creative learning and teaching, benefiting both students and educators alike.

The data also underscored how teacher educators perceived the curriculum and teaching approach within teacher education as a key in preparing pre-service teachers. While there was optimism about updating courses, challenges such as limited time, flexibility and autonomy for teacher educators are yet to be addressed. Despite there being unanimous agreement on the concept of fostering creativity, there were variations in approaches to nurturing it among pre-service teachers. Overall, this theme highlights the multifaceted considerations and efforts required to promote creative learning and teaching effectively in teacher education.

4.3.2.2 Factors related to teacher educators and lecturers

According to most of the teacher educators, the creativity of educators itself has significant value in teaching, extending its impact even to university students. Interestingly, during the interviews, the teacher educators acknowledged their personal experiences and discussed the challenges they encountered in their teaching practice. These encompassed three key elements: i) academic job requirements; ii) motivation for teaching among educators; and iii) teaching approach and pedagogical practices among educators.

1. Academic job requirements in teacher education

This point is directly related to teacher educators and their career situations. In the academic setting, teacher educators encountered barriers to creative teaching and learning due to their job requirements. Most of them commented on academic overload since teachers have two primary responsibilities, education and research, both requiring creativity. For instance, Joory highlighted tensions arising from the nature of the profession and multitasking. Amal and Mada shared their views on the challenges of a high workload within the academic sphere. Hanaa further explained three issues prevalent in Saudi academia. First, the hour-based course system leads to extremely busy schedules for lecturers, hampering collaboration among teaching faculty. Second, pressures,

stressful periods and extended hours are incurred in researching, writing and publishing articles. Third, additional responsibilities, such as admissions and registration, add to the workload of teacher educators.

These issues highlight the need for teacher educators to have adequate time for collaborative reflection and the development of creative practices in the classroom. This interpretation aligns with the notion that increasing academic demands can impede teacher educators' ability to engage in creative practice, both individually and with their students. This perspective is visualised in Figure 22. However, some educators indicated that the complexity of academic tasks is not the sole factor. They also highlighted the significance of having a creative personality that can effectively balance teaching obligations and time. This, in turn, ensures that educational requirements do not interfere with the promotion of creative teaching and learning.

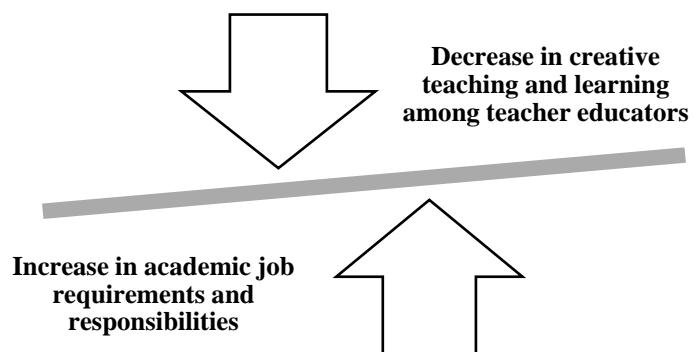


Figure 22: The relationship between academic workload and creative teaching and learning from the participants' perspective.

2. Motivation for creative teaching among teacher educators

Most participants highlighted the significant influence of motivation for their creative teaching practices, which in turn affects their students' creativity. Motivation, whether intrinsic or extrinsic, plays a pivotal role in promoting creative teaching. For instance, Rahaf pointed out that "The creativity of a teacher is influenced by many factors such as motivation". This motivation can stem from various sources, including administrative encouragement or personal attitudes towards teaching and students (Hlaa).

Hlaa also emphasised the link between teacher motivation and creativity, asserting that motivated teachers who embrace creativity tend to enhance student success. She explained, "Teachers must

be motivated and creative in their teaching to promote students' success and outcomes". However, Hanaa noted that some educators undervalue creativity in practice, saying "It is common in college for teachers to have a negative attitude toward creativity in the classroom as time-consuming, or they don't like using imaginative approaches and brainstorming within intensive subjects".

Despite their varying attitudes, all the teacher educators agreed that cultivating awareness of creative practices is vital for nurturing creativity among students. This consensus underscores the importance of fostering a supportive environment that encourages both educators and students to embrace creative teaching and learning approaches.

To raise awareness of creative learning in teacher education, six teacher educators suggested that educators and teaching staff should engage in professional development activities, such as symposiums and workshops on creative practice. For example, Shams recommended that academic institutions "Conduct mini-workshops with faculty members to discuss problems, strategies, and personal experiences".

3. Teaching approach and pedagogical practices among teacher educators.

All the teacher educators unanimously maintained the significant impact of pedagogical practices and teaching methods on pre-service teachers' creative learning. Their discussions revolved around teaching methods, the challenges they faced and self-critiques of their own practices. These perspectives fall into two key categories: diversification of positive teaching approaches and approaches to support critical thinking (viewed negatively in teacher education).

Three teacher educators expressed support for diversification but also noted the challenge of implementing various methods with larger class sizes. On the other hand, nine educators shared that they employed diverse teaching methods in their college classes, driven by reasons that align with fostering creative learning and engagement. For instance, Wedad stressed the promotion of critical and creative thinking through differentiated pedagogical practices. Joory highlighted the use of imagination to develop opinions and thinking, while underscoring the limited mention of imagination in university teaching contexts.

Using discussion emerged as a prominent method for supporting creative learning and teaching and demonstrating empathy, patience and building relationships. Half of the participants advocated

a friendly approach, considering pre-service teachers as beginners in education who might fear mistakes and criticism. Moreover, incorporating diverse methods was seen as a solution to address student boredom and the limitations of repetitive teaching strategies.

Several educators combined traditional lectures with dialogue and active learning methods, such as brainstorming, to foster active student engagement. Hlaa, Rana and Walaa believed in employing different techniques to provide new learning opportunities and facilitate knowledge discovery. Cooperative learning and mind maps were also used to enhance students' participation during lectures. Zahra supported various strategies and activities to motivate creative thinking.

In addition, five teacher educators emphasised the importance of deep learning and critical thinking to enhance student creativity. For example, Mouna argued for the inclusion of higher-order skills, such as problem-solving. Wedad proposed the use of open-ended questions and problem-based classwork, despite potential challenges, as a means of promoting higher-order learning.

These perspectives also apply to assessment methods. Rahaf made a connection between changes in teaching and assessment. Rana spoke against the "teaching to the test" approach in teacher education, stating that such learning limits creativity and neglects the significance of understanding what has been learned. Moreover, some rejected this approach due to its emphasis on memorisation and rote learning, which leads to high pressure, a predominant issue in the Saudi education system.

Cultivating research skills also emerged as a catalyst for critical thinking in teacher education. Amal and Hanaa highlight the significance of research tasks in fostering logical and creative thinking among pre-service teachers. They also noted the prevalence of a lower level of this ability among pre-service teachers, emphasising the need for careful consideration and support in this area.

In summary, this theme highlighted three main aspects raised by the teacher educators. It addressed the challenges posed by academic job requirements and multitasking, emphasised the importance of motivation in teaching and awareness of creativity and examined the critical role of diversifying teaching methods, both encompassing positive approaches and supporting critical thinking. Dealing with these factors could collectively contribute to fostering creativity in students through

a harmonious blend of student-centred and teacher-centred approaches. Moreover, the educators recommended using discussion as a means of manifesting care, empathy and support for pre-service teachers.

4.3.2.3 Factors related to pre-service teachers during placement

The teacher educators regarded placement as being highly important. Within this context, self-learning emerged as a significant positive factor influencing pre-service teachers' creativity during their placement, according to the teacher educators. This factor encompassed: 1) self-learning and content knowledge, 2) classroom and pedagogical approaches, and 3) continuous dialogue and feedback regarding their advancement.

1. Self-learning and content knowledge

The teacher educators pointed out the significance of self-learning for pre-service teachers in developing their knowledge; the importance of this cannot be overstated, especially considering that graduation from teacher education programmes may not guarantee an exhaustive understanding of every subject. A proactive approach is thus paramount for fostering effective and innovative teaching practices.

Moreover, the teacher educators pointed to the pivotal role of content knowledge in cultivating creative and proficient educators. Hanaa's observations of her pre-service teachers during their placement revealed that a solid grasp of the subject matter led to captivating presentations, seamless content delivery and dynamic group discussions among pre-service teachers. This resonated with all educators, who firmly believed that a comprehensive command of the subject equipped pre-service teachers to convey information coherently and efficaciously, while also nurturing their potential for creativity. Hanaa and Hlaa acknowledged instances of some pre-service teachers lacking a firm foundation in their subject matter, which affected their ability to teach with ingenuity.

Furthermore, Wedad and Mouna explored how incorporating the arts and active learning methodologies could empower pre-service teachers in conveying content knowledge in inventive ways. Shams proposed Gardner's 'Multiple Intelligences Theory' (originally published in 1983; cited in Gardner, 2011) as a valuable tool for enriching pre-service teachers' lesson delivery.

Hence, there is an evident need for self-directed learning among pre-service teachers evident, especially since they are expected to possess a broad understanding of various subjects.

2. Pedagogical approaches in the classroom

The teacher educators also focused on pedagogical approaches in the classroom. The essence of classroom management skills lies in fostering a creative teaching environment and disruptive behaviour and challenging classes can impede teacher creativity. In light of this, the teacher educators advocated the inclusion of effective classroom management skills as an integral component of fostering creativity in pre-service teachers.

Walaa highlighted the need to ensure pre-service teachers understand their role in the classroom. Similarly, Wedad stressed the role of teachers in the classroom, emphasising the shift from being sole sources of knowledge to becoming facilitators of learning. She asked: “How can we guide learning instead of being the primary centre of knowledge?” This inquiry underscores the modern educational challenge of encouraging critical thinking based on sound evidence.

Moreover, Halla said: “I recommended pre-service teachers to develop teamwork skills through collaborative interactions with school staff and in-service teachers, promoting constructive conversations and understanding complex teaching processes”. This collaborative learning, encompassing observation and active participation, aligns with the concept of self-directed growth. Hala also highlighted the significant role of school mentors in supporting pre-service teachers. However, there were few instances of teacher educators mentioning mentors who play significant roles with pre-service teachers.

3. Continuous dialogue and feedback

The data indicated strong support among the teacher educators for regular weekly meetings and consistent communication with pre-service teachers during their placement. This approach aims to offer support and address urgent issues. In addition, some teacher educators stressed the importance of continuously engaging with pre-service teachers during their placements by visiting school premises and attending their lessons. This involvement is crucial for developing effective teaching practices. However, due to the high number of pre-service teachers, the frequency of such visits by teacher educators may be limited. This also highlights the need for cooperation between teacher educators and schools, as indicated by Rahaf and Amal.

Nonetheless, the teacher educators emphasised the crucial role of lesson plan in shaping the teaching practices of pre-service teachers. They achieved this by observing pre-service teachers and directly witnessing their classroom interactions and instructional methods. This feedback, tailored to each individual's abilities and potential, serves a dual purpose: identifying strengths to build upon and addressing weaknesses for improvement.

When feedback is aligned with their capacity to apply it and is utilised to avoid recurring mistakes, it has the power to catalyse the development of creative teaching practices. Shams and Rahaf pointed out that this approach not only benefits the immediate classroom experience but also contributes to the long-term growth and cultivation of creative educators. In essence, the dynamic interplay between observation, constructive feedback and practical application forms a cornerstone for nurturing creativity. Consequently, the emphasis was placed on maintaining ongoing dialogue and feedback between teacher educators and pre-service teachers to facilitate this process.

To sum up, the teacher educators accorded significant importance to the placement of pre-service teachers. In this regard, the concept of self-learning took centre stage as a notable positive influence on the creativity of pre-service teachers during their placement. The teacher educators highlighted self-learning and the acquisition of content knowledge, the exploration of classroom and pedagogical approaches and facilitating ongoing dialogue and feedback to monitor progress.

4.3.3 Summary of Findings: RSQ2

This section has covered vital aspects of creative learning and teaching within teacher education. It has addressed significant factors linked to the educational context, encompassing leadership, the physical and social environment, and curriculum and courses within teacher education. Moreover, it has addressed the roles and motivations of college educators and lecturers, examining their impact on pedagogical approaches in teacher education.

An additional significant point is presented in relation to pre-service teachers during their placement, specifically highlighting the pivotal role of self-directed learning in nurturing creative teaching skills. This can greatly influence their acquisition of both content and pedagogical knowledge, in addition to shaping their ability to incorporate feedback effectively and enhance their creative teaching practices. While certain aspects may seem rather general, they were specifically regarded as related to pre-service teachers' creativity by the study participants.

4.4 Summary of the Chapter

This chapter presented the study findings in two main sections. First, it presented the perspectives of the pre-service teachers in response to RSQ1, setting out the key themes identified across seven cycles, drawing on the teachers' reflective journals, a focus group and my reflective journal. The themes showcased the participants' progress through the action research cycles and the transitions between themes. The subsequent part provided an individual analysis of six participants' reflective journals, presenting the evolving perspectives of those who actively engaged in all sessions.

Second, in response to RSQ2, the chapter presented the perspectives of teacher educators, exploring their views on creative learning and teaching and the factors of influence. While the teacher educators generally expressed support for creativity, their responses revealed potential gaps in comprehending its fundamental components for creative learning in practice in teacher education context.

Moreover, the exploration of the teacher educators' views encompassed crucial factors associated with the educational setting, aspects related to college educators and lecturers, such as teacher motivation and the pedagogical approach, factors relevant to pre-service teachers during placement. These factors collectively influence the development of pre-service teachers' creativity. In the analysis and reporting of findings, notable points of comparison emerged between pre-service teachers and their teacher educators. This leads to an exploration of the similarities and differences between the two groups in the following chapter (see 5.4). The next chapter discusses the study findings in relation to the existing literature.

Chapter Five: Discussion

5.1 Introduction

Following the presentation of the results of the analysis of qualitative data from the pre-service teachers and teacher educators in Chapter 4, this chapter provides a discussion of the findings as a coherent whole with reference to the literature. Specifically, this chapter continues and complements the discussion on creativity in Saudi education that was initially explored in detail in Chapter Two (see section 2.3.2).

The discussion is organised in four main sections. Section 5.2 addresses RSQ1 regarding pre-service teachers' views of creativity and creative teaching and learning, covering both their understanding and experiences of creative learning during their teaching placement. Section 5.3 addresses RSQ2 regarding the teacher educators' views in two parts. The first part discusses their views concerning creative learning, including the focus on creativity at university level, the generation of ideas and flexible solutions to problems, the connection between creativity and giftedness in children and the disconnect between views and practice in definitions of creativity within teacher education. The second part examines factors affecting pre-service teachers' creative learning and teaching.

Section 5.4 provides a synthesis and comparative analysis of perspectives on creativity, exploring the understanding between pre-service teachers and teacher educators. Finally, Section 5.5 presents and suggests a framework of key elements for developing a pedagogy of creative learning, specifically addressing the main research question. It also sheds light on the significant factors in preparing pre-service teachers through initial teacher education programmes in Saudi Arabia.

In summary, the chapter integrates the key qualitative findings in four focused sections to provide a coherent discussion addressing the research sub-questions and compare the perspectives that emerged on creativity, all in order to be able to answer the main research question. It should be noted that while I have presented and discussed the findings in this chapter, I do not aim to generalise any of these findings without deep consideration, given the inherent limitations of generalisability in interpretivist research. As explained in Section 3.11, the specific findings are understood as contextually bound, whereas the framework might have broader applicability.

5.2 Views of Pre-Service Teachers on Creative Learning and Teaching

This section discusses the findings related to RSQ1: ‘How do views of creative learning and teaching evolve among Saudi pre-service teachers during creative learning sessions?’ These findings, presented as themes across seven cycles and through individual analyses in Chapter 4 (sections 4.2.1 and 4.2.2), are now combined to provide an overarching discussion of insights. Accordingly, the views of the pre-service teachers concerning creative learning are thoroughly examined into two subsections: “Understanding of creativity and creative learning” (5.2.1) and “Experiences with creative learning during teaching placement” (5.2.2), refer to Figure 17.

Each section focuses on a specific subject and includes the relevant subheadings that collectively discuss the overarching findings

5.2.1 Understanding of Creativity and Creative Learning

To achieve the primary goal of the study, it was necessary to explore three key questions. The first concerned how the participants understood creative learning, as their conception of it was significant in shaping their teaching approaches.

As discussed in Chapter Two, Section 2.3.1, these different definitions of creativity highlight the dynamic nature of creativity, with two fundamental criteria: originality within its context and usefulness. The definitions also identify the dependence of creativity on both cultural and social factors, both of which are essential considerations in the Saudi context and for this thesis.

The second question related to how the participants’ views of creative learning and teaching evolved during the creative learning sessions. Here, I explored this definition in real practice during the intervention based on the use of the creativity model of Lucas et al., where these four components are crucial in terms of creativity in education. Building on the insights from Hills and Bird (2018), which were discussed in depth on page 44, these components—fertility, originality, imagination, and motivation—remain central to understanding creativity in the context of educating future teachers. This section also helped to reflect my understanding of creativity for pre-service teachers. In distinguishing between ‘creative teaching’ and ‘teaching for creativity,’ as I will explain at the end of this chapter, see 5.6.

Finally, the third question addressed how sociocultural factors shaped the participants' perspectives on creativity, a topic considered in many studies (See, e.g., Watson, 2014; Philip, 2015; Gaspar & Mabic, 2015; Alencar et al., 2017; Sheridan, 2020; Huang et al., 2022; Ismail & Kassem, 2022).

Referring back to the participants' perspectives in Chapter 4, I establish a direct connection between this study's findings and ongoing debates in the literature, enhancing the credibility of the analysis. It should be noted that the participants exhibited diverse motivations due to the voluntary nature of their participation (see 3.4.1), providing a rich context for exploring the varied impacts of creative pedagogical strategies regardless of the pre-service teachers' initial levels of interest in creativity. This diversity is crucial, as it highlights both genuine interest and ambivalence towards creativity among participants and reveals factors influencing their involvement. Understanding these motivations allows for an assessment of how different backgrounds influence engagement with creative teaching methods. This consideration is vital for tailoring teaching strategies to meet the motivational needs of pre-service teachers, thereby enhancing the study's applicability to a broader range of teachers and pre-service teachers.

In this section, I focus on these insights to explore their implications for teaching practice in the Saudi context. This discussion highlights their role in addressing the gaps in current creative educational practices and bridging the gap between educational policy and practice in Saudi Arabia. This analysis not only addresses the complexities of fostering creativity but also offers actionable recommendations to enhance educational strategies in diverse Saudi settings, as presented in Chapter Six.

5.2.1.1 Views of creative learning

In terms of creativity, the participants in this study frequently used different words to explain creativity, such as "new", "original", "different", "useful" and "valuable" ideas or solutions, (as shown in Theme 1, Section 4.2.1.1). Many of them gave the same description as Amabile et al. (2005), namely that creativity is "generally defined as the production of novel, useful ideas or problem solutions" (p. 368). This interpretation follows the standard definitions of creativity found in the literature (Plucker et al., 2004; Runco & Jaeger, 2012; Walia, 2019). Given this common understanding of creativity among the pre-service teachers, it is not surprising that their perceptions aligned with findings from previous studies, such as those of Newton and Newton

(2009), which revealed similar views among pre-service teachers in the UK context. Given that this study was conducted in Saudi Arabia, the consistency in perspectives across cultural contexts is even more noteworthy. As suggested by Wyse and Dowson (2009), the recognition of creativity is highly dependent on an individual's perception and this perception may vary based on the experiences individuals engage in. The findings showed pre-service teachers' views on creative learning often focused on enjoyment, productivity and the process of exploring and connecting various ideas. This aligns with the conceptualisation of creative learning embraced by many researchers, such as Sefton-Green et al. (2008), Claxton and Lucas (2004), Craft et al. (2014), Lucas and Anderson (2015), and Beghetto (2021).

In addition, the review of the literature reveals different perspectives on defining creative learning. Wyse and Spendlove's (2007) definition aligns with the findings of this study, considering creative learning to be the promotion of novel or unique thought that is valued by appropriate observers. However, Sefton-Green et al. (2008) acknowledge that the term "creative learning" is often used without a precise definition in mind and suggest the need for further exploration to specify what it means more clearly. Similarly, Craft et al. (2007) point out that the ongoing challenge of separating creativity from effective learning contributes to confusion surrounding the term "creative learning". The varying definitions exemplify the ongoing debates and controversies surrounding the concept of creative learning in education. Significantly, compared to widely used concepts such as "creative thinking" and "creative teaching", creative learning has not been studied to any great extent in Saudi or Arabic culture, as pointed out in Chapters 1 and 2.

The participants developed unique viewpoints during the intervention. For example, (as shown in Theme 3, Section 4.2.1.2), they viewed creative learning as a form of deep learning (Ola, p.202), an approach involving arts and colours (Lina, p.174 and Huda, p.206), and a means of solving problems (Noor, p.211). Furthermore, the joy of learning emerged as a significant component of creative learning (Nouf, p.209), with critical thinking also closely related to this development. These perspectives, critically important in the Saudi educational context, are briefly discussed in the following paragraphs, highlighting their role in addressing the gaps in current creative educational practices.

In terms of the first view, exploring the relationship between learning and creative learning, there is a clear distinction between creative and non-creative lessons. Selkirk and Keamy (2017) argue

that as our comprehension of creativity evolves, our understanding of learning becomes more sophisticated. According to the participants, general learning is focused on content delivery, while creative learning is concerned with the novelty and usefulness of activities. This view reflects Davidovitch and Milgram's (2006) proposition that creative thinking is a predictor of effective teaching. However, this perspective conflicts with the prevailing views of theorists like Dewey (1859–1952) and Kolb (1984), who emphasise that learning is inherently experiential and extends beyond mere knowledge acquisition (Sikandar, 2016; Kolb & Kolb, 2009). Learning involves active engagement, critical thinking, problem solving and personal involvement, all of which contribute to a more comprehensive and meaningful learning experience (Kolb & Kolb, 2009; Meadows, 2006).

It is important to consider the participants' perspective against the backdrop of standard practices observed in Saudi schools, where content delivery often takes precedence and experiential learning is overlooked (Althobaiti & Obeidat, 2020). Another aspect to consider is the participants' emphasis on the importance of activities, novelty and usefulness. Their perspective suggests that creative learning involves engaging in novel and valuable experiences that are beyond the scope of rigid measurement criteria. Jarvis (2006) argues that reducing experiential learning to objective and scientific measures can hinder the practical aspects of the learning process. Indeed, Jeffrey's (2006) definition of the concept of creative learning combines innovation, experimentation and invention with active engagement in exploring and acquiring knowledge. As a result, some pre-service teachers in this study recognised creative learning as a distinct form of learning, which is significant as it acknowledges the unique qualities and benefits it offers (Beghetto, 2021).

The second view associates creative learning with arts and colours, considering it an art form. McKay and Sappa (2020) define arts-based research as a creative process that supports teachers' identity development. It uses the arts to enable alternative ways of thinking, allowing for intuitive and emotional exploration of ideas. This approach enhances reflection, creativity, and the ability to see life situations from varied perspectives, which are crucial for professional growth and transformation. The participants felt that skills painting, crafts, and colour-based assignments to create space for thinking differently, enhance lesson creativity and facilitate creative tasks (Lee & Kemple, 2014; An & Youn, 2018; McKay & Sappa, 2020), even in language lessons. Educators

and the public widely link creativity with the arts (Runco, 2008; Aljughaiman & Mowrer-Reynolds, 2005; Glăveanu, 2014).

In one of the sessions, participants were tasked with creating visual mind maps to represent and explore literary concepts, a method that encouraged creative engagement with the curriculum. This activity involved the use of pastels and collage materials, providing a tactile and visually stimulating approach to synthesising and interpreting textual information. By arranging key themes, character relationships, and plot elements on a mind map, the pre-service teachers were able to visually connect and elaborate on these aspects through artistic expression. This process not only deepened their understanding of the literary content but also enhanced skills such as critical thinking and creative problem-solving in higher education (Hay et al., 2008; Machado & Carvalho, 2020). This artistic approach also demonstrates how art can be seamlessly integrated into academic subjects to enhance educational experiences and promote a comprehensive understanding of complex concepts through creative means. This aligns with the views of McKay and Sappa (2020). It is interesting that the participants had these art-based views, which could relate to the opportunities provided in the sessions. Given the neglect of the arts in Saudi schools, as various studies have highlighted (Albakri, 2020; AlDabbagh, 2020), it could be indicated that pre-service teachers need greater education on the value of integrating arts in lessons and an understanding of broad definitions and dimensions of creativity.

The third view emphasises the importance of problem-solving and the joy of learning in creative learning. The participants frequently described their experiences with creative learning as “fun” and “enjoyable”, aligning with Jeffrey’s (2006) concept of joy arising from meaningful engagement with the learning process. Elton-Chalcraft and Mills (2015) define fun learning as an exciting and enjoyable challenge that brings a sense of pride in achievement after overcoming initial struggles. Creative learning occurs when lessons or activities are challenging, unique and exciting, distinguishing it from non-creative learning which solely addresses knowledge acquisition and limits opportunities for the enhancement of high intellectual abilities (Sefton-Green, 2008; Beghetto, 2021). Developing an environment conducive to creating learning is key, as according to John Stuart Mill, a British philosopher (cited in Fisher, 2013), true joy is found in engaging with intellectual challenges and problem solving, these mentally stimulating activities being more fulfilling than pursuits that satisfy only basic physical desires.

Hence, this perspective relates to providing space for freedom, challenges and engagement activities across the curriculum to foster creative learning (Jeffrey, 2006; Craft et al., 2007; Sawyer, 2015). This approach is critically needed in the Saudi educational context, where traditional teaching methods dominate, and there is a significant gap in the implementation of creative pedagogies. In addition, as a former teacher educator where the research was conducted, I observed a lack of detailed topics or content related to the joy of learning that would enable pre-service teachers to translate such concepts effectively into practice. This gap was also noted by some participating teacher educators during the interviews.

The fourth view acknowledges the interconnection between critical thinking and creative learning (Paul & Elder, 2008; Ellerton & Kelly, 2021; Park et al, 2021), a focus that has gained increasing attention in OECD countries (Vincent-Lancrin et al., 2019; Grey & Morris, 2024). Creativity and critical thinking, often considered distinct areas, are actually deeply connected (Park et al, 2021). According to Fisher (2013), both critical and creative thinking are essential for a successful society, as they enable individuals to make sense of knowledge across various subject areas. This capacity is crucial to the creative process of teachers, allowing for independent and innovative challenges to established thought patterns (Lucas, 2016; Crawford & Jenkins, 2018).

In addition, critical thinking skills are highlighted as a significant aspect of creative learning in frameworks such as those of the Qualifications and Curriculum Authority (QCA, 2005) and Lucas et al. (2013). Dewey (1933) defined critical thinking as the active and persistent consideration of beliefs and knowledge in light of supporting evidence and potential conclusions; despite the perceived contrast between critical thinking and creativity, there is a deep and implicit relationship as promoting creativity also involves nurturing necessary thinking skills in both teaching and learning contexts (Fisher, 2013).

Drawing on the participants' insights concerning creative learning, the data analysis indicated a dynamic evolution in the pre-service teachers' views within the creative learning sessions, which I turn to next.

5.2.1.2 Evolving understanding of creative learning

The data analysis demonstrated that the pre-service teachers' views on creative learning underwent dynamic development over time, underscoring significant aspects of creative learning within the Saudi educational context, as detailed in the individual analyses (see 4.2).

Data from reflective journals and focus group indicated significant shifts in perspectives. Lama, for example, said, "I thought creativity was just about being artistic. I enjoyed participating with the group to design and ... However, I now see creativity as a way to approach any problem with an open mind and a collaborative approach". Pre-service teachers entered the study with their own perspectives, shaped by prior experiences and education. This study acknowledges the inherent tension between discovering pre-existing views on creativity and exploring the influence of the sessions of creative learning. The primary goal, as explained in Section 1.5, was twofold: to understand these initial viewpoints and to develop a framework for creative learning that might influence and expand upon them.

This dual aim is reflected in the findings, which show both the baseline understanding of creativity and the changes observed throughout the creative learning sessions. Given the nature of this study, it is challenging to clearly distinguish between pre-existing views and those influenced by the research interventions. However, the progression in pre-service teachers' views likely represents a combination of their initial perspectives and the impact of the creative learning sessions.

Therefore, this sub-section explains that the progression observed in pre-service teachers' views is not only pre-existing or naturally occurring, but rather influenced by several interrelated factors. These factors contributed to this evolution, including active participation in creative learning sessions, educational reforms and social changes within the Saudi context, the alignment of the sessions with andragogical principles tailored to adult learners' needs, and the synchronisation of creative learning with teaching placements. These elements synergistically enhanced the participants' comprehension of creative pedagogy. I found these elements synergistically enhanced the participants' comprehension of creative pedagogy. In the following sections, I will explore each of these factors in detail, discussing their significant roles in shaping the pedagogical comprehension of creativity among the participants.

First, in terms of active participation in creative learning sessions, the evolution of participants' understanding, as demonstrated in section 4.2.2, may be attributed to their participation in the sessions of creative learning, which were influenced by the model proposed by Lucas et al. (2013). Lucas (2016) pointed out that although the five-dimensional model was not originally implemented in pre-service teacher education, it provides a valuable framework with the potential to enrich pre-service and in-service teachers' comprehension of how creativity may be applied. This topic was also explored in the literature review (see 2.3.3). Specifically, this model offers substantial benefits to pre-service teachers by acting as a foundational tool for their professional development and by deepening their understanding of creative learning. Significantly, the sessions fostered shared progress and critical thinking as Ola and the participants expressed viewpoints, exchanged ideas and built on each other's contributions. This is a form of scaffolding (Roehler & Cantlon, 1997; Grainger et al., 2004), discussed further later in this section.

The participants' ability to articulate the multifaceted nature of creative learning, as evidenced in their reflective writings, underscores the significant role of reflective learning in refining their concept of creativity. For instance, the evolution of Huda's perspective, observed during the sessions, reflected her development of a more nuanced understanding of educational creativity. Supporting this, Levanon's (2021) study shows that dialogues and in-action reflection during training and practicum are beneficial for advancing pre-service teachers' creative teaching and possibly their overall well-being. Levanon (2021) concluded that pre-service teachers embrace a dynamic systems perspective, recognising the interplay between different components of creativity. These findings are in line with the growth observed in the participants of this research, reinforcing the notion that pre-service teachers' understandings and pedagogical approaches are likely to evolve in nurturing environments.

Interestingly, most of the participants developed a deeper understanding of creative learning during the sessions (see 4.2.2), despite creativity not being explicitly emphasised in any specific modules of their teacher education programme. This finding suggests that the participants' understanding of creativity was acquired not through direct instruction but rather through active engagement in the sessions, indicating that it may be shaped by factors extending beyond formal education, such as personal experiences and cultural influences. For example, Ola and Haifa demonstrated this understanding through their reflections during the sessions. In this regard, Ludhra (2008), within

the context of teacher education, argues the impact of pre-professional experiences on teachers' approaches to creativity, demonstrating how these formative backgrounds significantly shape their attitudes toward students and their educational values. Such experiences are pivotal, directly affecting new teachers' preparedness to integrate creative pedagogies in the classroom, which aligns with the influence of personal and cultural factors on the research participants observed in this study.

Denoting the significance of participation in creative learning sessions for the professional growth of pre-service teachers, several studies have been presented that have explored the impact of such sessions and workshops on the level of creative learning among future educators. Research has shown that creative learning activities improve university students' learning ability, motivation, critical thinking and enjoyment of learning (Grainger et al., 2004; Elton-Chalcraft & Mills, 2015; Sternberg, 2017; Sheridan, 2020). For example, Smith and Johnson (2018) conducted a survey among future educators who participated in workshops designed to foster creative thinking. The workshops significantly increased their motivation and enthusiasm for using creative strategies in their classrooms. Furthermore, Elton-Chalcraft and Mills (2015) observed that student teachers who participated in creative learning activities had more positive perceptions of their creative abilities and understood the value of creativity in the classroom. Altogether, these creative learning sessions based on collaboration and experiential learning shape and influence pre-service teachers' understanding of the importance of creativity in education. Most of the participants, as demonstrated by Fouz in Section 4.2.2.2, recognise that creativity is integral to the teaching and learning process, enhancing students' motivation, engagement and critical thinking skills (Runco & Jaeger, 2012).

In line with the above, according to Plucker et al. (2004) and Kalantzis and Cope (2012), it is essential to move away from the limited perspective of behaviourist teaching and learning. Instead, they propose embracing models that incorporate constructivist, humanist and social learning theories, which they term "New Learning". The integrative learning paradigm they describe also aligns with the principles of the five-dimensional model proposed by Lucas et al. (2013) in emphasising dialogue, creativity and a holistic approach. This paradigm recognises the significance of personal learning and communication within networks, resonating with the

perspectives of professional learning advocated by Jones and O'Brien (2014). Furthermore, Burnard and Fautley (2015) assert:

Lively learning communities must be mindful, meaningful learning communities, open to conceptual expansion of creativities enabled by diverse and multifaceted ways of engaging. (p. 254)

Second, for the pre-service teachers in this study, educational reforms and social change have been key factors in their evolving perspectives on creativity, representing the dynamic nature of the educational landscape in which the research took place as indicated by Quamar (2021). The connection between these recent changes in the evolving understanding of creativity among pre-service teachers and sociocultural factors will be explored in greater detail within the broader context of the findings. Bereczki and Kárpáti (2018) discussed how beliefs may shift in line with contemporary contexts, pointing to the importance of understanding present-day educators' views to develop effective creativity-building approaches. This ongoing evolution of perspectives is evident in the Saudi education context, as demonstrated by recent research undertaken with female Saudi teachers (Almutairi, 2015; Almahmudi, 2017; Bojulaia & Pleasants, 2021). This shift can be attributed, in part, to recent social changes and initiatives by the Saudi Ministry of Education, prioritising the development of creativity in the education system. These efforts have likely contributed to greater awareness and appreciation of creativity among teachers and teacher candidates (Bojulaia & Pleasants, 2021). However, while the participants in this research showed some familiarity with creativity, this does not necessarily translate into the capacity to implement it in the classroom (Cachia et al., 2010). Thus, it is essential for educational institutions to prioritise creative expression and practice. Numerous studies (e.g. Aljughaiman & Mowrer-Reynolds, 2005; Newton & Newton, 2009; Cachia et al., 2011; Newton & Beverton, 2012; Lee & Kemple, 2014; Maley & Bolitho, 2015; Selkirk & Keamy, 2017) have stressed the importance of encouraging creativity among both pre-service and in-service teachers. A conceptual understanding of creativity alone does not guarantee effective application in teaching practice. Hence, numerous studies have argued the critical need to foster creativity development and enable the integration of creative approaches in Saudi Arabian classrooms (e.g. Almutairi, 2015; Al-Qahtani, 2016; Aljashaam, 2017; Alzahrani, 2017; Ismail & Kassem, 2022; Aldujayn & Alsubhi, 2020).

Third, the structure of the creative learning sessions was intentionally designed to align with the specific needs of adult learners, embodying the principles of Knowles's (1973) andragagogical

framework, as described in Section 3.7.1. According to Caruth, (2014) Knowles' six assumptions provide an excellent foundation for educators to integrate andragogical principles when designing curricula and teaching practices. Consequently, the sessions were crafted to support the developmental and educational needs of the pre-service teachers, thus enhancing their understanding of creative concepts in education. I present the andragogical framework alongside the observations and explanations derived from the data as follows:

1. Self-concept: Most pre-service teachers demonstrated a strong self-concept regarding creative learning, viewing themselves as active participants in the learning process, (as shown by Noor on p.211). Their engagement in the sessions and proactive approach to seeking opportunities for creative learning underscored their belief in their capabilities as future educators.
2. Experience: Building on their prior experiences, the pre-service teachers actively integrated their existing knowledge and skills in the creative learning sessions. Their willingness to explore new teaching approaches while incorporating past experiences enriched the learning environment, discussed further in 5.2.2.
3. Readiness to learn based on needs: Throughout the research, the pre-service teachers displayed a readiness to learn, driven by their individual needs and professional aspirations, see Fouz, for example, on page 204. Their active participation and enthusiasm for creative learning exemplified their readiness to acquire knowledge and skills immediately relevant to their teaching careers.
4. Immediate application or problem-centric: The pre-service teachers were keen to apply their learning immediately, particularly during school placement. They eagerly participated in the sessions, seeking to apply creative learning techniques in real-world classroom settings, as shown in Theme 5, Section 4.2.1.2. Their eagerness to integrate their newly acquired knowledge and skills in their immediate placements reflects their recognition of the practical benefits for their future classrooms and teaching careers. This underscores their commitment to improving and adapting their teaching methods continuously to meet the needs of their students, reflecting a strong dedication to professional growth and development.

5. Internally motivated: The pre-service teachers had various compulsory duties, but they also displayed high internal motivation as shown in section 4.2.2 Key Themes from Individual Analysis of Six Participants' Reflective Journals. Their participation in the sessions was entirely voluntary and they exhibited a strong commitment to the tasks involved, such as completing reflective journals and actively engaging in focus group discussions. Their enthusiasm and dedication were fuelled by their passion for teaching and desire to enhance their skills. In addition, they created a WhatsApp group, which was not part of the data collection, to communicate and arrange session times, thus displaying their commitment to fostering collaborative and supportive learning experiences.
6. Need to know: The pre-service teachers demonstrated a strong appreciation for understanding the purpose and relevance of their learning, for example, see Noor in Section 4.2.2.5. At the conclusion of the sessions, they posed thought-provoking questions and expressed a desire for additional resources, despite the constraints on their time. This highlighted their inherent curiosity and need to delve deeper into creative teaching.

Fourth, aligning the creative learning sessions with the participants' concurrent teaching placements facilitated the practical application of theoretical concepts, effectively bridging the gap between understanding creativity and teaching creatively. This synchronicity may have significantly influenced the participants' development, transforming the learning process from a theoretical discussion about creativity to an active practice of teaching for creativity. The data from Cycles 4 and 5, in particular, showed how the participants benefited from aligning the theoretical and collaborative activities they engage in during the sessions with their teaching experience. This continuous interplay between theory and practice can enhance pre-service teachers' creative pedagogical approaches. Levanon (2021) pointed out that this dynamic allows pre-service teachers to recognise and build upon their existing knowledge, fostering professional understanding through reflective practice.

This is an important point as the disconnect between theory and practice in pre-service teacher education is noted as a key reason for pre-service teachers' difficulties in applying the knowledge they have learned (Feiman-Nemser, 2001; Aljughaiman & Mowrer-Reynolds, 2005; Korthagen et al., 2006; Blomberg et al., 2013; Baier et al., 2021). Research suggests that insufficient attention

to the connection between theory and practice hampers the effective communication of relevant scientific theories in university courses. This highlights the need for improved instructional design and methods that facilitate the application of theoretical knowledge in real teaching contexts.

Overall, several factors likely contributed to the evolving understanding of creativity among the participants. These include the educational reforms and social change in the Saudi context, their active participation in creative learning sessions, the alignment of the sessions with andragogical principles aimed at meeting adult learners' needs, and the synchronisation of creative learning with teaching placements. Together, these elements worked in concert to enhance the participants' comprehension of creative pedagogy. All these four points intersect with sociocultural factors in the Saudi educational context. The influence of sociocultural elements on the pre-service teachers' perceptions of creativity is taken up in next.

5.2.1.3 Sociocultural factors shaping pre-service teachers' perspectives on creativity

Through the analysis, I identified statements from participants reflecting the concept of creativity within the religious, cultural and social context, especially in relation to Saudi and Arabic culture (see Cycles 1, 5 and 7 in 4.2.1).

This study is situated within the distinct sociocultural context of Saudi Arabia, with its unique norms, values, religion, language, and traditions, alongside the progressive goals of the Vision 2030 and recent social shifts (Allmnakrah & Evers, 2020). These cultural dynamics substantially influenced how the Saudi pre-service teachers developed their understandings of creativity. For example, Noor's and Ola's statements, as indicated is section 4.2.1. Accordingly, this sub-section adopts a sociocultural lens to examine the participants' perspectives – as Saudis and prospective educators – on creative teaching and learning approaches. It also explores how sociocultural factors shaped their engagement, as highlighted in Cycle 1, and their views of the limitations of creative teaching and learning, as highlighted in Cycle 7. It concludes by exploring Vygotsky's Zone of Proximal Development (ZPD) within this context.

In brief, the creative learning sessions, grounded in social constructivist theory, were effective in fostering creative approaches among both the teacher participants and the tutor (the researcher). This approach, emphasising individual and societal meaning-making as proposed by Glăveanu (2010), cultivated a “creative society” in line with Csikszentmihalyi's (2014) conceptualisation,

promoting collaborative discovery and expression. Within this framework, pre-service teacher education views learners as active constructors of knowledge, engaging in collaborative activities such as discussions, brainstorming and hands-on projects (Zhou & Luo, 2012). These are principles that have significant implications for understanding creativity, as outlined by Sawyer (2012, 2015).

Consistent with the findings, the Saudi participants contextualised their understanding of creativity within the framework of their religious, societal, and cultural views, as evident from Haifa's quote on p.174. To explain, in Saudi Arabia, the framework of teaching has traditionally been grounded in conservative Islamic philosophical principles, with all curricula incorporating religious and moral elements (Elyas & Picard, 2013).

However, the recent emphasis in Saudi education on fostering a critical, creative, and reflective mindset, while simultaneously staying rooted in Islamic principles, illustrates more than just an alignment with 21st century learning skills; it reflects a deep connection to Islamic culture. This approach is exemplified in the teachings of Islamic philosophers like Al-Ghazali (1058-1111) and Ibn Khaldun (1332-1406), as discussed by Saputra et al. (2022) in the context of the modern era. Drawing from the works of, Mahdi (2015), Alawfi (2016) and Soussi, (2016), it can be interpreted that both philosophers emphasised the role of thinking in an individual's acquisition of knowledge within the Islamic religion and underscored the crucial importance of knowledge and education in human development. This perspective supports the idea of fostering a balanced development of creativity, while also preserving cultural and religious identity within the Saudi educational context (Allmnakrah & Evers, 2020).

The role of sociocultural also influences in shaping individuals' understanding and expression of creativity in education is well-supported by the works of Csikszentmihalyi, (1988), John-Steiner (2000), Grainger et al. (2004), Plucker et al. (2004), Zhou and Luo (2012) and Sawyer (2012, 2015). As Aljughaiman and Mowrer-Reynolds (2005) point out, creativity is culturally situated and emerges from social contexts. From this lens, changing creativity beliefs reflect evolving societal and education values. Saudi Arabia's recent emphasis on innovation, creativity and skills development has progressively established the importance of creative thinking for students' success (Almalki, 2019; Allmnakrah & Evers, 2020). Additionally, there have been efforts to

revise educational curricula to include more components of creative and critical thinking, such as the introduction of new subjects like critical thinking and digital skills in secondary schools (Ministry of Education, 2019). The participants experienced this shifting landscape, absorbing new cultural messages about the importance of creativity through policies, curricula, media and social exchanges. Their evolving views indicated the growing legitimacy and status of creativity within the ongoing transformation of Saudi institutions and life (Qahl et al., 2019; Quamar, 2021a).

In this regard, John-Steiner and Mahn (1996) underscore the interplay between social dynamics and individual cognitive processes in knowledge construction. This lens offers a deeper understanding of how social and cultural influences have shaped the evolution of Saudi teachers' perceptions of creativity over time. Ongoing research applying a sociocultural lens would further illuminate the complex dynamics between culture, educational context and creativity perspectives (Sawyer, 2012).

In addition, regarding the concept of creative learning, most participants displayed a recurring tendency to link creativity with person, process and product. In addition, they acknowledged the practical role of the environment and the thinking process and skills in relation to creativity. This highlights the importance of considering all these factors together, in line with the 4Ps model proposed by Rhodes (1961), even though no-one explicitly mentioned the interaction between these four components. According to Plucker et al. (2004, p. 90), "Creativity is the interplay between ability and process by which an individual or group produces an outcome or product that is both novel and useful as defined within some social context". This interpretation is also supported by Csikszentmihalyi (2014), who suggests that creativity happens in the interaction between an individual's thoughts in a domain and the sociocultural context. Furthermore, Vygotsky's sociocultural theory perceives learning as a collaborative endeavour that relies on the utilisation of cultural resources within a specific context (Kelly, 2006).

Furthermore, Vygotsky's theory of creativity, which suggests that creativity results from interactive engagement among individuals, groups and organisations (Lindqvist, 2003), offers a relevant framework. There has been limited application of sociocultural theories in the field of teacher learning, especially within pre-service teacher education (Goos, 2005). This gap argues for the importance of examining the dynamic interplay between an individual's social contribution

and the broader societal influence on creativity. With these considerations in mind, the subsequent discussion explores three crucial aspects related to the participants' experiences in creative learning sessions.

First, the language of interaction is one of the sociocultural factors that significantly influence communication and did so during the creative learning sessions. My observations revealed that the participants, including future English teachers, often used Arabic in both oral and written journals. This choice of language was influenced by the participants' social environment and linguistic background, reflecting the fact that people tend to feel more relaxed and authentic when communicating in a language they are more familiar with (Khan, 2011). In this study's seminar room setting, language acquisition was not the primary aim and the turn to Arabic highlights the social shaping of creative expression. Sawyer (2012) posits that the co-constructive nature of learning, marked by dialogue and improvisation, is crucial for nurturing creativity within educational environments. This approach, characterised by flexibility, adaptability and a willingness to explore new ideas, plays a vital role in fostering a creative and responsive educational setting. Building on Sawyer's (2012) exploration of creativity as a product of group dynamics, it can be argued that certain linguistic choices may facilitate clearer communication and comfort, essential for collaborative creativity.

Second, sociocultural background, including the attitudes and beliefs of teacher educators and peers, affected how the pre-service teachers viewed creativity. For example, in terms of the overall understanding of creativity, the majority of participants saw themselves as creative and believed they had the potential to enhance their creativity further, in line with Craft's (2002) perspective on potential for creativity. However, a few participants remained doubtful (or neutral) about this prospect until the end of the sessions. It is not surprising to encounter such doubts, as beliefs often take time to solidify in one's mind. This is exemplified by Lina on p.170, when she questioned, "Are we really creative?". According to Mullet et al. (2016), beliefs about creativity among teachers can be influenced by specific characteristics, such as their own creativity, experience and age. These various elements highlight the key role of sociocultural considerations in shaping the formation of beliefs about creativity.

Third, in addition to individual creativity, it is important to consider group-level creative dynamics generated through collaboration. Zhou and Luo (2012) suggest that collaboration is a topic of considerable research interest because it extends our understanding of creativity beyond individuals. Although this thesis does not explore the creative approach from the group perspective, it was evident that when the participants worked together creatively, they exhibited synergistic effects, generating novel ideas and solutions that might not have emerged from any one group member independently. Group conversations, team projects and cooperative learning activities can allow future educators to interact, test one another's ideas and build shared knowledge (Zhou & Luo, 2012). For example, Alencar et al. (2017) discovered that university students who participated in collaborative discourse had greater levels of critical thinking and a deeper comprehension of pedagogical topics than those who did not. Overall, constructivist and sociocultural lenses provide valuable foundations for examining the development of creativity through individual and collective knowledge-building.

Understanding the interplay between language, culture, beliefs and creativity is crucial for fostering a culturally responsive perspective on creativity in education and academic majors can be considered as one element of the sociocultural setting (Lin, 2011). Therefore, this perspective highlights the influence of cultural factors, including academic majors, on the understanding and acceptance of creativity, identifying the need to consider cultural contexts when discussing creativity in education (Plucker et al., 2004). Hence, engaging pre-service teachers in the sessions of creative learning and exposing them to the sociocultural environment has been shown to have a positive impact on their beliefs and attitudes towards creativity in education and a consideration here is also their academic major.

The participants' perspectives, as shown in Theme 6 in section 4.2.1.3, indicated that creativity can be demonstrated by both teachers and students in any subject, emphasising the importance of creative teaching across academic disciplines (Sternberg, 1999; Jeffrey & Craft, 2004; Tudor, 2008). In the context of pre-service teachers, limited studies have been conducted on creative instructional practices in academic subjects, such as Arabic, to determine their value in enhancing language skills. When examining pre-service teachers' perspectives on the connection between their subject areas and creativity, the participants, who specialised in Arabic, English and Islamic studies, expressed their support for creative teaching and learning methods in lessons. Their

insights shed light on the various opportunities for implementing creative activities to enhance language skills.

While studies have indicated that subjects like English have shown less potential for creativity, with a greater focus on rules in grammar and spelling that can constrain the focus on the broader nature of literacy (Newton & Beverton, 2012), the participants in this study still identified the English and Arabic curricula in the Saudi context as creative. This may be attributed to their emphasis on the teaching activities and the teaching process rather than the nature of the content. Promoting creativity in language teaching is essential to create an engaging and productive learning environment.

Creativity can be encouraged and expressed in any language. According to Vygotsky's sociocultural theory of development, language serves as a means of communication and a tool for thought, playing a crucial role in cognitive development and creative thinking (Lindqvist, 2003).

Regarding the pre-service teachers of Islamic studies, there was less mention or linking of their central being to a creative teaching or learning area, even though they acknowledged the importance of creativity. There could be several reasons for this. Given that the participants attended only two sessions, as indicated in Table 12 (see p.168), it is possible that their views on creativity remained at a general level. This lack of depth in understanding may not have been sufficient to significantly influence their planning and teaching practices (Newton & Newton, 2009). Another possibility, in line with Newton and Beverton (2012), is that the pre-service teachers viewed some subjects as less creative, such as religious subjects, because these are often fact-based and tend to have single or right-or-wrong answers that limit creativity. This suggests the importance of stakeholders in teacher education developing the curriculum to prepare pre-service teachers to see creativity in the content of these school subjects and their teaching methods. Research on creativity in Islamic studies curricula has been limited, particularly from the perspective of pre-service teachers. Fostering creativity in religious education and Islamic studies is essential as it can enhance students' ability to understand and appreciate different religious and cultural perspectives (Altinyelken, 2021). Moreover, creative classrooms promote tolerance and appreciation for diverse viewpoints, which are essential attributes in our increasingly globalised society and in the context of Saudi education (Alawfi, 2016).

Moving to the participants' engagement in the creative learning sessions and considering their perspectives on the limitations of creative learning and teaching observed in Cycle 7, I can draw upon Vygotsky's sociocultural theory, particularly the ZPD (Vygotsky, 1978, cited in Harland, 2003). The ZPD offers a framework for understanding the role of interaction in fostering pre-service teachers' learning and the development of creativity. It refers to the range of tasks that a learner can perform with the guidance of more knowledgeable others. Regarding creativity development, this suggests that pre-service teachers may benefit from the support and encouragement of educators proficient in creative methods. In this study, the sessions were optional, yet there was a notable eagerness to participate, even during mid-term examinations, reflects the participants' motivation for growth. Moreover, the pre-service teachers provided insights into their perceptions of their own creativity and the challenges they faced in lesson planning. While they viewed themselves as creative individuals, they often encountered difficulties in effectively incorporating creativity in their teaching. In addition, some participants highlighted the challenges of integrating creative approaches in the classroom, such as the need for more effort, thought and time (Ludhra, 2008; Levanon, 2021).

What is more, their understanding of what constitutes a "creative activity" varied, with some considering random activities as creative work, akin to the findings of Aljughaiman and Mowrer-Reynolds (2005). This difference in their abilities prompted some pre-service teachers to seek additional clarification and guidance in this area. For example, some asked me for more sessions to understand how to use imagination in their lessons. This aligns with the notion that stepping outside one's comfort zone and adopting creative teaching approaches may require additional work and a willingness to take risks, going beyond familiar practices (Davies et al., 2013; Beghetto, 2016). These challenges also demonstrate that teaching for creativity is an ongoing process, resonating with the findings of Ludhra's (2008) study, which suggests that beginning teachers may initially struggle to connect creativity and education due to limited personal experiences in integrating the two concepts.

In this regard, scaffolding played a crucial role in progressively developing the pre-service teachers' creative learning capacity in teaching for creativity. Originating from Vygotsky's sociocultural theory, scaffolding refers to temporary support structures that enable learners to achieve tasks beyond their current ability levels (Wood et al., 1976; Engin, 2011; Van de Pol et

al., 2010). Scaffolding, as conceptualized by Harland (2003), involves providing initial support to students as they enter the ZPD and gradually removing this support as they gain independence. Within teacher education, scaffolding can facilitate growth from initial creative lessons to independent creative pedagogy.

This research implemented scaffolded creative experiences for the pre-service teachers using various strategies based on the instructional scaffolding framework developed by Roehler and Cantlon (1997). They identified five specific strategies for instructional scaffolding: modelling desired behaviour, offering explanations, inviting student participation, verifying and clarifying student understandings and inviting students to contribute clues. The sessions began with explanations of creative learning and reflective writing. Then the participants were scaffolded in developing their knowledge about creative teaching approaches through guided activities. As the sessions progressed, the participants gradually practised generating their own applications and teaching experiences (see 5.2.2 for further detail); this gradual increase in responsibility aimed to build confidence and skill in designing lessons with creativity.

Ultimately, scaffolding seeks to advance both cognitive abilities and motivation (Belland et al., 2013), an advancement that was evident in their reflective journals (see 4.2.2). The research aimed to provide pre-service teachers with structured support in their creative teaching journey, enabling them to develop their abilities through hands-on experiences and a constructive approach to enhancing knowledge.

In essence, the findings revealed the participants held varied understandings of creative learning and teaching, as evidenced by their active participation in this study. Supporting pre-service teachers in expanding their conceptions, stepping outside their familiar practices and integrating creativity in core content requires recognising challenges as natural stages of professional growth. Overall, these points emphasise the importance of considering sociocultural factors in understanding pre-service teachers' perspectives on nurturing creativity in the classroom (Sawyer, 2012).

5.2.1.4 Summary

This section comprised three sub-sections that examined the participants' views on creative learning in terms of concept and pedagogy. It illustrated their general perspectives with reference

to the existing literature, then discussed the evolution of their views during the sessions, covering multiple aspects. Finally, it examined these perspectives through a sociocultural lens, considering factors such as language and interaction in the link with the sociocultural context.

The following sub-section will address the participants' experiences with creative learning during their teaching placements and significant roles in relation to creative learning.

5.2.2 Experiences with Creative Learning during Teaching Placement

This sub-section discusses the main findings regarding the pre-service teachers' experiences of creative learning in real teaching practice during their school placements. Although the research did not specifically focus on the practicum factor, the participants provided valuable insights into their experiences.

Exploring the integration of creative learning sessions in pre-service teachers' classroom practices is important when considering the significant impact teachers have on student learning processes and outcomes (Hattie, 2009), as well as the broader goal of enhancing the quality of education (Darling-Hammond, 2006). Examining personal incidents and obstacles faced by pre-service teachers provides insights into the complex process of incorporating creative approaches in daily teaching practices. This study took such an investigative approach by having the participants reflect on their experiences of implementing creative learning strategies from the sessions. The aim was to gain a nuanced understanding of how novice teachers assimilate creativity in core pedagogical approaches, facing both successes and struggles along the way. Their experiences highlight key considerations for smoothing this integration process through scaffolded support. This sub-section discusses several aspects, including: the journey towards integrating creative learning in teaching practice, fostering teaching for creativity through collaboration and empowering pre-service teachers as reflective practitioners for creativity.

5.2.2.1 Journey towards integrating creative learning in teaching practice

The unique nature and complexity of teaching creativity is highlighted by its diverse dimensions and inherent challenges (Grainger et al., 2004). The participants, on their journey towards integrating creative learning and teaching, expressed their concerns, pointing to the fear and anxiety associated with teaching experiences and emphasising the crucial role of self-confidence in this context (as shown in Theme 8 in Section 4.2.1.5 and Theme 9 in Section 4.2.1.6). It is

common for new teachers to experience a fear of taking risks or failing in their teaching, which is part of their professional development (Smith, 2004).

In understanding and navigating these challenges, Bandura's (1977) theory of self-efficacy, alongside Vygotsky's sociocultural theory, offers an insightful framework. This theory, which focuses on an individual's belief in their capacity to execute behaviours necessary for specific performance outcomes, is especially pertinent. It underscores the importance of confidence in one's ability to control one's own motivation, behaviour and social environment. According to Bandura (1977), the development of self-efficacy is influenced by experiences of mastery, vicarious learning, verbal persuasion and psychological arousal. For pre-service teachers, this translates into needing scaffolded and situated opportunities that allow them to implement creative approaches in teaching. Observing experienced models, receiving constructive encouragement and effectively managing anxiety and fear are essential for them to build confidence and proficiency in their teaching skills.

In addition, developing self-confidence is key for teachers in embracing ambiguity, taking risks and creating an environment that welcomes learners' creativity (Grainger et al., 2004). Self-confidence is a vital element enabling teachers to be more creative in unplanned situations during their placement (Ludhra, 2008). This is why teaching is considered a creative art, as noted by Grainger et al. (2004) and Sawyer (2015). Claxton (1997), (cited in Cremin & Barnes, 2018) explored the concept of "confident uncertainty" in the context of creative teachers. This highlights the importance of finding a balance between having confidence in one's knowledge and skills, being open to the unknown and being comfortable with uncertainty.

In addition, risk taking is vital for creative practice on the part of both teachers and pupils (Henriksen & Mishra, 2013). Lucas et al. (2013) termed risk taking in their model as the ability to tolerate uncertainty and ambiguity as part of persistence. Beghetto (2021) contends that creative teachers need to be confident and able to take risks in their teaching, as well as offering their pupils the opportunity to take risks in learning. According to Davies et al. (2013), growing evidence from across the curriculum and all ages shows that supporting learners to take risks in their learning enhances their creativity (Cremin et al., 2006; Grainger et al., 2004; Hall et al., 2007; Halsey et

al., 2006; Henriksen & Mishra, 2013; Spencer et al., 2012; Elton-Chalcraft & Mills, 2015; Cremin & Barnes, 2015; Cremin & Chappell, 2019).

To overcome teachers' lack of skills and confidence, it is crucial to prioritise professional development, especially through initial teacher education programmes, to enhance their confidence and abilities in taking risks in their teaching (Cachia et al., 2010). However, in this study, the participants did not clearly articulate the role of risk taking in creative teaching practice, which probably indicates the need to prepare student teachers as part of initial teacher education to understand how to take risks and accept mistakes within a creative approach and thus promote their creative teaching practice (Ludhra 2008; Elton-Chalcraft & Mills, 2015).

The participants identified additional personality traits for creative teachers that go hand in hand with self-confidence, including intrinsic motivation and perseverance, as shown in section 4.2.2. The link with these traits is supported by a range of studies, such as those conducted by Amabile (1983), Csikszentmihályi (1990), Grainger and Jonathan (2006) and Prabhu et al. (2008). Guilford's (1950) work is critical in exploring creativity through creative dispositions. From his perspective, the "creative personality is a matter of those traits that are characteristics of creative persons" (Guilford, 1950, cited in Lucas et al., 2013). Craft et al. (2007), Prabhu et al. (2008) and Yates and Twigg (2017) found a correlation between teachers' personality traits and attitudes, indicating a connection between their behaviours and their creative approach to teaching and learning.

In addition, during the pre-service teachers' placements, the findings of Cycle 7 revealed they faced several obstacles to integrating creative learning, consistent with prior research, including time constraints, role overload and limited support (Levanon, 2021). They also highlighted challenges with technology and resources, echoing studies on optimising environments (Davies et al., 2013; Beghetto & Kaufman, 2014). This aligns with Livingston's (2010) findings on the importance of technological capabilities in teaching creativity in higher education.

It is noteworthy that despite these challenges, several pre-service teachers demonstrated a positive attitude towards creative practice, implementing various activities and teaching methods, such as the Six Thinking Hats approach by Edward de Bono (1985), brainstorming by Osborn (1948) and learning through play by Frobel (1890) (cited in Lucas & Spencer, 2017). These methods were

derived from the session discussions, their own knowledge, or guidance from their teacher mentors. This indicates their willingness to explore creative approaches in the classroom, which they found desirable for its ability to make learning interesting and promote the shift from passive to active learners (Cherney, 2008; McCabe & O'Connor, 2014). This approach aligns with the principles of student-centred and inquiry-based learning (Blumenfeld et al., 1991; Savery, 2006). Student-centred strategies encourage learners to take ownership of their education and make content personally relevant (Woods, 1995; Jeffrey & Craft, 2004;) resulting in active and engaging learning experiences (Jeffrey, 2006).

Furthermore, these approaches align with the principles of teaching for creativity outlined by NACCCE (1999). They emphasise the importance of nurturing students' creative identity, developing essential capacities and sensitivities related to creative thinking and providing ample opportunities for creative expression. In addition, the participants stressed the importance of imagination, aligning with previous research that defines creativity as "imaginative activity fashioned so as to produce outcomes that are both original and of value" (NACCCE, 1999, p. 30). According to Rogers (1954), the optimal conditions for creativity to flourish are created when the learning environment strikes a balance between "psychological safety" and "psychological freedom" (cited in Bettencourt, 2014).

Furthermore, some of the pre-service teachers in this study, such as Ranim and Huda, as shown in Theme 8 in Section 4.2.1.5, recognised the importance of cross-disciplinary approaches in the curriculum, specifically project-based learning, after having the opportunity to collaborate on a creative activity in the final session. This aligns with the findings of Davies et al. (2013), who argued the significance of creating a learning environment that supports student creativity, including a flexible physical environment that allows for movement and provides a range of materials and tools. Significantly, the participants noted the importance of allocating sufficient time and space for experiencing the different stages of the creative process and nurturing the development of ideas during the session activities.

In addition, based on their experience of project-based learning, the pre-service teachers perceived it as empowering for learners, encompassing elements of ownership, control, relevance and innovation (Woods, 1995). This perspective, as exemplified by Ranim on page 184, advocates for

cross-disciplinary approaches in the curriculum and the use of project-based learning. This view is further supported by Runco (2014), who contends that creativity contributes to the development of various skills, including language acquisition, imaginative play, adaptation, innovation, problem solving, planning, decision making and individual well-being. By incorporating such pedagogical practices, educators can effectively foster creativity within the educational setting and support creative learning experiences.

5.2.2.2 Fostering creativity through collaboration

The findings as presented in Cycle 5, highlighted collaboration as a key factor in promoting creative learning and teaching, particularly within the Saudi context. This focus on collaboration aligns with the emphasis on integrating social traits and embedding “soft skills”, such as interpersonal and collaborative skills, throughout the curriculum, as suggested by Sefton-Green et al. (2008). This section critically explores the significance of teacher and learner roles in fostering creative learning, specifically through collaborative and student-centred approaches, in two respects. First, the importance of collaboration is evident for pre-service teachers in higher education, as described by Popov et al. (2012). The participants, as students, actively engaged in the creative learning sessions, characterised by their interactive and collaborative nature. Second, the role of collaborative learning extended to the participants in their capacity as pre-service teachers, working with their pupils during school placements, as noted by Gillies and Boyle (2010). The analysis of the experiences of the pre-service teachers during their placements highlighted the crucial importance of both the teachers’ and learners’ roles in the classroom context. This understanding prompts a deeper examination of pre-service teachers’ stance towards implementing collaborative learning and the dynamics involved in teacher-centred and student-centred approaches. Both aspects of collaboration, in the context of pre-service teachers as learners and teachers, will be further explored in the following paragraphs.

Creativity is a complex process that relies heavily on social and cultural aspects (Grainger et al., 2004). Notably, there is a dynamic interaction between individual creativity and team effort (John-Steiner, 2000) and collaboration plays a vital role in promoting creative pedagogy, as discussed by numerous scholars (Fleith, 2000; Jeffrey, 2006; Craft et al., 2007; Davies et al., 2013; Sawyer, 2015; Lucas, 2016; Cremin & Chappell, 2019). As Wix and John-Steiner (2008) point out, collaborative creativity entails the shared construction of ideas and group dynamics. Collaborative

learning here refers to students working in small groups to enhance mutual understanding (Johnson & Johnson, 1999), which builds crucial skills for creativity (Lucas et al., 2013; Jeffrey & Craft, 2004; Beghetto, 2021). Craft et al. (2007) also stress the fundamental significance of collaborative learning for creative learning. According to Lucas et al. (2013), teamwork and collaboration are integral to creative learning, and Jeffrey and Craft (2004) stress their importance in teaching for creativity. Collaborative skills are crucial as they foster an environment of shared ideas, diverse perspectives and collective problem solving (Beghetto, 2021), which in turn enhance the creative productivity of young individuals (Fleming et al., 2007). Moreover, group work can contribute to the development of emotional skills (Grainger et al., 2004)

For the pre-service teachers as students, most sessions were planned based on a collaborative approach. The sessions attempted to offer a space for the participants to work collaboratively, sharing and exploring their ideas. As a result of their experience, all the participants, as shown in Theme 8 in Section 4.2.1.5, expressed their belief in the importance of activating collaboration in their creative teaching and learning. The pre-service teachers (participants) and the tutor (researcher) actively engaged in conversations and activities, reflecting the importance of teamwork and collaboration in the teaching for creativity context. These interactions reinforced the social identities of the learners (Cremin & Chappell, 2019) and likely contributed to a greater appreciation of collaboration in the learning process. Jeffrey (2006) found that in creative learning experiences, participants often assume both learner and teaching roles: teachers engage with small groups, contribute to classroom investigations, and participate in discussions, transforming into learners themselves.

However, it must be acknowledged that collaboration may not come quickly to all learners, as evidenced by the negative feelings expressed by two of the pre-service teachers concerning collaborating with others during session activities. This difficulty in collaboration can be attributed to various factors. One is the preference for working alone, as expressed by Lama, who said “I mostly prefer to work alone”. Hence, students’ willingness to participate in group activities is influenced by their personality traits, with extroverted and energetic individuals typically taking a more active role in group work (Webb, 2009). Gillies and Boyle (2010) point to the importance of coordination and active participation among group members to ensure effective group functioning and individual learning.

Another factor hindering collaborative learning is the tendency to disagree with others' ideas without providing reasons and being resistant to changing opinions. This task-related conflict was exemplified during the focus group by Lina. She expressed her preference for assigning individual tasks to students, as she believed it allowed for better assessment and control over their progress. However, she also acknowledged the importance of collaborative activities in promoting teamwork and communication skills among students. According to Popov et al. (2012), a lack of collaborative skills among students can result in communication problems and hinder their participation in group work and contribution to group outcomes in higher education.

Another issue is that cooperation can sometimes be challenging due to disagreements that hinder progress in the sessions. Webb (2009) argued that while a certain level of competition and disagreement can be productive, excessive conflict may impede group members from seeking new information to resolve their differences. When students spend an excessive amount of time arguing, especially to win rather than to discover the truth, it can obstruct the development of new insights and impede collaborative learning.

The participants as teachers in their placements engaged in various forms of collaboration in their teaching, such as storytelling, discussion, team brainstorming and team mind maps, most of which align with the findings of Davies et al. (2013). These approaches demonstrate the integration of collaborative approaches in promoting creativity in the classroom and have been shown to enhance knowledge retention and deepen understanding (Lea et al., 2003). Ultimately, they promote active and engaging learning experiences through student-directed inquiry, aligning with the concept of student-centred learning. As described by Kember (1997), student-centred learning emphasises students' active construction of knowledge, positioning the teacher as a facilitator rather than merely a presenter of information. According to Beghetto and Kaufman (2014), a creativity-supportive environment fosters open dialogue and collaborative activities, which in turn cultivate mutual respect between teachers and students. This fosters an inclusive and diverse learning atmosphere that is conducive to nurturing creativity.

The role of teachers during the collaborative process is crucial, as highlighted by Elton-Chalcraft and Mills (2015). Their research indicates that when student teachers take on the role of facilitators, it positively affects children's learning. However, it is important to note that this role is not easy,

for novice and experienced teachers alike. Moreover, the education system may not be conducive to such an approach. The Saudi education system is increasingly embracing more progressive approaches and recognising the importance of fostering creativity within the educational framework (Almalki, 2019; Allmnakrah & Evers, 2020).

In this study, the participants, who are future teachers, demonstrated efforts to adopt a student-centred approach. This aligns with the objectives of the Saudi Vision 2030 (Saudi Vision, 2016), which advocates such progressive educational practices. However, the participants also expressed three key concerns regarding the implementation of collaboration, a vital component of creative learning and teaching in this context:

First, they expressed concern about how teachers can effectively manage student behaviour and facilitate learning in large classroom settings. The high number of students poses a challenge for implementing group work and monitoring student progress effectively, potentially impeding the cultivation of creativity. This is in line with the work Blatchford and Russell (2020), who addressed how class size affects the quality of teachers' practice. They found that larger class size led to a greater focus on control and reduced cognitive exploration and feedback opportunities. Likewise, Wang and Calvano (2022) suggested that class size negatively affects classroom processes. In the Saudi context, the Ministry of Education has recently recommended that all primary and secondary school classrooms be organised into groups if there are many students. Typically, there are around 35–45 students in a class, which make group work challenging. According to the OECD (Holinger & Kaufman, 2018), the number of students per teacher in Saudi public schools was one of the highest among countries in 2020.

In addition, some participants, as shown in Theme 8 in Section 4.2.1.5, expressed concerns about collaborative learning, citing potential issues such as noise, distractions and difficulties in classroom management. These concerns are based on the prevalence and familiarity with a teacher-centred approach and arise from the fear of losing control of the class, as pointed out by Lin (2011). Jeffrey (2006) advocates creating opportunities for children to engage actively and meaningfully with learning by taking ownership of the knowledge. However, it is important for pre-service teachers to find the right balance between structure and freedom in the classroom in empowering students to have a voice and take charge of their learning (Davies et al. 2013; Beghetto & Kaufman,

2014; Sawyer, 2015). These concerns also highlight the importance of providing support to pre-service teachers in implementing instructional methods that foster creativity.

The second concern the participants raised regarding the collaborative approach to creative teaching related to the complexities involved in the teacher–student relationship, particularly the emotional and pedagogical requirements of implementing the effective co-construction of knowledge and joint shaping of learning content. This underscores the challenges in balancing teacher guidance with student input in the collaborative learning process. Research strongly supports the notion that the relationship between teachers and learners is a crucial factor in creating an effective pedagogic environment (Jeffrey & Craft, 2004; Jeffrey, 2006; Davies et al. 2013). The participants considered both emotional and pedagogical aspects influenced the friendly teacher–student relationship in creative learning and teaching (Grainger et., 2004). They believed that emotions and feelings are part of the creative process (Craft, 2000; Hoffmann & McFarland, 2023), meaning that teachers’ emotional behaviour can affect the development of pupils’ creative learning. The participants stressed the importance of empathy, in line with Mumford (2003) and Newton (2013), who show the influence of emotions, moods and traits on creative thought in teaching. Likewise, Gajda et al. (2017) point out that teacher behaviour, such as caring for students and offering emotional support, positively affects students’ academic achievement and creative abilities. This finding is in line with many studies that have confirmed the role of respectful relationships between teachers and learners in the creative environment (Jeffrey & Craft, 2004; Grainger et al., 2004; Davies et al., 2013; Beghetto & Kaufman, 2014a; Renzulli, 2017).

Third, there was significant concern among the pre-service teachers about the complexities of giving and receiving feedback in collaborative settings, a task that is often more challenging than for individual work. Effective feedback is a key component of collaborative and creative learning and is essential for group work dynamics, particularly in the context of teaching for creativity. This aspect of the learning process is prominent in the works of (Black & Wiliam, 1998; Grainger et al., 2004), who highlight its vital role in educational settings.

Feedback played a significant role for the pre-service teachers, who demonstrated sensitivity to receiving criticism from other educators and concern about providing feedback to their students. Their sensitivity may stem from their perception that receiving feedback is akin to being judged,

leading them to prioritise maintaining their own sense of self-worth and self-efficacy over using others' comments as a tool for improvement (Sezer, 2008). Wisniewski et al. (2020) shed light on the complex dynamics involved in feedback exchanges, emphasising the multifaceted nature of the feedback process. The dynamics of feedback encompass various aspects, including personal and emotional factors, which could have significantly influenced how the pre-service teachers perceived and responded to feedback in both their roles as teachers and students.

The participants, as shown in Theme 9, stressed the importance of continuous, valuable, qualitative feedback in fostering a creative classroom environment (Lea et al., 2003). Several noted that teachers' language significantly influences teacher-student relationships and creativity. Lea et al. (2003) also described feedback as a reciprocal process involving both teachers and students and enabling supportive collaboration. However, despite its importance in all educational context, Holinger and Kaufman (2018) found inconsistencies in the creativity-feedback link and argued that feedback is understudied.

Giving and receiving feedback is a critical component of learning and development in teacher education programmes. According to Kolb and Kolb (2009), learning should be a continuous process facilitated by feedback rather than feedback being a mere outcome. Therefore, they argue that higher education should focus on engaging students through dynamic feedback processes to optimise learning. Likewise, Chanwaiwit's (2019) study on feedback for pre-service teachers found it plays a crucial role in developing competence and teaching skills. The findings indicated that feedback positively affects teaching performance by providing evaluative information to improve instructional practices. However, the pre-service teachers often struggled to provide constructive feedback to students in their placements, mirroring common issues with feedback in teacher training programmes (Chanwaiwit, 2019).

As definitions of effective feedback emphasise empowering students to use comments to drive their progress (Scott, 2014), this is an essential skill for creatively adept teaching. Ramsden (2003) highlights the importance of giving feedback from the students' perspective and aligning it with their learning needs. Balancing constructive feedback with student-driven classrooms enables learners to take responsibility for their growth (Lea et al., 2003). However, the participants found it difficult to provide feedback that stimulated the students' creative thinking, problem solving and

expression in groups. The findings indicate more scaffolding is needed to help pre-service teachers learn to deliver feedback that fuels creative learning for diverse students.

Based on the idea that students should have opportunities for risk taking and making mistakes in a safe environment (Craft, 2003), I argue that pre-service teachers, in their role as students learning how to teach creatively, require the opportunity to engage in practical teaching experiences and receive constructive feedback tailored to their needs. Overall, to enhance collaborative learning and creativity, it is important to find the right balance between teacher-centred and student-centred approaches. This type of creative collaboration involves building respectful relationships, promoting active learning and establishing effective feedback (Lin, 2011). As Lin (2011) points out, teachers play a crucial role as guides, facilitating collaborative creativity by understanding group dynamics. They must provide the right mix of structure and flexibility to allow creative collaborations to flourish (Elton-Chalcraft & Mills, 2015; Sawyer, 2015). Fostering collaborative creativity requires scaffolding of the process in the early stages and gradually shifting control to the learners, while still offering mentorship.

Teaching experience can be enriched by the principles of collaborative learning, leading to a more productive and reflective learning environment (Davies et al., 2013). In what follows, I will explore the significance of pre-service teachers' engagement in reflective practice.

5.2.2.3 Empowering pre-service teachers as reflective practitioners for creativity

Fostering creative pedagogies requires equipping pre-service teachers with the necessary skills, self-efficacy and agency to implement imaginative practices within often constraining systems. In this empowerment process, reflection centred on teacher experience is vital, as highlighted by (Schön, 1987; Meadows, 2006; Ditchburn, 2015). Reflective practice is essential to empower pre-service teachers as practitioners in fostering creativity.

According to Dawson (2003), critical reflection is a fundamental concept in adult education and creativity is a crucial element of our capacity for engaging in critical reflectivity. While reflective practice was discussed in the literature review (see 2.10), Here, I focus on it from the standpoint of the participants' findings, specifically from Cycle 7While the participants, in Cycle 7, highlighted several general points and benefits related to writing reflective journals (O'Connell & Dymant, 2011), most indicated that the written reflective journal was a new academic experience

for them. This aligns with prior studies (Sibahi, 2016; Almalki, 2020), which emphasise the need to foster a culture of reflection among pre-service teachers in the Saudi education system.

The participants raised various challenges in their reflective practice. First, many struggled with confusion and inadequate writing skills. Second, some found it difficult to express complex feelings effectively. Third, they mentioned a lack of reading materials. Lastly, time constraints were identified as a significant obstacle. These challenges are frequently encountered in reflective tasks among pre-service teachers, particularly during the final stages of their studies. This also aligns with several recent studies in Saudi Arabia (Al-Silami, 2010; Al-Ahdal & Al-Awaid, 2014; Almalki, 2020), Qatar (Ahmed, 2020) and Israel (Levanon, 2021).

O'Connell and Dyment (2011) identified nine challenges associated with reflective journaling based on a comprehensive review of interdisciplinary literature. These challenges encompass various aspects, including the lack of training and structure provided to students, writing primarily for the instructor's benefit, excessive use of journaling, negative perceptions of journaling, journals not meeting the needs of all students, gender differences, ethical concerns, assessment issues, legal considerations, time requirements and the quality of reflection. These findings are mostly in line with the general context of Saudi education, highlighting similar challenges that need to be addressed in reflective practices within this specific educational setting.

In terms of unstructured, informal reflection, the literature suggests that no single structure universally enhances reflection effectively. The participants highlighted that open reflection, free from conventional constraints, significantly supported their learning in this research. This notion is supported in teacher education research, where several studies underscore the advantages of learner autonomy in cultivating deeper and more critical reflection among pre-service teachers (Shoffner, 2008; Caudle et al., 2017). Specifically, Ramsey (2010) discovered that pre-service teachers benefit significantly when given the freedom to control how they reflect. This engagement can take various forms, from writing to doodling, drawing, collaging, or creating mind maps. Such freedom not only enhances their engagement but also leads to reflections that are more substantial and creatively enriched. In my own experience, encouraging this variety in reflective practices has consistently proven to deepen understanding and foster creativity among my students, affirming the value of flexibility in educational approaches.

Regarding the quality of reflection, most of the participants' written reflections were predominantly descriptive. Nevertheless, it must be acknowledged that each level of reflection offers its own benefits and serves as a stepping stone for the development of student teachers. As argued by Hatton and Smith (1995), the technical level provides a solid foundation for addressing immediate challenges and motivating progress towards higher levels of reflection. Moreover, they highlight the value of critical reflection in preparing future teachers to be self-aware and flexible in their approach to meeting the needs of their students.

It is important to reiterate that this study did not assess the quality of the reflective journals. Rather, the focus was on providing insights into the perspectives of the participants, giving voice to their experiences (Almalki, 2020). The pre-service teachers themselves acknowledged that reflective writing might initially seem straightforward but in fact required careful thought and analysis. They emphasised the benefits of reflective thinking in practice, such as improving self-expression, enhancing problem-solving skills, organising critical thoughts and cultivating mindfulness in teaching. These examples highlight the role of reflective practice in supporting teachers in fostering creativity in their classrooms. Furthermore, reflecting on implementing creative activities facilitates learning from successes and challenges to refine approaches (Davies et al., 2013). Moreover, consistent reflection helps pre-service teachers recognise the development of their creative competencies, further cultivating self-efficacy and confidence to persevere, and teachers' adjusted application empowers the incremental integration of creative pedagogies (Beghetto, 2016). By documenting growth in creative skills, knowledge and mindsets through reflective practice, teachers gain resilience against cultures of compliance.

Some participants in this study, such as Huda, advocated using online platforms for collaborative reflection, noting their potential benefits. These platforms offer asynchronous communication, which differs from traditional verbal dialogues or focus group discussions. This feature allows participants more time to think and respond, potentially leading to deeper and more considered reflections. Additionally, online platforms enable broader participation by removing physical barriers, allowing a diverse range of voices to contribute to the discussion (Nicholson & Bond, 2003). However, they may also introduce challenges, such as reduced non-verbal cues, which can impact the depth and nuance of communication.

Understanding these differences is crucial for effectively integrating online platforms into educational strategies, particularly to foster reflective practices among learners. Despite these discussions, it is important to clarify that in this specific research, collaborative reflection through online platforms was not implemented. Participants did not share their reflective journals with each other, adhering to ethical considerations set forth at the beginning of the study. This decision was made to ensure the privacy and confidentiality of individual reflections, as discussed in Chapter Three (see Section 3.10).

The concept of reflection as “co-reflection” is a form of social practice highlighted by Yukawa (2006) that has garnered increasing attention in research (e.g. Nicholson & Bond, 2003; Cord & Clements, 2010; Collin & Karsenti, 2011; Beauchamp, 2015; McGarr et al., 2019; Yang & Choi, 2023). These studies argue that reflecting collaboratively can develop pre-service teachers’ capacities for co-creation and teamwork, which are essential for sustainable creative teaching.

Yang and Choi (2023) note that shared analysis through collaborative reflection builds communication skills, provides peer models for reflection and helps reduce the isolation that teachers often face. Such interactions are pivotal for pre-service teachers in constructing their professional identities in creative teaching and developing a sense of agency. This aligns with Vygotsky’s sociocultural perspective, which considers that social interaction enables the construction of deep and comprehensive meanings, a view supported by Yang and Choi (2023). However, further research is needed to understand fully how this type of collective reflection contributes to fostering deeper and creative learning, thus enhancing knowledge development.

Moreover, the action research in this study was designed to empower the participants, shifting their creative perspectives and practices and moulding them into agentic reflective practitioners. Several studies have indicated that employing action research in teacher education programmes can be used to foster reflective engagement among pre-service teachers (Ponte et al., 2004; Smith & Sela, 2005; Trent, 2010; Heikkinen et al., 2011; Lattimer, 2012; Ulvik & Riese, 2016; Niemi, 2022). This emphasises the potential of reflection to enhance teacher agency and efficacy, which are essential for transformative creative teaching.

Empowering pre-service teachers to be reflective and creative practitioners through an action research approach aligns with the sociocultural perspective in teacher education, as indicated by

Lantolf and Thorne (2006) and (Engin (2011). This considers educators, especially pre-service teachers in this context, as explorers of their own practices. Their understanding deepens through engagement in broader professional discussions and practices, continually developing via active participation in professional discourses and communities. As noted by Engin (2011), this approach provides a theoretical framework that positions teachers as lifelong learners, underlining the communal nature of their professional growth. Furthermore, Trent (2010) points out that viewed from a sociocultural lens, pre-service teachers build their understanding by investigating their experiences within a social context, aligning with the principles of action research. In essence, the conception in sociocultural theory of educators as socially embedded reflective practitioners closely reflects the emphasis in action research on the collaborative examination of experiences, thereby empowering pre-service teachers as creative agents in an evolving praxis.

5.2.3 Summary

This section has examined the perspectives and experiences of Saudi pre-service teachers regarding creative learning and teaching. It has highlighted the evolution of their views concerning creative learning, which significantly influenced their understanding of creativity. This evolution underscores the impact of the social and cultural context within the Saudi educational framework. The findings revealed evidence of the participants' views and beliefs through their experiences during their school placements. Furthermore, the section has provided insights into the participants' process of integrating creative learning in their teaching practices, together with the associated challenges. It has also addressed the crucial role of collaboration in teaching for creativity, particularly the challenges faced in the Saudi educational context. Another notable aspect discussed was the empowerment of pre-service teachers as reflective and creative practitioners. These points are in line with and underscore the need for innovative pedagogical approaches to address the gaps in the current Saudi education system and to support the ongoing reforms aimed at enhancing educational quality and creativity. The next section will discuss the views of teacher educators regarding creative learning and teaching.

5.3 Views of Teacher Educators regarding Creative Learning and Factors Affecting Pre-Service Teacher Preparation

This section focuses on RSQ2, exploring the views of the Saudi teacher educators concerning creative learning as an integral part of teacher education in the higher education sector. It is divided into two parts, the first of which addresses the key findings related to the teacher educators' views of creativity (see 5.3.1).

The second part (see 5.3.2) sheds light on significant factors from the Saudi teacher educators' perspective, categorised as associated with: (i) educational settings, (ii) college educators and lecturers, and (iii) pre-service teachers during placement. These findings provide a comprehensive understanding of the various factors influencing the promotion of creativity in teacher education.

It should be noted that some aspects discussed here may not appear to be strongly linked to creative teaching. According to Grainger et al. (2004), creative teaching is not a one-size-fits-all concept; rather, it varies and is open to interpretation. Consequently, they advocate for the active combination and integration of various factors in dynamic and innovative ways to truly foster creativity in teaching.

In addition, to avoid confusion in this section by use of the term "higher education", it is worth noting that teacher education is part of higher education in many countries (Niemi, 2022), including Saudi Arabia. Thus, studies from higher education may provide relevant insights into teacher education when carefully contextualised, especially considering the limited research on creativity in initial teacher education.

5.3.1 Views of Creative Learning

The perspectives of teacher educators offer valuable insights into how creativity is conceptualised and integrated within teacher education contexts. This sub-section aims to explore the key views of Saudi teacher educators concerning creative learning and teaching, highlighting both areas of alignment and ambiguity, which also relate to the previous discussion of the challenges around creativity in Saudi education in Chapter Two (see 2.3.1). Understanding their stance is crucial, as many educators may face challenges in realising their creative vision without proper professional support (Philip, 2015).

As noted by Jackson (2006), educators in higher education must recognise the spectrum of creative potential and nurture creativities in both everyday and exceptional situations to help students fully develop their capabilities. For teacher education to foster lifelong learning, problem-solving capabilities and adaptability to change, nurturing unique creative capacities becomes a worthwhile objective (Grainger et al., 2004).

The aim here is to understand the situation rather than judge the responses, based on my ontological and epistemological assumptions (see Chapter 3). The goal is to analyse critically their views on beliefs and practices to reveal insights into the systemic and cognitive factors influencing creative teaching, rather than to evaluate the validity of their viewpoints. This analytical approach can unpack the complex interplay between educator cognition, institutional constraints and pedagogical realities in shaping creative instruction. This understanding is crucial for fostering an environment that nurtures and promotes creativity in both teacher educators and pre-service teachers, ultimately enhancing the quality of education and pre-service teachers' creative practice.

5.3.1.1 Creativity: An important and growing subject in higher education

A significant view expressed by four of the twelve participants was the rising emphasis on creativity within the Saudi higher education context, such as in the relationship between the needs of society, the economy and the academic field. This perspective aligns with a trend in Saudi contemporary educational discourse that increasingly recognises creativity as instrumental in enhancing research quality and output, reflecting a notable paradigm shift within academia (Allmnakrah & Evers, 2020; Essa & Harvey, 2022).

Higher education institutions are increasingly seen as central to fostering the creativity and innovation needed to drive economic growth and promote development amid complex global transformations (Simonton, 2011; Park et al., 2021). Gaspar and Mabic (2015) note that universities can cultivate critical thinking, creative capacity and novel solutions underpinning sustainable development. Sternberg (2003) contends that they act as creativity hubs that build the flexible skillsets and mindsets required to thrive in changing times. This recognition is corroborated by the findings of Park et al. (2021), who highlight the essential role of creativity in higher education, particularly given the complex and rapidly transforming global landscape.

The participants' acknowledgement of the recent policy focus on integrating societal needs, economic considerations and academic fields reflects a keen understanding of the current direction of educational policies. This insight aligns with Craft's (2010) and Lin's (2011) study, which articulated the importance of assimilating creativity within education as it serves as a cornerstone for societal development and economic prosperity.

Viewing creativity as both an outcome and a process and placing a pronounced emphasis on the associated societal and economic benefits reinforce the idea that creativity transcends the realm of an individual attribute to become a societal asset. The Systems Model of Creativity propounded by Csikszentmihalyi et al. (2014) asserts that creativity is a phenomenon within a system comprising the field, the domain and the individual. Therefore, the perspectives offered by these educators highlight the importance of embedding creativity within curriculum planning and instructional strategies. They highlight the need for a pedagogical transformation that encourages creativity, aligning with Beghetto's (2010) argument that educational systems should cultivate creativity as a core discipline.

Although the participants did not explicitly discuss creativity in higher education contexts, the literature indicates that cultivating creativity is vital in teacher preparation programmes. Henriksen et al. (2016) found creativity remains peripheral in most teacher training curricula, highlighting the need to integrate creative competencies. Hence, while the participants focused on school contexts, research confirms the same imperative exists in higher education for modelling and building creative teaching abilities (Watson, 2014; Philip, 2015; Gaspar & Mabic, 2015; Alencar et al., 2017; Sheridan, 2020).

5.3.1.2 Creativity: Generating many ideas and flexible solutions rapidly

As shown in section 4.3.12, most of the teacher educators in this study predominantly viewed creativity as a means of rapidly generating original ideas and solutions, often referring to notions of newness (Guilford, 1965; Sternberg & Lubart, 1998). This perception aligns with divergent thinking, which involves exploring multiple possible solutions and leads to novel outputs. However, while ideational fluency is important, genuinely impactful creativity also requires elaboration, refinement and the synthesis of ideas (Copley, 2006). Thus, supportive educational environments encouraging free-flowing ideation while emphasising critical analysis and the

improvement of ideas are vital to develop quality creativity (Cachia et al., 2010; Beghetto & Kaufman, 2014a; Davies et al., 2013).

Some participants such as Shams and Mada also characterised creativity as a strategic, flexible approach to problem solving (Cachia et al., 2010). This aligns with notions of “functional creativity” (Copley, 2006) and dual process thinking, highlighting adaptability in challenging existing frameworks to devise creative solutions. Developing problem-solving skills boosts workplace innovation (Zhou & Luo, 2012) and prepares students for future professional challenges. What is more, as noted by Sternberg (2003), creative people are not just problem-solvers but also problem-finders who identify new opportunities.

While these perspectives provide valuable insights, overemphasising rapid ideation risks promoting quantity over quality in terms of creative output. In addition, positioning creativity primarily as a means of implementing workplace innovation could constrain more open-ended creative exploration. Framing creativity predominantly in terms of problem solving also overlooks the importance of imagination, self-expression and following intrinsic passions, all of which often drive creativity (Kaufman & Sternberg, 2010).

A more comprehensive conception views creativity as the interplay between divergent and convergent thinking (Guilford, 1956), imagination and rationality (Sternberg & Lubart, 1998) and freedom and constraint (Csikszentmihalyi, 2014). Creativity thrives at the intersection of flexibility, focus, passion and pragmatism (Davies et al., 2013). Hence, balanced educational approaches that provide structure while encouraging exploration (Sawyer, 2015), enable expression while developing analytical skills and foster both problem solving and problem finding are essential to unlock students’ creative potential (Sternberg, 2003c).

Overall, the findings from the interviews with the teacher educators reflect criteria for creative work in higher education, viewing creativity as the generation of many ideas and providing speed in problem solving.

5.3.1.3 Creativity as an aspect of giftedness in students

Some participants such as Hala and Walaa perceived a strong correlation between creativity and giftedness, as shown in section 4.3.1.3. This can be attributed to the considerable attention paid by

the Saudi Ministry of Education to gifted students and the efforts of King Abdulaziz and his Companions Foundation for Giftedness and Creativity (known as Mawhiba.org) on their behalf. As discussed in Chapter 2, they have developed programmes to provide specialised education for gifted students in Saudi Arabia (Alshareef, 2022). These programmes include the National Program for Gifted Identification, the Mawhiba Academic Enrichment Program, the Mawhiba Research Enrichment Program, the Mawhiba Universal Enrichment Program and the Mawhiba Skills Enrichment Program (Mawhiba, 2020). These gifted programmes aim to provide specialised scientific enrichment programmes, promote the culture of giftedness and create an environment that motivates students to become scientific and creative individuals (Alfaiz et al., 2022).

When exploring the varying viewpoints of the teacher educators regarding creativity and its relationship with the level of intelligence, giftedness and creativity among students (Getzels & Jackson, 1962; Sligh et al., 2005; Gardner, 2006, 2011; Plucker et al., 2015), it became evident that some educators believed all students identified as gifted in national tests would be inherently creative, but were uncertain about the creative potential of other students who might not have been identified as gifted. This aligns with Aljughaiman and Mowrer-Reynolds' (2005) study, which ascertained that teachers primarily associate creativity with traits of gifted education while also viewing it as an ability that can be developed. Hence, the teacher educators in this research had a shared understanding that creativity is a cognitive ability that exists in everyone, regardless of whether they have been identified as gifted (Kaufman & Beghetto, 2009). In other words, creativity is seen as a universal trait that can be nurtured and developed in all students, not limited to those labelled as gifted (Craft, 2003). However, the participants acknowledged contradictions and overlaps in interpreting the relationship between giftedness and creativity within Saudi society, indicating the need to examine these constructs critically in educational settings (Salamah et al., 2023a).

Debates in the literature shed light on the complexity of the creativity–giftedness relationship. While some theorists argue that creativity is inherent to giftedness, Renzulli (2005) contends that conceptions of giftedness should emphasise creative, productive abilities rather than solely relying on high test scores, as overlooking creativity can lead to the misidentification of gifted students. Others consider that creativity and giftedness are distinct and can exist independently (Milgram,

1989; Sternberg, 1999; Treffinger et al., 2002). This nuanced view suggests that giftedness should not be equated with, or limited to, creativity.

In the Saudi context, Alshareef's (2022) study highlighted the significant cultural influence on the perception and assessment of giftedness and creativity in Saudi education settings. For instance, Al Qarni (2010) notes the dedication of Saudi political leadership in promoting and empowering gifted individuals and nurturing talent and points to the substantial role of societal factors in shaping the understanding and interpretation of these constructs. Salamah et al. (2023) argue the need for clear definitions of creativity in educational policy documents to avoid misunderstandings and confusion between creativity and giftedness. These findings collectively shed light on the complexities and cultural factors that shape understandings and the promotion of creativity and giftedness in the Saudi education system.

The findings reveal potential gaps in some Saudi teacher educators' understanding of the creativity–giftedness relationship. Teachers may conflate giftedness with high academic achievement, leading to biases that result in the failure to identify and support creative students who may not excel academically but possess divergent thinking abilities (Dai, 2010). Such problematic notions of giftedness as an innate superiority can exclude disadvantaged students and limit the diversity of creative expression (Borland, 2005).

Understanding models of creative behaviours, such as the 4C Model (Big-C, Pro-C, Little C and Mini-C) (Kaufman & Beghetto, 2009), could provide valuable insights into the different levels of creativity exhibited by students and educators in Saudi Arabia. Moreover, conducting further research and training is essential to offer Saudi educators a more critical and nuanced perspective on creativity and giftedness. This approach would aid in nurturing the creative potential of all students, regardless of notions of giftedness, and recognising creativity as a multidimensional construct shaped by sociocultural contexts (Csikszentmihalyi, 1999). To foster a more inclusive and enriched learning environment for all students, that values and encourages creativity and giftedness at all levels of education (Salamah et al. 2023).

5.3.1.4 Creativity and the ambiguity between views and practice

There seemed to be a gap between the teacher educators' views on creativity and their ability to apply creative teaching practices effectively. The findings, as shown in section 4.3.1.4, revealed

that many educators struggled to define creative learning in their courses precisely, often providing vague responses and not addressing key creative elements like novelty and uniqueness (see 4.3.1). This inconsistency aligns with prior research examining how university educators comprehend and implement creative pedagogy (Grainger et al., 2004; Jackson, 2006; Cornish, 2007; Livingston, 2010; Gaspar & Mabic, 2015; Philip, 2015; Alencar et al., 2017; Sheridan, 2020; Ismail & Kassem, 2022). Grainger et al. (2004) suggest that creative teaching is particularly complex in initial teacher education. Specifically, when attempting to integrate creative learning concepts in their teaching practices, some teacher educators in this study failed to establish a clear connection between their views on fostering original ideas and the teaching of college subjects. Such views are further explored and discussed with reference to the pre-service teachers' perspectives in the following section (5.4).

On the one hand, the teacher educators in initial teacher education seemed to lack a clear focus in terms of providing practical examples of creative learning and teaching. This could be attributed to the limited research in this area at the higher education level as already noted (see Grainger et al., 2004; Cornish, 2007; Kleiman, 2008; Philip, 2015; Gaspar & Mabic, 2015; Ismayilova & Laksov, 2023). The scattered and repetitive responses from the teacher educators, along with the varying definitions of creativity in the literature (Fryer & Collings, 1991; Mowrer-Reynolds & Aljughaiman, 2005; Tapinos, 2016), point to a lack of clarity and consensus in agreeing a definition. Moreover, Fryer and Collings' (1991) study with 12 academics from various disciplines revealed that despite a powerful fascination with creativity, there was limited shared understanding of its meaning and development, as well as discrepancies between rhetoric and practice. This situation is likely to have remained unchanged, suggesting a persistent gap between the theoretical appreciation of creativity and its practical application (Alencar et al., 2017; Karwowski et al., 2020).

Indeed, Kleiman's (2008) research highlights the intriguing paradox between an interest in creativity and its limited integration in academic discussions in higher education. It reveals that creativity does not hold a prominent place in the daily academic educational discourse in higher education, as also indicated by the findings of Ismayilova and Laksov (2023). This suggests that although defining creativity is of great interest to both researchers and educators, it may hold less significance for those engaged in and interested in applying creativity within teaching and learning

contexts (Kleiman, 2008). Similar trends can be observed in the Saudi context, such as a limited emphasis on creativity in daily academic discourse as per some responses, implying that the results of the UK study could also apply to Saudi higher education.

In contrast, the teacher educators appeared more confident in relating creative teaching concepts to the primary school context. This confidence could be influenced by the abundance of definitions and models evident in school-based research, with a strong focus on early childhood and primary education (Jeffrey & Craft, 2004; Kampylis et al., 2009; Ismayilova & Laksov, 2023). Examining insights from the UK context may enhance understanding of Saudi teacher educators' references to creativity, specifically in relation to primary education, and their effective application of creative teaching practices. However, given the educational impact of the UK on the field of creativity, both in terms of its definitions and the growing recognition of the importance of creativity in education, particularly during the period 2000–2010, it is noteworthy that there has been a concerning decline in the visibility of creativity within schools in England in recent years (Lucas, 2019). Jones (2023), in a personal conversation, provides a justification for the participants' references to creativity in primary education, highlighting that teacher educators in the UK often prioritise teaching pedagogical methods suitable for elementary classrooms. Teacher preparation programmes, such as the Postgraduate Certificate in Education (PGCE) at Newcastle University, explicitly model creative techniques that can be applied in primary schools, discussing the rationale for them in the process. Given this dual role of developing subject matter knowledge and pedagogical skills relevant to teaching younger students, it is understandable that teacher educators construct connections between creativity and primary education. The university classroom serves as a platform to bridge theoretical concepts of creative learning with practical approaches that students will later employ as schoolteachers (Jones, 2023).

Furthermore, Murray and Male (2005) explain that as initial teacher educators transition from the first-order setting of schools to the second-order setting of higher education in England, their expertise in school teaching becomes a valuable asset in their new academic role; their prior experience as schoolteachers has a significant influence on how they approach their work as teacher educators in higher education. However, it is important to recognise that this explanation may not hold true in all educational contexts, particularly in Saudi education. In Saudi Arabia, some teacher educators may directly enter higher education without prior experience as

schoolteachers. This difference in experience could significantly affect their approach to teaching in higher education, including their understanding and integration of creativity in teaching practices.

It may be that the discrepancy between views and practice is related to the complexities of creative teaching in teacher education in the Saudi context. These complexities are related to several significant factors. One key factor is the prevalent stereotype and general perception of higher education in Saudi Arabia, which often adheres to traditional teaching and learning methods (Alnesyan, 2012; Allamnakhrab, 2013; Alzahrani, 2017; Algamdy, 2020; Almalki, 2021). This historical emphasis on transmitting content knowledge rather than fostering thinking and learning strategies can hinder the integration of creative teaching practices (Cornish, 2007; Philip, 2015). Moreover, the lack of specific guidance on implementing creative teaching approaches in educational policies in Saudi Arabia adds to the challenges (Salamah et al., 2023). Institutional cultures in higher education might also restrict educators' ability to take risks in implementing creative teaching and some teachers may lack the pedagogical skill sets required for creative teaching (Sternberg & Vroom, 2002). Hence, translating abstract creativity concepts into practical teaching methods within rigid university systems and unfamiliar disciplines likely poses significant challenges for teacher educators in Saudi Arabia.

These challenges collectively hinder the integration of creativity in education in the Saudi context. In summary, multiple complex factors arise from stereotypes, policies, cultural context, constraints and unclear definitions, raising critical questions about the actual integration of creativity in Saudi higher education. This demonstrates the need for an in-depth exploration of the underlying issues to bridge the gap between educators' views and their practical implementation of creative teaching practices. However, the teacher educators provided valuable insights into several factors and elements that can affect the preparation of creative teachers, which may also contribute to the lack of clarity and link between their views and practices. The subsequent section explores the factors affecting the pre-service teachers' creative preparation, offering further understanding of how these complexities influence the development of creative teaching approaches among future educators.

5.3.2 Factors Affecting Pre-Service Teachers' Creative Preparation

The discussion of creative learning and teaching, from the standpoint of teacher educators, uncovered various elements influencing pre-service teachers' creative learning and teaching. Three central factors arose in the findings, as shown in section 4.3.2, which are examined in depth to understand how they support pre-service teachers' creative learning and teaching. These are related to: (i) the educational setting, (ii) college educators and lecturers, and (iii) pre-service teachers during their placement.

The factors identified align with the sociocultural approach to learning, as integral components of sociocultural dynamics, significantly influence creative potential in teacher education programmes (see Section. 5.2). First, educational settings are a critical component in teacher preparation, as they reflect the sociocultural factors that influence learning and teaching. Edwards (2009), influenced by sociocultural perspective, posits the importance of examining these settings to understand their impact on teacher education.

Second, college educators and lecturers play a pivotal role in the sociocultural dynamics of teacher education, as highlighted by Kelly (2006). He suggests that if teacher learning, referring to teacher educators with their pre-service teachers in teacher education in this context, is a co-constructive activity with students as partners in the process, then it is more effective to view teacher and student learning as two sides of the same coin. This perspective supports the idea that learning is a mutually beneficial and collaborative process, reflecting the reciprocal nature of teaching and learning. Hence, it is necessary to consider both teacher and student development as integral and interconnected aspects of the educational experience, specifically in teaching creatively (Grainger et al., 2004). Therefore, the involvement of teacher educators extends beyond mere delivery of content; as Kleiman (2008) points out, they should actively contribute to creative development – both their own and that of their students – rather than simply adhering to a predetermined “creativity agenda”.

Third, placements provide pre-service teachers with experiential learning opportunities through interactions with others, fostering the development of creative teaching skills in real-world educational settings (Alencar et al., 2017). Kelly (2006) highlights how teachers' involvement in school practices and related discourses not only shapes their expectations of becoming expert

teachers but also influences the challenges they choose to address. This involvement plays a crucial role in shaping their identities as teachers, as described by Lave and Wenger (1991). Furthermore, Goos (2005) discusses the importance of the ZPD in teacher education, pointing to its critical role in the professional growth of pre-service teachers. Pre-service teachers are subject to the influence of two zones of proximal adjustment – one from their university programme and another from their supervising teacher during practicum. While these zones might not always align, they are essential in guiding a teacher's learning and socialisation. Thus, this sociocultural perspective highlights the significance of practical experience and mentoring in teacher training, facilitating the development of teaching identities through increased engagement in practice.

Together, these interrelated factors illustrate how environmental and social elements synergistically enable or inhibit the creative growth of pre-service teachers and their approach to creative teaching within the context of teacher education. The findings highlight the sociocultural forces that influence the development of creative teaching capacities, as discussed in the literature.

In addition to this sociocultural perspective, I will discuss these factors in relation to the broader body of literature in the following paragraphs. Importantly, some of these contextual factors have been criticised as barriers to creativity in education, as noted by Cheng (2010). While previous studies, like those of Alsahou (2015), Philip (2015) and Ismayilova and Laksov (2023), have explored related factors, they have not specifically addressed how these elements interact within teacher education in the Saudi educational context.

5.3.2.1 Factors related to the educational setting

The creative development of pre-service teachers is deeply intertwined with the academic landscape in which they are nurtured. Teacher educators highlighted three primary aspects of the educational setting as crucial in cultivating creativity: (i) leadership and administration, (ii) the physical and social environment, and (iii) the curriculum and courses in teacher education.

The significant influence of academic administrators, policymakers and university leaders in shaping the creative landscape within teacher education cannot be overstated (Chang et al., 2010). An association between creativity and leadership is commonly made as creativity is frequently considered an attribute of effective leadership (Sternberg & Vroom, 2002; Shalley & Gilson, 2004).

The teacher educators in this study highlighted the importance of leadership in establishing educational policies, strategic priorities and academic plans that can foster a conducive environment for creative learning within any teacher education programme. Their perspectives align with the literature articulating the pivotal role of leadership in shaping cultures that enable creativity to flourish at individual, team and organisational levels (Isaksen & Akkermans, 2011; Davies et al., 2013; Ismayilova & Laksov, 2023). In teacher education, administrators must prioritise collaboration and create spaces for sharing novel ideas to foster creativity (Henriksen & Mishra, 2013).

In addition, the participants in this study identified developing a supportive and conducive learning environment as a vital factor in enhancing creative learning and teaching (Alencar et al., 2017). This view converges with the research findings of Barrett et al. (2015), which described the profound impact of the learning environment on creativity. Leaders should support role expectations of creativity by creating an environment that encourages positive interactions and fosters the exchange of constructive feedback (Shalley & Gilson, 2004). In addition, providing access to appropriate resources, such as technology and digital tools, can significantly nurture creativity (Livingston, 2010; Chang et al., 2010; Gaspar & Mabic, 2015). The physical and emotional aspects of the learning environment also play a crucial role in shaping the learners' creative processes (Cropley, 1999; Trigwell, 2012). By creating a positive atmosphere, educational institutions can stimulate the exploration and expression of original ideas, fostering a culture of creativity and innovation, which has far-reaching implications for developing pre-service teachers' creative skills and competencies. Therefore, concerted efforts should be made to promote a positive and enriching learning environment for all learners.

Moreover, the significance of syllabi and courses in promoting creative teaching has been identified by previous studies (Alsahou, 2015; Ismayilova & Laksov, 2023). The teacher educators in this study also referred to significant developments in syllabi and courses, with a noticeable increase in the emphasis on creativity skills observed in the newer curricular documents. This shift signifies a departure from traditional educational approaches and reflects a more progressive mindset within the Saudi education system (AlHarbi, 2021). This aligns with global educational trends towards recognising creativity as a crucial skill in the 21st century (Craft, 2010; Craft et al., 2014; Lucas & Venckutè, 2020). However, the participants in the study identified a significant

challenge: translating theoretical objectives and written plans into practical teaching strategies. As Craft (2010) pointed out, the gap between policy and practice is a recurring issue in educational reform, particularly when implementing creative pedagogical practices. Therefore, effectively integrating creativity in teaching requires not only a change in the curricula but also a transformation in teaching practices and mindsets.

5.3.2.2 Factors associated with college educators and lecturers

While examining teacher education dynamics, the teacher educators noted the crucial role of creative teachers as models to guide pre-service teachers. They highlighted three primary characteristics: academic job demands, motivation toward teaching, and awareness of creative learning and teaching as critical attributes of being creative teachers in teacher education, as shown in section 4.3.2.2. This section begins by establishing the realities of academic job constraints and then examines how intrinsic motivation and strategic awareness empower creativity within those realities. In addition, the importance of professional development in enhancing awareness is highlighted. Finally, the interplay of these factors and their influence on creative teaching is discussed.

Specifically, there is limited research examining teacher educators' professional experiences and induction requirements as they begin their roles in higher education institutions (Murray & Male, 2005). One key factor influencing the ability to be a creative teacher in higher education is the alignment with academic job requirements (Gregory & Lodge, 2015; Huang et al., 2022; Ismayilova & Laksov, 2023). The challenging balance of teaching, research and administrative duties for teacher educators can hinder creative teaching, especially in the face of overloaded roles (Winter et al., 2000; Henriksen & Mishra, 2013; Gregory & Lodge, 2015). However, some studies suggest increased job challenges can stimulate creativity by promoting excitement, resourcefulness and ideation. Shalley and Gilson (2004) argue that greater work challenges lead to heightened engagement, thus enhancing creative performance. Similarly, Sun et al. (2020) assert that job challenges prompt cognitive flexibility, leading to creative responses as employees view work from new angles, discover improved strategies and generate novel solutions amid obstacles. Yet, while some challenges can catalyse innovation, excessive pressures likely become hindrances. As Amabile et al. (2002) observed, workplace creativity thrives with moderate workloads and autonomy. Beyond optimal levels, overload impedes creative teaching (Kleiman, 2008).

Winter et al. (2000) found that academics in the health sciences and humanities reported greater overload than business academics, indicating that disciplinary cultures shape experiences. Exploring these disciplinary differences is vital to understand constraints in teacher education. In this regard, studies from higher education may provide relevant insights into teacher education. As Ismayilova and Laksov (2023) noted, alignment with academic job requirements influences creative teaching capacity. The role of teacher educators has increasingly evolved to focus more on facilitating the development of critical thinking, strategic planning and collegial problem solving rather than merely being distributors of knowledge (Gregory & Lodge, 2015). However, prevailing expectations may insufficiently value pedagogical innovation and creativity, leading to implicit norms that stifle radical creative approaches in favour of content delivery (Kleiman, 2008).

Gillespie et al. (2001) identified five categories of causes of stress that have a deleterious impact on teacher educators' professional work and the practice of teaching across 15 Australian universities: insufficient funding and resources; work overload; poor management practices; job insecurity; inadequate recognition and reward. These constraints likely manifest in different ways across cultural contexts. For example, while Kleiman (2008) examined the UK higher education system, Gregory and Lodge (2015) looked specifically at the Australian university context. Ismayilova and Laksov (2023) analysed the conditions supporting teaching creatively in higher education in Sweden. However, there may also be similarities with the Saudi context, particularly given potentially comparable institutional cultures across universities. In the Saudi context, these constraints may exist to some extent. This may hinder the development of a supportive and conducive teacher education learning environment. For example, higher education reforms in Saudi Arabia have tended to focus on the number of publications and citations rather than the quality of teaching and learning, potentially reinforcing hierarchies prioritising research over pedagogy (Smith & Abouammoh, 2013). Therefore, a critical examination of how these factors influence the field of teacher education in Saudi Arabia is much needed.

In addition to academic job requirements, some teacher educators, such as Rahaf and Hlaa, noted the importance of their motivation in improving their creative teaching practices while preparing pre-service teachers (see Section 4.3.2.2). Indeed, the motivation of teacher educators plays a pivotal role in shaping their ability to engage in creative teaching (Jackson, 2006). Similarly, in primary education, this factor holds considerable importance. Hong et al. (2009) found that

teachers with sophisticated beliefs about knowledge and high intrinsic motivation for creative work were more likely to support and foster student creativity actively through their instructional practices. Both intrinsic and extrinsic motivational factors influence educators' ability to overcome barriers and foster student creativity. Intrinsically, a passion for teaching and an internal drive to be creative can promote innovation (Jackson, 2006), as extrinsically can desires for professional rewards or recognition (Hennessey, 2000; Gillespie et al., 2001). Equally, Kleiman (2008) noted that intrinsic motivations can drive creative teaching in higher education. While the prior literature has explored the role of motivation in student learning and creative outcomes (Amabile, 1996; Dewett, 2007), limited research has specifically focused on how motivation enables creative teaching practices among teacher educators in teacher education programmes. Sawyer's (2011) definition of creative teaching, emphasising imagination, engaging methods and originality, highlighted the crucial role of motivation in its effective implementation. Educators who possess intrinsic motivation are more likely to embrace creative approaches in their teaching (Jackson, 2006), aligning with the characteristics outlined in Sawyer's definition. Further research explicitly examining teacher educator motivation for creativity is needed, both in the Saudi context and internationally, to understand comprehensively the interplay between internal drive and external catalysts.

In addition, personal dispositions offer valuable insights into creative teachers, as evidenced by Grainger et al. (2006), who identified passion, commitment, risk taking, curiosity and introspection as traits exhibited by creative teacher educators. These dispositions reflect a deep intrinsic motivation to teach creatively. Fostering educator autonomy, interest and purpose can further enhance motivational factors and contribute to enhanced creative teaching practices (Amabile, 1988; Craft, 2003; Craft et al., 2014; Henriksen & Mishra, 2013).

Moreover, the teacher educators stressed the need to cultivate awareness of creative learning and teaching, which goes beyond mere motivation. This finding illustrates that teacher educators must maintain a dual focus on facilitating interpersonal dynamics and laying the foundations for students' future teaching practices. The role demands active engagement in teaching about teaching through personal pedagogy (Murray & Male, 2005). Continuous professional development, including workshops and online courses, focused on creative teaching strategies, is required to gain in-depth understanding and unlock creativity in their classrooms, as shown by

Shams in Section 4.3.2.2. This viewpoint is supported by Brookfield's (2015) finding that exposure to novel strategies through professional development inspires vibrant, creative learning environments. Henriksen and Mishra (2013) further assert that active engagement in creative practices during professional development helps teacher educators develop effective classroom creativity strategies. Intellectual risk taking is central to cultivating a creative teaching practice, such that teachers embrace new ideas and approaches to discover innovative teaching methods (Watson, 2014).

Consequently, the interplay of academic job requirements, teacher motivation and awareness of creative learning strategies holds significant sway over teacher educators' teaching approaches and pedagogical practices. The participants in this study strongly believed in the influence of their pedagogical practices on fostering their students' creativity. Grainger et al. (2004) contend that the training of creative teachers encompasses not only the observation of creative teaching methods but also active participation in creative learning experiences, as teachers who incorporate these practices in their own pedagogical approach can effectively inspire and nurture creativity in their students. Hence, the participants made the following two related points:

1. Critical thinking and research skills: Some teacher educators viewed critical thinking and research skills as fundamental components of creative teaching in preparing teachers. Research skills are especially accentuated at higher levels of education and are commonly used in the Saudi context. These skills empower students to evaluate various perspectives and enhance their creative problem-solving abilities, ultimately promoting and supporting students' creativity (Jackson, 2006).
2. Diverse teaching approaches: In addition to critical thinking and research skills, the participants, such as Hlaa, Rana and Walaa, highlighted the importance of embracing diverse teaching approaches to nurture creativity and prioritise critical thinking in teacher education. These viewpoints align with the findings of Cherney's (2008) study on active learning in higher education, as well as the works of Alencar and Fleith (2009), Cropley (2005, 2006), Grainger et al. (2004) Lin (2011) and Watson (2014), all of which advocated employing various teaching styles to foster creative responses among students. Using a blended approach that involves switching between teaching styles, varying the pace of discussion, incorporating questioning

techniques, integrating practical activities even within lectures and encouraging student inquiry can effectively enhance creativity in the learning process (Crawford & Jenkins, 2018). Such a multifaceted teaching approach creates an environment conducive to fostering creativity and stimulates students' innovative thinking (Grainger et al., 2004). By employing a range of teaching strategies catering to students' diverse learning styles, educators can provide multiple avenues for students to engage with learning and foster their creative skills (Sternberg, 2003; Lin, 2011). In addition, teachers embracing facilitator roles enable a flexible approach that provides support while allowing open exploration (Jackson, 2006; Lin, 2011).

This alignment with diversifying teaching approaches supports the findings of Alsahou (2015), who highlighted the detrimental effects of adopting identical pedagogies on student engagement and creativity. Emphasising creative learning can motivate both students and teachers, providing enjoyable and challenging learning situations with positive role models (Jackson, 2006; Elton-Chalcraft & Mill, 2015). However, simply diversifying methods is insufficient; as Beghetto (2016) argues, teaching creativity requires a judicious balance of structure and freedom. According to Lin (2011), overlooking creative learning characteristics, such as autonomy, in teaching methods may pose challenges in nurturing students' creativity.

Overall, the teacher educators mentioned various teaching approaches, indicating their knowledge of pedagogical practices regarding creative teaching. This aspect is further explored in 5.4, where a comparison is made with the approaches used by their students.

5.3.2.3 Factors linked to pre-service teachers during their placements

The teacher educators, as shown in section 4.3.2.3, recognised school placements as contexts that were pivotal for manifesting creative teaching capacities, illustrating the key relationship between university and school settings (Walkington, 2005).

Drawing on their perspectives, I identified three key interrelated aspects that affect pre-service teachers' creative development during placements: (i) mentorship, (ii) pre-service teachers' ability to build content knowledge and pedagogical approaches, and (iii) ongoing dialogue and feedback about their progress. This section critically examines these elements, exploring how their interplay shapes pre-service teachers' creativity. First, the vital, yet under-examined, role of mentors is analysed. Next, developing knowledge and pedagogical skills is discussed. Finally, the impact of

continuous discourse and feedback is considered. Investigating the synergies between these factors illustrates how school placements might be optimised to empower pre-service teachers' creative growth.

The terms "mentor" and "mentoring" are not widely used in Saudi initial teacher education; however, research in other contexts shows their impact (Alghamdi, 2020). Instead, in Saudi initial teacher education, "supervisor" is the term commonly used for teacher educators who mentor pre-service teachers, while "schoolteacher" refers to a teacher serving as a mentor. Hobson et al. (2009) identified conditions for effective mentoring in initial teacher education, including providing emotional and psychological support, holding regular meetings, encouraging autonomy in teaching style development, conducting constructive lesson observations and promoting deep reflection on teaching and learning.

The teacher educators made limited reference to the role of school-based mentors in supporting Saudi pre-service teachers' creative development during placements. This reveals a gap in recognising mentors' value, unlike in the US (Feiman-Nemser & Parker, 1992; Feiman-Nemser, 2001), and the UK, where national policies mandate their involvement (Martin, 1994; Walkington, 2005; Hobson et al., 2009; Hobson, 2016). From Saudi studies, such as those of Alkrdem (2011) and Alghamdi (2020), it is evident that there is a limited emphasis on school-based mentors in Saudi teacher education, highlighting an area needing improvement. In addition, there is a lack of information regarding school-based instructional supervision practices in Saudi schools. These findings stress the need to address and enhance support systems for pre-service teachers' creative development during placements.

Moreover, research suggests that school-based mentoring offers a range of potential benefits, such as increased confidence and growth, and facilitates pre-service teachers' development (Feiman-Nemser, 2001; Walkington, 2005; Hobson et al., 2009; Buyukgoze-Kavas et al., 2010; Garza et al., 2014; Grima-Farrell, 2015; Philip, 2015; Schwan et al., 2020). Given this, and as the previous studies by Alkrdem (2011) and Alghamdi (2020) articulate, Saudi teacher education must critically evaluate how to leverage mentors' guidance during placements. This may require formalising expectations, providing mentor training and establishing partnerships to optimise support for developing pre-service teachers' creativity. Therefore, I argue that based on this study's findings,

fostering creative development among pre-service teachers requires recognition of the key role that school-based mentors can play during placements.

Furthermore, some teacher educators, such as Hanaa and Hlaa, focus on developing pre-service teachers' content knowledge and pedagogical approaches (Feiman-Nemser, 2001). Knowledge alone is not enough; developing the skills to apply it creatively is equally crucial (Walkington, 2005). This is consistent with Shulman's (1987) model, which integrated content expertise, pedagogical knowledge and practical application, empowering pre-service teachers to explore innovative teaching approaches. Teacher education must cultivate creativity, equipping pre-service teachers to adapt to unexpected situations in innovative ways (Alencar et al., 2017). Henriksen and Mishra (2013) demonstrate that accomplished creative teachers continue actively learning themselves, valuing creativity in their ongoing development. Acquiring deep subject knowledge and practical experience is vital for enhancing pre-service teacher creativity (Darling-Hammond, 2006). Moreover, Sternberg and Lubart's (1995) framework illustrated the essential abilities for success, including analytical, practical and creative skills. A creative teacher balances analytical and creative approaches to design engaging and innovative student learning experiences (Ludhra, 2008). However, cultivating this creative, autonomous approach requires opportunities to put it into practice (Watson, 2018).

The teacher educators, such as Hanaa, greatly emphasised the role of school placements in fostering learning about teaching and the pre-service teachers developing themselves as creative teachers, as well as learning to teach (Walkington, 2005). Building on this concept, Kim (2021) highlights that teacher learning is deeply connected with classroom teaching, with one of its primary goals being to devise better ways to help students acquire core competencies, including knowledge, skills, values and attitudes. On the one hand, encouraging pre-service teachers to take charge of their learning allows them to become proactive learners (Jeffrey, 2006; Newton & Beverton, 2012; Elton-Chalcraft & Mills, 2015). On the other hand, pre-service teachers are challenged to look at education in different ways, which may hinder their ability to design and deliver creative lessons (see Section 5.2).

The Saudi context poses challenges in fostering creativity among pre-service teachers during their placements, as discussed in Chapter Two (see 2.3.2). One significant challenge is the gap between

theory and practice (Hamdan, 2015; Alblaihed, 2016; Alsharari, 2016; Albaqami, 2019; Alsaleh, 2019; Binmahfooz, 2019). In addition, Alghamdi (2020) pointed out that the material taught in teacher education programmes in Saudi Arabia often fails to relate to the realities of schools and frequent curriculum changes add to the complexity. Considering these points is necessary when setting expectations for pre-service teachers during their placements (Newton & Beverton, 2012). Such challenges must be addressed to ensure that pre-service teachers receive meaningful practical experiences that foster creativity and ready them for their future roles as educators.

Another aspect the teacher educators considered an important foundation for preparing creative teachers was constructing meaning from experiences, which necessitates ongoing dialogue and feedback from university and school mentors (Grainger et al., 2004; Kelly, 2006). Providing constructive feedback through dialogue, criticism and shared experiences is instrumental in developing creative teaching practices (Holinger & Kaufman, 2018). Jackson (2006) discovered that higher education teachers encourage students' creativity through discussion, including adopting a questioning approach to learning, creating opportunities for problem solving or inquiry-based learning and providing platforms for collaborative working and discussion. Notably, the pre-service teachers also mentioned feedback and discussion (see Section 5.2), indicating the importance of exploring it further (see 5.4). However, providing effective feedback remains a challenge as students often struggle to comprehend the complexities in feedback, which hinders their ability to meet learning outcomes (Sheridan, 2020).

The construction of meaning from experiences also highlights the need for cooperation between teacher educators and school mentors in placements, providing scaffolded support (Engin, 2011). As the pre-service teachers themselves previously indicated, meaningful relationships enable progress through challenges.

In addition, the findings demonstrate that coordination between teacher education and school placements, as well as the collaboration between teacher educators and teacher mentors, plays a crucial role in supporting pre-service teachers, as shown by Rahaf and Amal in section 4.3.2.3. This perspective is also strongly supported in the literature (Davies et al., 2013; Alsahou, 2015; Alencar et al., 2017; Ismayilova & Laksov, 2023)

In conclusion, school placements are pivotal for nurturing pre-service teachers' creativity. Addressing challenges in the Saudi context in terms of fostering independence, scaffolding, content mastery, hands-on experience and mentorship likely prepare teachers to be creative and reflective practitioners. Teacher education must prioritise fostering creative mindsets and skills alongside expertise to navigate the complexities of creative teaching effectively (Grainger et al., 2004).

5.3.3 Summary

This section has offered an in-depth examination of teacher educators' perspectives on creativity within higher education, with a specific focus on initial teacher education. The section then analysed significant factors influencing the promotion of creativity in teacher education. These factors were explored within the sociocultural perspective, as well as in relation to the broader literature.

Moving forward, the next section presents a synthesis and comparative analysis of the perspectives on creativity held by pre-service teachers and teacher educators. This will likely highlight areas of alignment and divergence in understanding of creativity.

5.4 Synthesis and Comparative Analysis of Pre-Service Teachers' and Teacher Educators' Views of Creativity

This section critically examines and compares understandings of creativity drawing on the perspectives of the participant pre-service teachers in their final academic year and their teacher educators. It provides examples from the study data and supports the analysis with evidence from relevant studies in the field. After thoroughly examining and discussing the perspectives of both the pre-service teachers and their teacher educators, I proceed to conduct a comparison between the two groups based on some key points identified regarding developing the pedagogy of creative learning. However, I must clarify that the extensive duration of data collection and analysis prevented me from returning to the participants to seek further clarification or gather additional details. Therefore, the comparison should be interpreted with caution and considered an initial exploration rather than an exhaustive analysis.

It is important to acknowledge this limitation as it may have affected the depth and breadth of the comparison. Moreover, it is worth mentioning that although the comparison is part of the reflexive thematic analysis, it is included in this discussion chapter to establish connections with the existing literature, provide a comprehensive understanding of the topic and offer a full answer to the research questions. This was only possible after extensive discussion of the key themes and findings. Presenting this information allows for a more comprehensive understanding of the topic and facilitates a more holistic exploration of the findings without being constrained by specific codes or categories.

The aspects directly related to addressing the current Saudi gap (see 2.3.2) and contributing to the understanding of creativity among pre-service teachers and teacher educators are presented based on an interpretation of creative learning. The discussion starts with general views on creativity and then progresses to specific needs and recommendations, thus providing a logical and comprehensive account. The discussion in this section addresses seven points, as follows:

1. Shared perspectives on the nature of creativity
2. Divergent perspectives on the meanings of creative practice
3. Perspectives concerning creativity
4. Creativity across education levels
5. Beliefs and pedagogical approaches
6. Dialogue, collaboration and reflection as the main pedagogical approaches
7. Ongoing support and professional development

These aspects highlight both the similarities and differences between the two groups in their perceptions of creativity.

5.4.1 Shared Perspectives on the Nature of Creativity

Both the pre-service teachers and teacher educators demonstrated a notable agreement regarding the description of creativity within the educational context. Studies have highlighted that creativity should be recognised as a transversal and cross-curricular skill that can be developed by anyone (Craft, 2000; Cachia et al., 2010). Both parties believed that the development of creativity can be hindered or inhibited if not properly supported. They shared a view of creativity encompassing new, original, different and useful ideas or solutions, reflecting the linguistic richness of the Arabic

language in expressing creativity. In addition, both groups associated creativity with a level of intelligence (Sligh et al., 2005; Plucker et al., 2015). This understanding aligns with Beghetto and Kaufman's (2007) definition of creativity, which highlights the ability to produce high-quality, novel and appropriate work across different scales or scopes of creative endeavours. While creativity is not exclusively linked to high IQ, a broader understanding of its various levels enables teachers to recognise the significance of lesser forms of creativity (mini-c and little-c) in their classrooms (Beghetto & Kaufman, 2014). Therefore, there is a need in teacher education for a consensus on creative pedagogy to enhance student creativity. Comprehensive definitions of creativity capture its multifaceted nature and wide-ranging applications, particularly in primary schools. Given this shared conceptualisation, the question arises: How can these ideas be implemented effectively in teachers' pedagogical practices? This issue will be explored further in the next point.

5.4.2 Divergent Perspectives on the Meanings of Creative Practice

While examining how the pre-service teachers and teacher educators respectively demonstrated and articulated their understanding of creative learning from their practice, it was observed during the second session that most of the pre-service teachers were able to explain the concept of creative learning using pedagogical expressions from a teacher's perspective, as exemplified by Ola and Fouz (see 4.2.2). In contrast, the teacher educators faced challenges in providing a precise and coherent definition of creative learning in teacher education from their courses, as demonstrated by the responses of Joory and Mada (see 4.3.1.4). Most of the teacher educators used vague terminology, mixed concepts concerning effective and creative teaching in articulating the core elements of creative learning in their courses. Their responses tended to deviate from the topic or mention time constraints rather than addressing key components, such as novelty and utility, in a practical manner. This finding may initially seem surprising as teacher educators are expected to have a deeper understanding of integrating creativity in teaching methodologies, given their emphasis on fostering creativity in the classroom and guiding their university students and pre-service teachers in developing creative thinking skills (see Section 5.3.2).

This finding suggests a potential gap in the teacher educators' understanding of creative learning and teaching, despite their expressed general support for creativity. The scattered and repetitive responses from the teacher educators, coupled with varying definitions of creativity in the literature

and a lack of clarity in conveying an agreed definition in higher education (see Section 5.3.1), contribute to this gap. This ambiguity may hinder the effective implementation of creative teaching approaches, specifically in teacher education classrooms, potentially missing valuable opportunities to express creativity in teaching practice in teacher education and nurture students' creativity.

Hence, recognising the importance of creativity, for example by using the creative learning sessions approach demonstrated in my study to construct the knowledge of creativity together, could foster a common understanding between pre-service teachers and their teacher educators. The divergent perspectives on the meanings of creative practice can significantly affect the consistent and effective application of creativity in the classroom. These differing viewpoints may influence pedagogical practices and hinder the seamless integration of creativity across various subject areas. Given that educators have diverse interpretations of creative practice, it is necessary to address contradictions in formulating and implementing instructional methods that effectively nurture their creative abilities.

5.4.3 Perspectives Concerning the Breadth of Creativity

Perspectives on creativity differed between the teacher educators and pre-service teachers, with the teacher educators adopting a broader view that encompassed creativity across subjects, grade levels and educational settings. They also considered systemic factors that could affect creativity, such as testing and leadership. In contrast, the pre-service teachers presented a narrower focus, primarily concerning themselves with creativity in their specific subject areas rather than considering the wider educational implications.

Both groups expressed positive attitudes to embracing and encouraging creativity in education, which initially seemed promising. However, the pre-service teachers' optimism may stem from idealistic assumptions that does not encompass a comprehensive understanding of the systemic constraints acknowledged by the teacher educators. The enthusiasm of the pre-service teachers for educational creativity can be attributed to factors such as their young age, limited teaching experience and the evolving social context in Saudi Arabia, which offers them increasingly open life and empowerment opportunities (Sani, 2018; Rizvi & Hussain, 2021; Aldegether, 2023). Their optimism was evident in their reflective journals, such as Noor in section 4.2.2.5, in which they

expressed excitement about developing innovative lessons and activities for their future students. However, this optimism may diminish over time when they face entrenched barriers and resistance to change in educational settings. To ensure a balanced approach to fostering creativity in education, it is necessary to maintain pre-service teachers' optimistic outlook while grounding their creative aspirations in the realities of the teaching profession. Collaborating with teacher educators, who possess valuable expertise and guidance, can help bridge the gap between idealism and practicality. Teachers need a level of criticality, giving them an awareness of the challenges and complexities that may arise so that they can develop a nuanced understanding of how to implement creativity effectively in educational settings.

The teacher educators' perspectives were shaped by their experiences in facing systemic barriers and everyday challenges, leading to a more cautious and realistic attitude. However, both groups in this study shared an initial openness to creativity, which is promising. In the Saudi context, Al-Qahtani (2016) found that more than half of Saudi male teachers did not feel the desire to incorporate creativity activities in their language classes. In contrast, Aldujayn and Alsubhi (2020) and Bojulaia and Pleasants (2021) found that Saudi female teachers supported and welcomed creativity in their teaching. This contrast may be due to various factors related to individual beliefs and contextual influences.

Nonetheless, it is crucial to address issues related to the potential downsides of creativity in the classroom as fostering creativity goes beyond just welcoming it in teaching. Notably, neither group engaged in a deeper discussion about how creative student behaviours could sometimes be misinterpreted as disruptive or annoying. Concerns about teachers' responses to creative students have been highlighted in various studies (Scott, 1999; Aljughaiman & Mowrer-Reynolds, 2005; Mullet et al., 2016), underscoring the need for a comprehensive understanding of the challenges associated with fostering creativity in the classroom. Scott (1999) particularly found that teachers were significantly more likely than college undergraduates to rate creative students as more disruptive than their peers. Therefore, despite claiming to value creativity, pre-service teachers and teacher educators may exhibit negative attitudes and responses in the face of creative characteristics. Kettler et al. (2018) also note a mismatch between teachers' stated beliefs and their actual attitudes towards creativity, including the acceptance of creative students.

5.4.4 Creativity across Education Levels

Both the pre-service teachers and teacher educators acknowledged the enjoyment and engagement associated with creative learning, in line with several studies (Grainger et al., 2004; Jeffrey, 2006; Elton-Chalcraft & Mills, 2015). The perceptions of creative learning among the participants in the study seemed to be more strongly tied to primary school contexts rather than related to older students and higher education. This finding suggests that prevailing notions of creativity often associate it with fun and engagement, particularly suited to younger students, while perspectives on creative learning for older students and in university settings may not be as well-developed or emphasised. This is a conception that needs to be challenged, as creativity is not an innate trait limited to children; adults can also exhibit creative behaviours (Glăveanu, 2011).

Interestingly, during the creating learning sessions, some pre-service teachers, such as Huda, expressed surprise when encountering the use of games and activities in college-level education. This reaction highlights the novelty and perhaps undervalued role of play and creativity in adult learning. It appears that preconceived notions about the nature of learning and teaching in university settings may not always align with the potential for creativity and engagement through interactive and playful approaches. Philip (2015) suggests that the role of play in supporting adult creativity might be overlooked. Play is also advocated to support creative expression in adult learners by Brown and Vaughan (2009), and in higher education specifically by James, (2019). This observation accentuates the importance of exposing pre-service teachers to diverse pedagogical methods, including creative techniques, to expand their understanding of effective and engaging teaching practices across all educational levels. Acknowledging the role of playfulness in supporting creativity in higher education can lead to a more holistic approach to teaching and learning, encouraging a positive and exploratory mindset among both educators and students.

5.4.5 Beliefs and Pedagogical Approaches

The importance of considering the context is evident when discussing the level of confidence and attempting to understand the beliefs held by pre-service teachers and teacher educators regarding the teaching of creativity. The pre-service teachers, as novices often grappling with certain fears (Schreiber, 2018), tended to view themselves as somewhat creative and made efforts to build

creativity into their professional identity and practice. Moreover, they displayed notable confidence in incorporating creativity across subjects and grades.

The teacher educators in this study, drawing on their extensive experience, displayed a significantly higher level of self-confidence in both their professional identity and teaching practices. This is exemplified by Hanaa, who has 11 years of experience; her statements in both sections 5.3.1 and 5.3.2 illustrate this confidence. Furthermore, they indicated that they employed a variety of teaching methods with their university students, often expressing considerable enthusiasm and excitement about their own teaching styles (see Section 5.3.2). In contrast, the pre-service teachers noted that their teacher educators employed only a limited range of the activities mentioned and expressed some dissatisfaction with the teaching approaches. This discrepancy may indicate a conflict between the beliefs held by the teacher educators and their actual practices in the classroom, as perceived by their students. Indeed, Gaspar and Mabic, (2015) reveal a significant discrepancy between how teachers evaluate themselves and how students assess their instructors. Notably, teacher educators tend to rate themselves more positively, while students feel a lack of encouragement to actively participate in the learning process. This disparity necessitates critical reflection on teacher education practices and prompts questions about the efficacy of current pedagogical approaches in nurturing creativity among pre-service teachers.

One possible explanation for this inconsistency can be found in Alsahou's (2015) study of teacher beliefs and practices regarding creativity in Kuwait, which shares cultural and educational similarities with Saudi Arabia. The study identifies two key factors contributing to the varying consistency in creativity in teaching. First, sociocultural factors can constrain teachers' beliefs and practices, leading to the implementation of specific approaches that may or may not align with their creative teaching beliefs. These external sociocultural influences shape how teachers perceive creativity and the extent to which they feel empowered to foster it in their classrooms. Second, teachers' experiences and immediate contexts play a significant role in shaping their beliefs and practices related to creativity. Personal experiences and the environment in which teachers work influence the strategies they employ to nurture creative thinking among their students. Alsahou's (2015) findings resonate with the results of this study, although his was focused on male science teachers in primary schools, particularly regarding teacher educators, highlighting the impact of educational setting conditions, leadership roles, academic administration, the physical/social

environment and teacher education curricula on creative teaching. Moreover, the study acknowledged the significance of individual factors, such as job requirements, motivation and awareness of creative teaching strategies, which can affect the translation of beliefs into classroom practices of teachers.

5.4.6 Dialogue, Collaboration and Reflection as the Main Pedagogical Approaches

Dialogue, collaboration and reflection emerge as key pedagogical approaches emphasised by both pre-service teachers and teacher educators as a means of promoting creative teaching and supporting creative learners. Indeed, the teacher educators indirectly indicated the importance of reflection through their acknowledgment of learning from experience. Reflection, both individual and collaborative, is advocated as valuable by numerous research studies undertaken with pre-service teachers (Pedro, 2005; Yukawa, 2006; Ramsey, 2010; Rico et al., 2012; Almalki, 2020). Also, based on their explicit and implied views, it is evident that there is a need for more opportunities to foster collaboration, particularly through experiential learning and enjoyable learning experiences (Elton-Chalcraft & Mills, 2015; Girvan et al., 2016; Watson, 2018).

Furthermore, in the context of teacher education, Grainger et al. (2004) accentuated the creation of an atmosphere of “flow”, as described by Csikszentmihalyi (1988b), by promoting a sense of relaxation and affective involvement in creative learning. This can be achieved by encouraging openness and enjoyment in the learning process and incorporating elements such as humour, informality, curiosity, collaboration and constructive feedback. Grainger et al. (2004) found that this approach ensured a supportive and engaging learning experience for the students, aligning with the main elements of creative learning sessions. This collaborative approach is best understood as a continuous, evolving process of reflection and debate. Education represents a joint endeavour, with teachers and learners developing each other’s understanding. Therefore, it represents the co-construction of knowledge interactively by instructors and students, as demonstrated in the works of Vygotsky (1978), Wix and John-Steiner (2008), and Craft et al. (2014). Fostering shared pursuits and power-sharing is needed to enrich the development of creativity in Saudi teacher education.

Drawing on the strengths of both teachers and students through collaborative exploration of diverse viewpoints helps students deepen their understanding and enhances their creative thinking (Barron & Darling-Hammond, 2008).

5.4.7 Ongoing Support and Professional Development

In the context of Saudi Arabia, both the pre-service teachers and teacher educators acknowledged the critical role of ongoing support and professional development, aligning with Schön's (1987) emphasis on the significance of reflection as a continuous learning process. This recognition signifies an evolving understanding of teaching as a profession that requires continuous growth and adaptation to remain up to date with research, approaches and trends, ensuring high-quality education (Girvan et al., 2016; Glaveanu et al., 2019; Tang et al., 2022)

Both groups highlighted the importance of workshops, seminars, conferences and online courses to familiarise educators with cutting-edge advancements in assessment, pedagogy and best practice. Research in Saudi Arabia has identified that these initiatives contribute to establishing a shared understanding of teaching for creativity and drive continuous improvements in the overall quality of education (Almutairi, 2015; Al-Qahtani, 2016; Alnasib, 2017; Almalki, 2020). As Barnett (2012) suggests, the process of continuous learning is not just about preparing for a known future but also enables individuals to come to understand and strengthen themselves in preparation for “an unknown future”.

5.4.8 Summary

Overall, this study revealed both alignments and differences in understandings of creativity between Saudi pre-service teachers and teacher educators. While there are shared perspectives concerning the nature of creativity and divergent viewpoints emerge regarding creative practices. The variations in perspectives observed may stem from factors such as knowledge, experience, beliefs and context. By embracing continuous learning, both groups can enrich the quality and impact of Saudi education. Importantly, these findings reinforce the value of applying a sociocultural lens when examining how creativity is understood and enacted within the Saudi teacher education context.

In summary, I have aimed to synthesise the key findings concisely, addressing the factors that shaping the perspectives of pre-service teachers and teacher educators and highlighting the need to bridge the theory-practice gap and promote professional development linked to the overarching goals of advancing Saudi education. Based on the insights provided, the next step is to present a framework for the pedagogy of creative learning.

5.5 Suggested Framework: Key Elements in Developing a Pedagogy of Creative Learning

In this section, I present and explain the suggested framework and articulate its relevance within the context of Saudi education. I aim to construct a comprehensive framework based on the findings and discussion to answer the main research question of this research:

What are the fundamental components of a pedagogy of creative learning that can enhance the understanding of teaching for creativity among Saudi female pre-service teachers?

Building upon the insights from my study, including the research gaps discussed in Chapter One (section 1.4.1), the literature review in Chapter Two, the findings in Chapter Four, and the discussions in this chapter, this section proposes a framework that can guide the development of pre-service teachers' teaching practices aimed at fostering creativity and shed light on the significant points for preparing pre-service teachers in initial teacher education in Saudi Arabia (see Figure 23).

In this diagram, I present an interconnected model of the central elements in the pedagogical process, incorporating four key aspects:

- Firstly, the engagement in theory, practice, and research, represented by the below-arrow;
- Secondly, moving to the central grey cycle, the main pedagogical approach of creative learning and teaching between pre-service teachers and their teacher educators;
- Thirdly, the main creative dimensions (habits);
- and lastly, the sociocultural factors in teacher education.

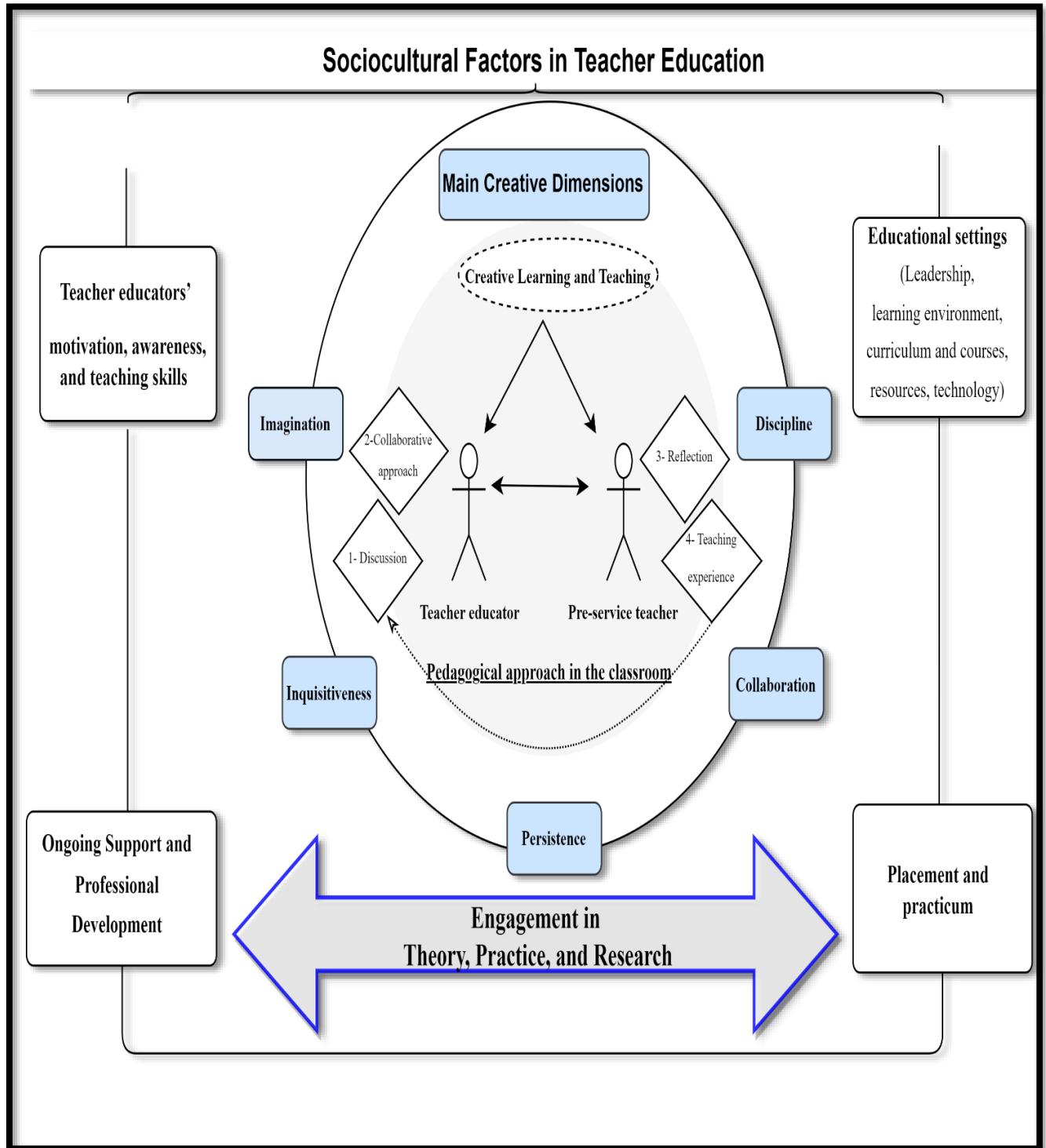


Figure 23: Proposed framework for a pedagogy of creative learning in teacher education.

From Figure 23, I will explain each aspect clearly, highlighting the significance and links among them in a logical order. Due to the importance of this part in my thesis, I will provide a detailed explanation, linking with the literature.

Firstly, the central theme of the framework is the **Engagement in Theory, Practice, and Research**. This central theme is represented by a large arrow that spans the bottom of the diagram, signifying its foundational role in the process of developing creativity in teacher education.

The integration of theory and practice in the professional development of creative learning and teaching for pre-service teachers and teacher educators is of paramount importance. This integration is supported by Borg (2005), Allen and Wright (2014), and Katwijk et al. (2023) who emphasise its critical role in the development of pre-service teachers within teacher education. Particularly in the context of creative teaching, Grainger et al. (2004) and Levanon (2021) highlight the significance of this integration in the development of pre-service teachers. 'Engagement in theory and practice' here refers to the active involvement of pre-service teachers and their educators in both the theoretical aspects of teaching, such as educational theories, pedagogical concepts and subject knowledge, as well as their practical application in real-world teaching contexts. This dual engagement ensures that pre-service teachers not only grasp the fundamental principles of education and creativity but also acquire the skills to successfully apply them in classroom settings during teaching practicums and beyond (Katwijk et al., 2023). Bridging the gap between theoretical knowledge and practical teaching skills, which has been a significant challenge in Saudi education, is the primary goal of this engagement.

Furthermore, this engagement goes beyond theory and practice; it also encompasses research for both pre-service teachers and their educators, as suggested by several action researchers (Smith & Sela, 2005; Lattimer, 2012; Ulvik & Riese, 2016; Ulvik et al., 2018; Aras, 2021; Katwijk et al., 2023). Thus, this engagement involves continuous exploration of diverse external sources, enriching educators' understanding (Hordern, 2021). Specifically, to bridge the gap between theory and practice advantageously, I suggest aligning teaching with the underlying theoretical foundations, practical experiences and empirical evidence. This alignment process is dynamic and responsive and informed by feedback and reflective analysis. It serves as a catalyst for the development of pedagogical practices that are not only evidence-based but also flexible and adaptable for educators. The synergy between theory, practice and research forms the bedrock for

the cultivation of data-driven, research-centred creative pedagogies. As a result, these pedagogies are tailored to the specific nuances of the learning environment, contributing to the continuous enhancement of teaching and learning experiences. This aspect is crucial and will also be indicated in the last aspect, along with the sociocultural factors.

Second, I suggest positioning both teacher educators and pre-service teachers at the centre (Kaser & Halbert, 2014; Philip, 2015), reflecting the unique dynamic of mutual learning and the significance of creative learning and teaching for both parties. This arrangement transcends traditional educational hierarchies, fostering a collaborative environment in which knowledge and creativity are not merely imparted but co-constructed. Such an approach acknowledges the dual role each party plays in influencing creative learning and teaching, thus blurring the lines between the ‘teacher’ and the ‘learner’.

Within this partnership, building trusted relationships and establishing a respectful climate is essential for the open sharing of diverse perspectives and co-creation of creative pedagogies. As pointed out by Beghetto (2016), trust forms the cornerstone for risk-taking and the incubation of ideas enabling creativity to flourish. This approach, therefore, embraces uncertainty, iteration and occasional failures as valuable learning opportunities. It promotes an environment in which creativity not only exists but actively thrives, encompassing both creative thought processes and various forms of creative output. This involves creating a balanced setting such that students feel both secure and supported (psychological safety) and intellectually stimulated and challenged (intellectual rigour), both being vital for nurturing creativity. In addition, it is equally important to design creative activities with care. These activities should aim to provide enjoyable and thought-provoking experiences, while also being mindful of the potential to overwhelm pre-service teachers. Striking the right balance in these activities is crucial to ensure they are both engaging and manageable, thereby effectively supporting the developmental needs of future educators. This emphasis on a balanced, supportive and challenging environment leads to consideration of the study findings concerning pedagogical approaches.

The methods most frequently mentioned, as identified in the research, were discussion, collaboration and reflection. These methods are not only topics of learning but also form the basis of teaching styles in initial teacher education, proving to be valuable across both compulsory and

optional courses, particularly for older learners such as pre-service teachers. A critical aspect of this is the practical teaching experience for pre-service teachers. Simply employing these methods without offering real-world experiences will fail to build sufficient confidence and teacher identity. Hence, space is needed for both teacher educators and pre-service teachers to engage in practice and constructive feedback.

Transitioning from the design of the learning environment and activities to the third part, we encounter the main creative dimensions as conceptualised by Lucas et al. (2013): imagination, inquisitiveness, persistence, discipline and collaboration. As educators, it is imperative to focus on these pinnacles of the framework to develop our creative teaching. These elements are essential facets of creative learning and teaching, particularly when preparing future teachers or designing creative lessons. I found that introducing and discussing these dimensions and providing pre-service teachers with a solid grounding in them, was vital for their pedagogical practice. Although there is no single, clear way to achieve this, the pedagogical teaching approach presented in part two is likely to support the development of these habits in learners.

Lastly, surrounding the five dimensions of creativity are sociocultural factors and spheres, each signifying distinct yet interrelated domains that directly affect the development of pre-service teachers. The ‘Main Factors’ sphere highlights the broader environmental elements that influence the cultivation of creative habits. This domain is further divided into four areas: ‘educational settings’, ‘teacher educator factors’, ‘placement’ and ‘ongoing support and ‘professional development’. Each category has specific components, and the factors are interconnected and mutually affect each other.

- The ‘educational settings’ factor includes leadership, the learning environment, the curriculum and courses, resources, technology, time and rewards. While not the central aspects examined in this research, it is important to recognise that incorporating technology and attaining an effective balance between theoretical and practical knowledge can profoundly influence creative learning and teaching.
- The ‘teacher educators’ factor addresses their motivation, awareness and teaching skills and methods because these directly affect their students. Educators can support learner motivation by making learning both more efficacious and more enjoyable, where possible.

- ‘Placement’ encompasses several elements related to pre-service teachers in school placement, such as mentoring, cooperation, self-learning, content knowledge and content pedagogical knowledge, alongside feedback. These factors collectively facilitate an environment conducive to nurturing creative sub-habits.
- The ‘ongoing support and professional development’ aspect highlights the importance of continuous support and growth opportunities for both pre-service teachers and their educators. This is particularly significant considering the complexity of teaching and the rapid, often unpredictable changes in the educational landscape (Beghetto & Jaeger, 2022). It encompasses providing access to quality reading materials, educational events, workshops, seminars and opportunities for collaborative practice in teacher education programmes (Levanon, 2021). Such ongoing support is vital to maintain and enhance the creative competencies of teachers, enabling them to effectively instil creative habits in their students. Additionally, this approach acknowledges the importance of personal experience in the growth and development of teachers, moving beyond a technicism approach that might otherwise reduce teachers to mere technicians. This approach is not solely about implementing creative learning strategies as if they were merely techniques; it is about their consistent evaluation and the integration of theory and research in the professional development of pre-service teachers and teacher educators.

Given these four factors, which aim to cultivate a learning environment that embraces both theoretical and practical aspects of teaching, it is likely that a holistic approach underpins the importance of integrating theory, practice and research in Saudi teacher education. This integration is essential for nurturing creativity within the education of both pre-service teachers and their educators. By considering leadership, learning environments, curriculum and courses, resources, technology, placement and practicum experiences, ongoing support, and professional development, alongside the motivation, awareness and teaching skills of teacher educators, this comprehensive approach ensures a more effective and creative teacher education process. This cycle fosters data-driven yet human-centered creative pedagogies tailored to the individual setting. By interweaving evolving research with practical wisdom and stakeholder voices, educators can collaboratively advance creative teaching strategies across diverse educational environments, enhancing the quality and relevance of teacher education.

Overall, this framework introduces a distinct approach to Saudi teacher education, emphasising several key aspects that differ from current practices. It focuses on cultivating creative habits, addressing the previously noted lack of emphasis on creativity and creative learning in traditional models. Grounded in action research, the framework is designed not only to promote theoretical understanding but also to facilitate practical application. It aims to generate change and improve teaching methods, particularly within the Saudi educational system, where creativity has not traditionally been a focus, as evidenced by the data gathered in this study (see Transferability in section 3.11).

In the Saudi context, this framework diverges from conventional teacher education methods by balancing theoretical knowledge with practical application and integrating collaborative and reflective teaching approaches. These elements, including the creative dimensions and consideration of social factors as supportive or hindering creativity, contribute significantly to pre-service teachers' development. Consequently, the framework marks a progressive shift in teacher education towards a more creative and holistic educational model.

Moreover, the framework emerging from this research on creative learning and teaching can serve as a valuable guide for encouraging creativity in teacher education and also within higher education. Thus, these elements have potential significance for practitioners across various disciplines and can contribute both to theoretical understanding and practical application in the field of teacher education and creative teaching and learning more broadly. This will be explored further in the research contributions in Chapter 6.

5.6 Reflection on and Summary of the Chapter

As this chapter discussed several aspects of creativity, it is crucial to delineate my interpretation of 'creative teaching' versus 'teaching for creativity' as a researcher conducting this action research. At the beginning, I believed creativity was primarily about originality, value, and usefulness. However, my understanding evolved through engagement in the sessions with my participants. Subsequently, this study adopts a specific definition of creativity, incorporating the four key elements defined by Hills and Bird (2018): fertility, originality, imagination, and motivation, as discussed in Chapter Two. I found these elements crucial for cultivating creative pre-service teachers, as demonstrated by the findings in terms of creative learning and teaching.

In my view, these insights are highly relevant in the context of educating future teachers, especially during periods of reform and modernisation. As educators, we need “the capacity [of pre-service teachers and their teacher educators] to imagine, conceive, express, or make something that was not there before” (The Durham Commission, p.2). As Figure 8 illustrated the link between these elements and the creative mind habits in the Lucas et al. model, the definition of creative learning in this research was guided by the literature, specifically Jeffery’s definition and the Lucas et al. model. Therefore, my understanding of creative learning is becoming an extending concept.

As explained in this chapter, ‘creative teaching’ involves the methods and strategies teachers use to foster an environment that encourages students to think creatively and independently, stimulating their imagination and critical thinking. On the other hand, ‘teaching for creativity’ refers to explicit instruction aimed at developing creative skills, such as problem-solving, critical thinking, and the ability to generate novel ideas. These two concepts have not only guided the theoretical framework but have also been integral to the design and execution of my study. By conducting the creative learning sessions and collecting data, I examined the practice of ‘teaching for creativity’ and engaging in ‘creative teaching’ among both pre-service teachers and their teacher educators. This dual approach provided a rich, practical context for examining how these concepts manifest in real-world educational settings. This comprehensive examination highlights both the overlaps and distinctions between these two essential components of creative education. It underscores the need for future educational practices and research to integrate and implement creative education in higher education, specifically in the preparation of teacher education.

Reflecting on the findings and discussions, this process has significantly shaped my understanding of creativity in education. It has led me to appreciate the nuanced differences between teaching creatively and teaching for creativity while also recognising the areas where they overlap. For instance, fostering an environment that values creativity (creative teaching) naturally complements and enhances direct efforts to teach creative skills (teaching for creativity).

Both approaches—creative teaching and teaching for creativity—led to increased engagement, facilitated through a reciprocal relationship between teacher educators and pre-service teachers. This relationship focuses on discussion, collaborative approaches, reflection, and hands-on teaching experience. As such, both approaches require ongoing support and professional

development for both pre-service teachers and their teacher educators. Therefore, in the framework, I highlight the commitment to continuous growth for both teacher educators and pre-service teachers. This aspect ensures that educators remain motivated, aware, and skilled, thus creating a sustainable model for fostering creativity in education. Consequently, these aspects are highly needed in Saudi Arabia to foster an educational system that aligns with the national aspirations of innovation and global competitiveness. This deeper understanding has informed my approach to designing the sessions of creative learning, emphasising the importance of nurturing an innovative classroom atmosphere and explicitly teaching creative experiences.

Overall, this chapter has sought to answer the research questions, providing a critical discussion of the qualitative findings organised in four main sections. It began by exploring the pre-service teachers' perspectives on creativity and creative teaching and learning. The chapter also examined the growth of pre-service teachers, highlighting some strengths linked to the sessions of creative learning and offering an overview of their significance based on related literature.

Subsequently, it examined the views of teacher educators concerning creative learning and factors influencing the preparation of creative teachers in teacher education. A synthesis and comparative analysis of creativity perspectives was then provided, shedding light on the alignment and differences between pre-service teachers and teacher educators in their understanding of creativity. It has concluded by proposing a framework of key elements in a pedagogy of creative learning, particularly highlighting crucial points for preparing pre-service teachers in initial teacher education in Saudi Arabia.

The following chapter concludes the thesis, presenting a summary of the study and the overall findings and recommendations.

Chapter Six: Conclusion

6.1 Introduction

This final chapter of the study provides a conclusion to this research on creative learning and teaching among Saudi pre-service teachers and teacher educators. It aims to succinctly summarise the primary findings, highlight the significant contributions, interpret the implications, acknowledge the limitations and suggest potential directions for future research. The chapter concludes with remarks encapsulating the overall impact and significance of this study.

6.2 Summary of the Main Answers

This qualitative action research explored views of pre-service teachers and their teacher educators on creative learning and teaching in order to answer the central research question: *What are the fundamental components of a pedagogy of creative learning that can enhance the understanding of teaching for creativity among Saudi pre-service teachers?*

In Chapter 5, I have explored and summarised the responses to the two sub-questions. The first sub-question explores the evolution of views on creative learning and teaching among Saudi pre-service teachers during creative learning sessions. This involves an examination of their comprehension of creativity and their encounters with creative learning during teaching placements (detailed in Chapter 5.2). Furthermore, the second sub-question sheds light on how Saudi teacher educators perceive creative learning and the factors influencing the preparation of creative pre-service teachers in higher education contexts (see Chapter 5.3 for details).

Consequently, based on these answers, this study reveals the significant importance of a pedagogy of creative learning in Saudi teacher education to support pre-service teachers in teaching for creativity. The suggested framework focuses on the fundamental components of a pedagogy of creative learning that enhance the understanding of teaching for creativity as presented in Figure 23 and discussed in section (5.5).

This framework, based on the study's findings, underscores the important role of creative learning and teaching within teacher education, benefiting both educators and students. It also presents the critical points regarding enhancing the context of Saudi teacher education. Namely, it outlined four key aspects of an effective creative learning framework in Saudi teacher education. Firstly,

engagement in theory practice, and research. Secondly, it focuses on the main pedagogical approach of creative learning and teaching between pre-service teachers and their teacher educators. Thirdly, it discusses the main creative dimensions (habits), based on Lucas et al.'s (2013) Five-Dimensional Model of Creativity). Lastly, it explores the sociocultural factors in teacher education.

Moreover, the research intervention is based on the sessions of creative learning, guided by the sociocultural constructivism framework and Lucas et al.'s (2013) adapted model of five dimensions (imagination, inquisitiveness, persistence, discipline, and collaboration), plays a fundamental role in fostering creativity in both learning and teaching. These sessions have resulted in pre-service teachers gaining a deeper understanding of creativity, including knowledge, creative thinking skills, motivation, and the importance of a creative environment. The study also demonstrates that these sessions positively influence pre-service teachers' views on creativity and highlights the potential impact of integrating the Five-Dimensional Model of Creativity into teacher education programs.

While this suggested framework was developed based on research within the Saudi pre-service teacher education context, its core components may offer value to teacher education programs in other countries as well. However, it is important to note that current Saudi educational environments do not consistently provide all the beneficial elements outlined in this framework. As the findings reveal, factors such as an unsupportive educational environment, placement cultures, limited access to professional development, technology, and a lack of leadership prioritisation of creativity constrain creative teaching opportunities for many educators in Saudi Arabia at present.

Fully actualising this framework would require addressing these systemic challenges through policy reforms, resource allocation, and cultural changes for enhancing creative growth. While the movement toward this vision is underway in Saudi Arabia, substantial work remains to construct appropriately supportive educational ecosystems at scale. Recommendations for progressing toward this goal are provided in the study implications (see 6.4) and recommendations (see 6.5).

Overall, the main research question aims to identify the essential elements of a pedagogy of creative learning that can enhance the understanding of teaching for creativity among Saudi pre-service teachers.

6.3 Contributions of the Research

Despite the complexities in generalising from interpretivist research (see Section 3.11), several contributions of this research can be outlined. This study advances knowledge in the fields of creative learning and teaching, teacher education, and educational research. Taking into consideration the small scale of the study and its interpretivist nature (as will be explained in Section 6.5), I highlight these contributions in five key points below:

- **Addressing Research Gaps within the Saudi Educational Policy and Practice**

The research addresses significant gaps within the Saudi educational context, particularly in fostering creativity within the Saudi educational system. The research questions are contextually original and aim to provide answers that align with current educational demands. The primary objective was to identify the key elements of a pedagogy of creative learning, offering support to pre-service teachers and promoting creativity within Saudi Arabia's teacher education programmes. The scarcity of prior research with similar objectives enhances the value and originality of this study, making it a significant addition not only in the Saudi context but also on an international level.

In terms of policy and practice, the study draws on both Saudi educational studies and actual policy documents, in particular the Ministry of Education's strategic plans and Saudi Vision 2030 (2016). These documents emphasise creativity as a core component of educational reform, as discussed in Chapter One. The study highlights the importance of fostering creativity in Saudi education, linking it to economic, societal, and educational benefits. Specifically, the research identifies gaps between policy aspirations and teacher preparation, as well as classroom implementation, as explored in the findings in Chapter Four and discussed in Chapter Five.

The findings of this research and the suggested framework align with the objectives of Saudi Vision 2030, underscoring the relevance and importance of the research in supporting national educational goals and improving the quality of teacher education in Saudi Arabia.

Moreover, this study holds particular significance as it broadens the perspective on creativity, extending it beyond the limited scope of gifted education, which has been the primary focus of many researchers in the Saudi context. This comprehensive approach emphasises the importance

of nurturing creativity in teacher education programs, not only at higher levels but also by recognising the value of mini-creativity and everyday creativity. Such an approach has far-reaching implications for both researchers and educators, contributing positively to the wider educational landscape.

- **Contribution to Methodology**

This study contributes to the body of qualitative research, a necessary approach for exploring educational contexts in Saudi Arabia. The qualitative design facilitates an in-depth understanding of complex, context-specific issues and is particularly required in Saudi studies to address nuanced cultural and educational dynamics.

The study also offers significant methodological contributions, particularly within the realm of action research and reflective practice. By adopting a qualitative design encompassing sampling, data collection, and analysis, it aligns with interpretive, naturalistic, and reflexive approaches. The integration of the action-reflection cycle, as discussed in Chapter Three, exemplifies an effective framework that underscores the iterative nature of action research. The flexibility inherent in the action research approach allows for adaptability in real-world educational settings and aligns well with this study's objectives. Thus, the study contributes not only to the empirical knowledge base but also to methodological practices. These insights provide valuable guidance for future studies, demonstrating that integrating reflective cycles into research designs can lead to a deeper understanding and more effective educational interventions.

- **Contribution to Creative Learning and Teaching**

This study makes a contribution to knowledge in the fields of creative learning and teacher education. By delving into the experiences of Saudi pre-service teachers during the sessions of creative learning, it has offered valuable insights that illuminate potential areas for further exploration in creative pedagogy and the effective use of creative dimensions to enhance pre-service teachers' understanding and approach towards creativity. Furthermore, the research addresses gaps in the existing literature by examining the perspectives of teacher educators and identifying factors that foster creativity among pre-service teachers within initial teacher education.

The study also highlights the multifaceted benefits of a creative learning approach for pre-service teachers as students in teacher education. Such an approach fosters students' creative skills by encouraging idea generation, problem-solving, and flexible thinking. Engaging students in group work and real-world experiences allows them to develop and apply their creative abilities in diverse contexts. Additionally, a creative classroom environment nurtures students' self-confidence and sense of worth, leading to an increased commitment to learning. Policymakers can benefit from these insights to establish supportive and conducive environments for creativity in initial teacher preparation programmes.

- **Contribution to Comparative Insights into Creativity in Teacher Education**

This research also contributes to the understanding of designing for and fostering creativity in higher education. It provides a novel comparison between Saudi pre-service teachers and their teacher educators' understandings of creativity, addressing a gap in the existing literature.

The research reveals both alignments and differences in perspectives on creativity between these two groups, offering insights into shared views on the nature of creativity and divergent opinions on creative practices. It identifies potential factors influencing these variations, including knowledge, experience, beliefs, and context, contributing to a more nuanced understanding of creativity in teacher education. The findings also underscore the value of applying a sociocultural lens when examining creativity within the Saudi teacher education context.

- **Contribution of The Suggested Framework to Practical Implementation**

The suggested framework presented in Chapter Five (5.5) enhances our understanding of the complex interplay between engagement in theory, practice, research, and contextual factors. This contributes to the field of creative learning and teaching, and to the practical implementation within the context of teacher education. By integrating core creative dimensions such as imagination, inquisitiveness, persistence, collaboration, and discipline, this framework provides a structured approach to enhancing both theoretical and practical aspects of teacher education.

This framework also highlights a reciprocal relationship between teacher educators and pre-service teachers, focusing on discussion, collaborative approaches, reflection, and hands-on teaching experience. These elements ensure that pre-service teachers are not only recipients of knowledge

but active participants in their educational journey, fostering a deeper understanding and application of creative teaching methods.

Furthermore, the framework emphasises the importance of educational settings, including leadership, learning environments, curricula, resources, and technology. By acknowledging these contextual factors, the framework provides a comprehensive view that aligns with the broader goals of Saudi Vision 2030. This alignment underscores the relevance of the framework in supporting national educational goals and improving the quality of teacher education in Saudi Arabia.

The inclusion of ongoing support and professional development highlights the framework's commitment to continuous growth for both teacher educators and pre-service teachers. This aspect ensures that educators remain motivated, aware, and skilled, thus creating a sustainable model for fostering creativity in education.

In summary, the suggested framework offers a robust model for integrating creative learning and teaching practices in teacher education. It provides valuable insights into the practical implementation of these methods, making a significant contribution to the improvement of educational practices in Saudi Arabia.

Overall, the study's findings hold significant potential to impact education in Saudi Arabia by fostering creativity among pre-service teachers. The research sheds light on the pedagogy of creative learning, guiding teacher education programmes in developing effective teaching methods that promote creativity. Moreover, it opens new avenues for enhancing creativity within Saudi Arabian teacher education and inspires transformative practices in the field of education. Hence, the contributions of this study lay the groundwork for further discussions on theoretical and practical implications, study limitations and potential future research directions. These aspects will be explored in detail in the subsequent sections of this chapter.

6.4 Implications of the Research

The findings from this study have significant implications, providing direction for future policies, practices, and research in the domain of creative learning and teaching for creativity within the

context of Saudi pre-service teachers, which could potentially reduce the current Saudi gap. While the study did not specifically focus on creativity among children or youth, its aim is to ultimately enhance the quality of education for the new generation. By improving teaching methods and curricula, the implications of these findings are relevant both directly and indirectly to the educational experiences of children and youth. Additionally, the lessons learned from this research may be applicable to other contexts, further extending its impact.

6.4.1 Implications for Teacher Educators and Pre-service Teachers

Teachers, including pre-service teachers, teacher educators, and mentors, are instrumental in nurturing creativity among their students. Providing opportunities for growth and learning improves the quality of education delivered to pre-service teachers, subsequently impacting the students they will eventually teach. This is illustrated in four points regarding the current gap and trends in Saudi education, based on the previous chapters:

- 1. Foster a Supportive Learning Environment:** The evidence suggests that creative learning methodologies and sub-habits, including collaborative and experiential learning techniques, significantly enhance the understanding of how to educate for creativity. Integrating these strategies into teacher education programmes is essential. Additionally, engaging in reflective practice not only enhances lesson plans but also fosters a classroom culture conducive to creativity. A supportive learning environment that encourages open dialogue, risk-taking, and a growth mindset is crucial in cultivating creativity. Teacher educators must create such an environment and demonstrate its efficacy to pre-service teachers.
- 2. Promote Continuous Professional Development:** The study highlights the importance of ongoing professional development for both pre-service teachers and teacher educators. There is a need for more opportunities to participate in professional development activities such as webinars, seminars, and conferences focusing on creative pedagogy and teaching practices. By providing these opportunities, teachers can nurture creativity among their students, thereby improving the quality of education delivered to pre-service teachers and ultimately benefiting the students they will teach.

3. Implement Creative Teaching Strategies: The findings demonstrate the advantages of a creative learning approach, which has extensive implications for students. Creative teaching strategies that promote idea generation, problem resolution, and flexible thinking enhance students' creative abilities and motivation to participate actively in their education. Engaging students in open-ended assignments that require generating new ideas and evaluating their work refines their problem-solving skills, which are transferable to various academic and professional settings.

4. Empower Students for Lifelong Learning: Creative learning activities provide students with opportunities to discover, collaborate, and express their unique voices, fostering self-assurance and a sense of accomplishment. These acquired skills are applicable in various contexts, equipping students to become critical thinkers and problem solvers in both their academic journeys and beyond. Creative learning fosters an environment where students appreciate and embrace diverse perspectives, preparing them to navigate a complex and rapidly evolving world with confidence and competence.

Overall, the study underscores the importance of integrating creative learning strategies into teacher education, as it empowers both students and teacher educators to cultivate essential skills, expand their knowledge and develop a lifelong passion for learning.

6.4.2 Implications for Policymakers

This research illuminates the gaps between policy and practice in the Saudi educational context, particularly in the realm of creativity. By addressing these gaps and providing actionable insights, the study aims to contribute to the ongoing educational reform efforts in Saudi Arabia, in alignment with the objectives of Saudi Vision 2030. The insights gained from this research could inform future policies and practices, ultimately improving the quality of teacher education and fostering a more creative and innovative educational environment.

The research has several implications for policymakers, especially in supporting the new generation of learners—children, youth, and pre-service teachers. It shows that creative learning pedagogies and teaching for creativity might have a positive impact on these groups. Consequently, there is a need for policies that encourage such innovative approaches. This support

could take various forms, including funding, resources, training programmes, and policy changes, all aimed at creating an environment conducive to the effective adoption and implementation of these strategies. Five points are addressed here and directed to the policymakers within the Saudi higher education and the Ministry of Education:

1. Integrate Creative Learning Pedagogies: Creative learning pedagogies and teaching for creativity can significantly impact pre-service teachers, which would extend to the children and young people they teach. Policymakers should prioritise the integration of creative learning pedagogies into the teacher education curriculum and foster an educational climate that nurtures innovative practices. This includes:

- Encouraging leadership and creating dynamic learning environments.
- Designing courses that blend theoretical and practical aspects of teacher education effectively.
- Minimising external constraints and supplying facilitating factors that affect creativity in higher education.

2. Align Policy Formulation with Practical Implementation: While policymakers focus on highlighting creativity and 21st-century skills in new frameworks and documents, as discussed in Chapter One, they must ensure an ongoing balance between policy formulation and its practical implementation. For example, delivering workshops and seminars on creativity, and publishing guidelines can be instrumental in bridging this gap. This balance is crucial for the successful integration of creative learning strategies.

3. Prepare and Empower Adaptable Educators: According to Dewey, the main aim of education should be to prepare educators who can adapt their teaching methodologies to meet the diverse needs of all students, helping them think critically, solve complex problems, and thrive in a changing world. Policymakers should support teacher educators in embracing and adjusting to these changes by adopting active and creative pedagogical approaches that align with their students' needs, ensuring immediate benefits to the learners. This also means supporting them in making decisions and listening to their voices, thereby empowering educators to take an active role in the development and implementation of educational strategies.

4. Facilitate Continuous Professional Development: The necessity for teacher educators' continued professional development, as highlighted in this research, calls for policies that facilitate access to professional development programmes focusing on teaching for creativity. Funding and resources should be allocated to support this approach, demonstrating a commitment to enhancing the quality of education delivered to pre-service teachers. By equipping educators with the tools and approaches to nurture creativity, we not only enhance the quality of education but also contribute to shaping a more innovative and adaptable future for Saudi Arabia.

5. Promote Best Practices in Creative Teaching: Policymakers play a crucial role in advancing creativity in education. They should establish frameworks to promote the sharing of best practices in creative teaching and learning throughout the education sector. Emphasising creativity in classrooms and universities should not be optional but rather a mandated requirement within educational policies. Additionally, policies should encourage reflective practice within teacher education and among academic members. Promoting research that analyses and explores creative practices in higher education for pre-service teachers and beyond is essential to continuously improve and innovate teaching methods.

By addressing these points, policymakers can create a supportive environment that encourages creativity and innovation in education, aligning with the goals of Saudi Vision 2030 and ensuring the effective application of the research findings.

6.4.3 Implications for the Broader Education Community

Here, I refer specifically to stakeholders in teacher education, high education, school administrators, curriculum developers, and researchers within Saudi Arabia and beyond. This encompasses professionals and experts engaged in shaping and advancing the educational landscape, particularly in the field of teacher education and development. For the broader education community, this study's findings emphasise the importance of fostering a culture of creativity within educational institutions. Specifically, there is a need for more focused and in-depth exploration from researchers regarding creative pedagogy, including creative teaching, teaching for creativity, and creative learning in the Saudi educational context. These areas merit further investigation to gain a comprehensive understanding and to inform the development of effective frameworks to promote creativity in education. In addition, stakeholders in higher

education, teacher education, school administrators, curriculum developers and researchers must consider the valuable role that creative learning and teaching for creativity play in enhancing students' cognitive skills and overall academic performance.

Schools could incorporate creative learning methodologies into their teaching and learning processes, focusing on activities that encourage open dialogue, collaboration, self-reflection and risk-taking. Additionally, this study highlights the value of a supportive learning environment, urging schools to create spaces that foster creativity and innovative thinking.

Curriculum developers can utilise these findings to craft curriculum materials that promote creativity and provide teachers with practical strategies for its integration into classroom activities. For educational researchers, this study's findings underline the necessity for continued research in this area, exploring different dimensions of creative learning and teaching for creativity and their impact on students' learning outcomes.

6.5 Wider Limitations of the Study

While this research offers valuable insights and implications, it is important to acknowledge its limitations. Particularly, a comprehensive discussion of these limitations within the research methods is presented in the methodology chapter (see Section 3.12). Here, I highlight the main areas of general limitations in this research. These constraints, in turn, may present opportunities for future research.

In this study, my approach, grounded in the interpretive ontological perspective and social constructivist epistemology (see Sections 3.2.1 and 3.2.2), encompassed 15 pre-service teachers and 12 teacher educators within a single teacher preparation program in Saudi Arabia. Despite efforts to ensure diversity, the relatively small sample size limits the robustness of conclusions and their broader applicability, particularly in the wider educational context of Saudi Arabia and beyond. The study's focus on pre-service teachers and teacher educators, while excluding other stakeholders like mentors, in-service teachers, school administrators, and students, may also narrow the understanding of creative learning and teaching. Additionally, the exclusive focus on female perspectives limits the study's breadth; including male participants could have provided a more comprehensive view of creativity in education.

A key limitation is the potential for researcher interpretation bias, which could significantly affect data interpretation. As a qualitative action research study, the findings are inherently subjective, reflecting participants' perceptions and experiences. Primary data sources such as interviews and reflective journals introduce biases like social desirability and the Hawthorne effect (McCambridge et al., 2014). However, the interpretive ontological perspective and social constructivist epistemology consider the researcher's close involvement and personal perspective as essential to the research, rather than a flaw (Ponte, 2002; Willis, 2007).

Another significant issue is the generalisation of findings given the small sample size and nature of the study, as previously discussed in Section 3.11. While statistical generalisation is not feasible, it is possible to generalise beyond the immediate research situation through context similarity and pattern recognition (Melrose, 2001; Larsson, 2009). Larsson (2009) asserts that generalisation in qualitative research can be achieved by recognising patterns applicable to similar contexts and by maximising variation to enhance generalisation potential.

In this qualitative action research, generalisation considers the transferability of the suggested framework for fostering creativity in education. Although developed within the specific context of this study, this framework can be adapted and utilised in different educational environments, taking into account local nuances and needs. Conversely, the specific findings of this study are rooted in the participants' experiences. While the broader patterns and insights about creative learning and teaching can be relevant to similar educational settings, the specific findings are contextually bound and not broadly generalisable. This distinction helps to avoid misunderstandings about the study's scope and intentions. Rather than denying broader application or emphasising the limitations of interpretivist work, this research underscores the significance of creativity and offers a nuanced understanding of how creative learning and teaching can be developed within specific contexts. This approach ensures that while the framework has broader applicability, the specific findings are understood as contextually bound.

In addition, the influence of translating data from Arabic to English is another important consideration, as it may alter the interpretation of findings. Furthermore, time-bound study as an international student, limited to a three-month data collection period in Saudi Arabia from January to mid-April 2021, captures only a short snapshot of participants' perspectives. This time constraint likely impacted the study's depth and scope. The limited timeframe restricted extended

ethnographic observation and long-term follow-up, thus limiting deeper cultural insights and assessment of lasting impacts.

Each of these limitations should be kept in mind while interpreting the study's results. Nevertheless, these limitations provide fertile ground for future research to extend and deepen our understanding of creative learning and teaching for creativity within diverse educational contexts.

6.6 Suggestions for Future Research

Given the study's outcomes and limitations, several recommendations can be made for future research and practice. These recommendations aim to address the gaps and build upon insights gathered from the study to further enhance the field of creative learning and teaching for creativity, particularly within the context of Saudi pre-service teachers and teacher educators.

Future studies could build upon the findings to explore these factors' relationships to creative pedagogy more in depth.

- 1. Expand the geographical and cultural scope:** The current study focuses on the Saudi context. Future research could expand the geographical and cultural context of the study to other countries or regions. This would allow for a comparative analysis between different educational systems and pedagogical approaches, which could provide valuable insights into the universal and culture-specific aspects of teaching for creativity.
- 2. Undertake a comparative analysis of understanding creativity:** The current study focused on pre-service teachers majoring in English, Arabic, and Islamic studies. Future research could compare understandings and applications of creativity between pre-service teachers specialising in other fields at the same final academic year level. Exploring potential variations between those studying early childhood, secondary, and special education, for instance, could elucidate similarities and differences in perspectives across areas. Understanding the factors that influence creativity in these distinct groups could inform the design of effective pedagogical strategies and targeted interventions to nurture creativity in pre-service teachers and their teacher educators.
- 3. Research methodology:** employing mixed-methods studies that combine quantitative and qualitative data could offer a more comprehensive examination of the different dimensions

of creativity within these two distinct groups. This approach may reveal valuable insights into the similarities and differences in their perspectives on creativity and shed light on potential areas for enhancing creativity in both student learning and teacher education programmes.

- 4. Investigate the perspectives of other stakeholder:** To gain a more comprehensive understanding of creative learning and teaching for creativity, future research could consider the perspectives of other stakeholders. This could include in-service teachers, school administrators, pupils, leaders, and parents. Their perspectives could provide additional insights and practical strategies for promoting creative learning in the classroom and learning environment.
- 5. Undertake a longitudinal study:** The current study focuses on pre-service teachers within a short timeframe. A longitudinal study examining the long-term effects and sustainability of creative learning and teaching as pre-service teachers transition into in-service teaching would be beneficial. Such an approach could shed light on how these strategies shape in-service teachers' perspectives and practices, ultimately contributing to higher-quality education.
- 6. Promote Curriculum Development in Saudi Arabia to Enhance Creativity for Learners:** The current study's findings are optimistic about the integration of creative learning within the new standard curriculum of teacher education programmes and teachers' professional development. Moreover, the high desire of Saudi policymakers to focus on learners' creative and critical thinking skills has been reported. Additionally, this research suggests future curriculum development in Saudi Arabia that not only promotes creativity but also directly benefits learners—children and young people. By integrating creative learning strategies, the curriculum can foster critical thinking, problem-solving skills, and innovation among students, ultimately enhancing their educational experience and preparing them for future challenges. Therefore, it is essential to explore new studies and future practices concerning creative teaching and learning and their impacts on learning outcomes. Such exploration can provide valuable insights into curriculum reform and design for fostering creativity.

7. Design the activities and the sessions of creative learning: The current study employed only six sessions and did not involve the researcher in mentoring the participants during their placements. Future research could consider increasing the number of sessions and incorporating researcher guidance during participants' placement experiences. This approach will provide a deeper understanding of the real-world impact of integrating the Five-Dimensional Model of Creativity in teacher education programs, allowing for a more comprehensive assessment of its outcomes.

6.7 Concluding Remarks

This thesis has explored the perspectives and practices of Saudi pre-service teachers and teacher educators in relation to creative learning and teaching for creativity. The findings derived from this research journey provide substantial insights into the current status and the potential for future enhancements in this crucial area of quality teacher education.

While the findings of this research indicate promising signs of acceptance and enthusiasm towards the concept of creative learning among pre-service teachers, they also underline a significant need for comprehensive and targeted interventions to ensure that these potentials are properly harnessed. This is particularly relevant in the context of Saudi Arabia, where the landscape of education is continually evolving, guided by Vision 2030's strategic goals.

Furthermore, the study reinforces the essential role that teacher educators play in nurturing creativity among future teachers. Their roles are not confined to the realm of knowledge transmission; instead, they act as facilitators, mentors and role models, instilling the values and skills of creative teaching among pre-service teachers.

From a personal perspective, throughout this thesis journey, I have embraced the roles of researcher, creative learner and tutor educator. I had the privilege of exploring and focusing solely on the teaching practice in different contexts. During this period as a tutor and researcher, I conducted six sessions and collected data without any additional teaching or responsibilities in my role as a teacher educator at the college. This action research approach allowed me to systematically investigate and refine creative teaching methods while closely monitoring the outcomes and progress of the participants. This dedicated approach enabled me to engage wholeheartedly with the participants and gain valuable insights into their perspectives, which they

graciously acknowledged. This experience has been transformative, prompting profound reflections on my pedagogical beliefs in teaching and learning and how to create enriching learning environments.

While my aim is to explore Saudi pre-service teachers' perspectives on creative learning and their teacher educators' perspectives, as well as the factors shaping the preparation of creative pre-service teachers in higher education, the goal is to develop a framework for a pedagogy of creative learning that supports the development of Saudi pre-service teachers' understanding of teaching for creativity.

However, I found that this research also initiated a significant change in myself, which is a notable feature of the action research approach. This self-transformation underscores the dual impact of action research, benefiting both the researcher and the participants. Witnessing the positive impact of creative learning sessions on the participants' attitudes and approaches to teaching has reinforced my commitment to fostering creativity in education. Additionally, I have gained valuable insights into creative learning and its implications for pre-service teachers and teacher educators. It has not only enriched the research findings but also provided invaluable lessons for my own professional growth.

However, as with any academic endeavour, this study has its limitations and has opened new paths for further inquiry. The journey of enhancing creative learning and teaching for creativity is a continuous one, requiring consistent efforts from educators, policymakers, researchers and the broader education community.

In closing, it is hoped that this research contributes to the broader dialogue on how to foster creativity within teacher education programmes. It aspires to be a catalyst for further investigations and initiatives that will advance our understanding and practice of teaching for creativity. Ultimately, the goal is to prepare and empower future teachers to creatively educate a generation of learners who go beyond mere knowledge, fostering in them creativity, reflection, and readiness to face the challenges and opportunities of a rapidly evolving world. Such an approach aligns with contemporary educational theories that emphasise the importance of developing 21st century skills' in learners.

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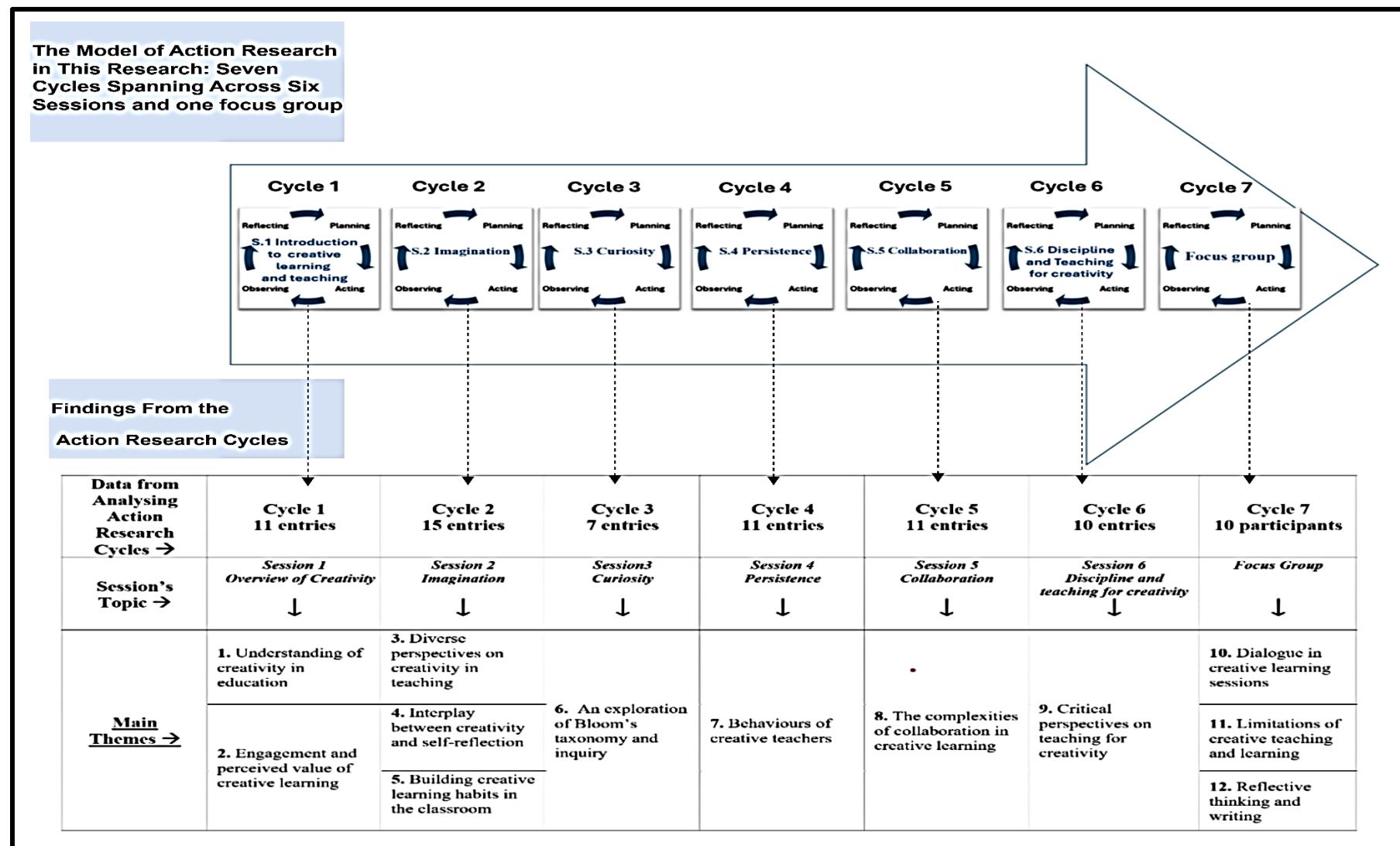
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Appendices

Appendix A: Linking the Action Research Design and Findings from Pre-Service Teachers (PSTs)



Appendix B: Guide of Reflective Journals for Pre-service Teachers

A. Reflective journal guidance

Reflective journal could be a challenging task. However, to support Saudi pre-service teachers in their understanding of reflective writing I added this section to explain the main points of reflective journals. In the following a useful information from Writing Development Centre of Newcastle University Library at www.ncl.ac.uk/library/subject-support/wdc. and <https://www.ncl.ac.uk/learning-and-teaching/effective-practice/reflective-practice/>.

- **The definition**

Reflective journal is an ongoing activity often for the duration of a period of training and development. It is related to a diary or blog in that it is structured around regular, chronological entries, perhaps weekly. Its purpose is to help you develop the habit of reflecting regularly on your learning during this time to help you get the most out of it.

- **Keys of reflective journals:**

- Personal

The key difference between reflective writing and most forms of academic writing style is that you are writing in the first person 'I'. Your voice is very present in the text because you are writing about yourself. You have to write 'I' when you are describing things that you did, thought and felt, and things that happened to you: "I did", 'I decided', 'I was frustrated', 'he said to me'. You also write 'I' when you are reflecting on these past events in the present, so you can write 'I think', 'I will', 'I now understand' 'I need to'.

- Formality

You are also often quoting or paraphrasing things that you or others said and writing about perceptions and feelings and other 'real life' things that are hard to scientifically quantify or characterise. Your language can therefore be a little less formal than in traditional academic writing: 'he was really annoyed' 'I don't think it matters that much', 'it was just too important'. Reflective writing is still a professional form though, so it needs to keep some formality and neutrality.

- Critical analysis

Writing in the first person in a slightly less formal tone can sometimes lead us to overlook the need to be objective and unpack your reasoning for the reader. Reflection can then become a descriptive, unselective account of everything that happened, or a series of unsubstantiated statements which are easy to say, but too generic or too sweeping to be credible. Reflective writing is still quite academic in that it is critical, reasoned and evidenced, demonstrating higher level thinking beyond description, and your style will demonstrate this. See, for example, questions in the table below that might inspire you.

To develop analysis, the analysis step is where you have a chance to make sense of what happened. Up until now you have focused on details around what happened in the situation. Now you have a chance to extract meaning from it. You want to target the different aspects that went well or poorly and ask yourself why. If you are looking to include academic literature, this is the natural place to include it.

Helpful questions:

- Why did things go well?
- Why didn't it go well?
- What sense can I make of the situation?
- What knowledge –

Further support also provided using: <https://www.ed.ac.uk/reflection/reflectors-toolkit/reflecting-on-experience/gibbs-reflective-cycle>

B. The format of reflective journals

There is more than one way to write reflectively. Specifically in this study, there is no one format of writing reflective journal, and therefore you have the freedom to choose an appropriate setting for your writing and opinion. For examples using:

- 1) Content style: table, note taking, story or essay. with or without pictures/ figures/ memes.
- 2) Sending method: electronic by email or handwritten form.

3) the time: after each session or later at a suitable time.

Only remember to express yourself, open the window for thinking and write regularly, even if individual entries are sometimes short. I am looking forward to reading your journals.

Name:	Date:	
The reflective journal of Session ____	The researcher response/comment	
Try to think of these questions: <ul style="list-style-type: none">- What did you like about the experience? and why?- What did you not like? And why?- What is the most important thing you learned today?- Why is that significant? How is it relevant?- What aspects of the session called your attention?- How does this session help in your learning?- When were you the most creative, and why do you think that is?- How do I know that? What makes me think that?		
Any questions/ suggestion/ comment.		

- The table is an example of journal reflective 'optional form'.

Appendix C: The Guide for Focus Group with PSTs

Discussion with 15 pre-service teachers,

for (60-90 minutes) on Wednesday 6th of April.

A. Perceptions of a concept 'creative pedagogy'

1. How would you describe 'creativity' from your major or point of view?
2. How important is it, in your view, to develop understanding and practice of creativity, and why?
3. What do you see as a pre-service teacher how to be creative in your learning and teaching?

B. The sessions of creative learning and five habits of mind

1. What did the experience of participating in creative learning sessions add to you?
2. What did you learn about yourself during creative learning sessions?
3. How important is it, in your view, to develop understanding and practice of each habit, and why?
4. What was your most enjoyable moment during your participation in creative learning sessions?
5. How was the experience in creative learning sessions similar or dissimilar to what you expected?
6. What do you think of using sessions of creative learning in order to support pre-service teachers in their approach?
7. What did you suggest elements or activities in creative learning sessions for the future?

C. The weekly task of reflective writing

8. Are you enthusiastic to reflect on your teaching practice? Why?
9. Describe your feelings about reflective writing after each session?
10. What are the benefits and challenges of engaging with reflection?

D. The factors to develop creative learning in pre-service teachers

11. What do you see as factors that would help with your creativity in your practice?
12. How do you think these factors will help you in your creative teaching and learning?

E. The difficulties of enhancing creative learning in pre-service teachers

13. What difficulties did you encounter during the sessions?
14. From your point of view, what are the barriers to the development of creative pedagogy in general and in your field? Please explain how?
15. How do you think one can overcome these challenges?
16. Is there any question, comment, feedback would you conclude with?

Appendix D: An outline of the semi-structured interview questions for Teacher Educators and Mentors of Pre-service Teachers

(English version)

Interview questions

After obtaining consent from the participants who are the supervisors and mentors of pre-service teachers in one Saudi collage, the interview will be conducted to acquire the information needed to answer the research questions. The interview will be partly structured according to the following outline.

The interview procedures

- **Time and date of interview:** the interview will be conducted in the appropriate time that suits the teacher timetable.
- **Place:** the place should be suitable in which there is no disturbance and should be secure to maintain confidentiality.
- **Audio recording and estimated time:** taking the interviewee agreement about recording the conversation and recording the interview information such as time, date, estimated time for the interview, place, interviewee rights, and the focus area.
- **Interviewee's rights and consent form:** remaining the interviewee about her rights and submitting the consent form and ensure that interviewee sign before the interview conduction.
- **Topic of Focus:** a brief description of the research focuses and aims

General information (to help participants settle in)

- Name
- Professional status
- Academic qualification
- Area of specialization
- Teaching and training experience

- Subject (s) you teach in the collage
- Years of teaching pre-service teachers experience

Theme 1: perceptions of a concept 'creative pedagogy'

4. What is the word or sentence that comes to your mind when you hear the word creativity and creative pedagogy?
5. How would you describe creativity from your major or point of view?
6. Do the objectives of the subject that you teach includes any attention to creativity?

Theme 2: creative behaviour

7. To what extent do you think Saudi pre-service teachers understand creative pedagogy in their major?
8. Can you describe the most creative lesson or activity from your experience with pre-service teachers?

Theme 3: the factors to develop creative learning

9. Do you think that teachers get adequate preparation to teach for creativity? -What does a pre-service teacher need to be creative in their learning and teaching?
10. What do you feel is the most important element to support pre-service teachers' creative pedagogy? and how can it apply in your specialty?
11. What do you think of using sessions of creative learning in order to support pre-service teachers in their approach?

Theme 4: the difficulties of enhancing creative learning

12. From your point of view, what are the barriers to the development of creative pedagogy in general and in your field? Please explain how?
13. How do you think one can overcome these challenges?

Appendix E: An outline of the semi-structured interview questions for Teacher Educators and Mentors of Pre-service Teachers

(Arabic version)

ملخص لأسئلة المقابلة شبه المنظمة

• الوقت وتاريخ المقابلة: ستجرى المقابلة في الوقت المناسب الذي يناسب جدول المشارك

• المكان: يجب أن يكون المكان مناسباً بحيث لا يوجد تشويش ويجب أن يكون آمناً لحفظ على السرية.

• تسجيل الصوت والوقت المتوقع: الحصول على موافقة المحدثة على تسجيل المحادثة وتسجيل معلومات المقابلة.

• حقوق المحدثة وغذوج الموافقة: تذكر المحدثة بأن المشارك تطوعية و اختيارية، و تقديم غذوج الموافقة والتأكد من توقيع المحدثة قبل إجراء المقابلة.

• نبذة عن موضوع البحث: وصف موجز لمشكلة البحث وأهدافه.

معلومات عامة من كل مشاركة: •الاسم •الوضع المهني •المؤهل الأكاديمي •مجال التخصص •خبرة التدريس والتدريب •المواد التي تدرسها في الكلية •سنوات تدريس والإشراف على مقرر التربية العملية تحديداً.

الموضوع 1: مفاهيم وتصورات حول مفهوم "التربية الإبداعية"

1. ما هو الكلمة أو العبارة التي تتبادر إلى ذهنك عندما تسمع كلمة الإبداع والتربية الإبداعية؟

2. كيف تصنف الإبداع و "التعلم الإبداعي" من وحمة ظررك العامة أو الشخصية؟

3. هل تشمل أهداف المقرر التي تدرسها أي اهتمام بالإبداع؟ وضعي.

الموضوع 2: السلوك الإبداعي:

4. إلى أي مدى تعتقدين أن طالبات التربية العملية يدركون أهمية ومعنى التربية الإبداعية في تخصصاتهم؟ هل تعتقدين أن نظام المدارس والتعلم في المملكة العربية السعودية يدعم الإبداع اليوم؟ وكيف ذلك؟

5. هل يمكنك وصف أكثر درس أو نشاط إبداعي تجربتيك مع الطالبات المتدربات أثناء فترة التطبيق العملي؟ ولماذا؟

الموضع 3: العوامل المساهمة في تطوير التعلم الإبداعي

6. هل تعتقد أن الطالبات المتردبات يحصلن على تحضير كافي في الكليات التربوية لتدريس الإبداع؟ ما الذي يحتاجه الطالبات المتردبات من عوامل ليكونوا مبدعات في التعلم والتدريس أثناء فترة التطبيق العملي؟
7. ما العنصر الأكثر أهمية في دعم التربية الإبداعية للطالبات المتردبات أثناء فترة التطبيق العملي من وجهة نظرك؟ وكيف يمكن تطبيقه في تخصصك؟
8. ماذا تقررين أيضاً لدعم أسلوب التعلم من أجل الإبداع. وما رأيك في استخدام جلسات التعلم الإبداعي مخصصة لمناك لدعم الطالبات المتردبات في التدريس أثناء فترة التطبيق العملي؟

الموضع 4: صعوبات تعزيز التعلم الإبداعي

9. من وجهة نظرك، ما هي العقبات التي تواجه تطوير التربية الإبداعية بشكل عام وفي مجالك؟ يرجى شرح كيفية ذلك.
10. هل هناك عقبات أخرى من حيث عملك كمشفرة سواء متعلقة في الكلية أو المدرسة؟ وكيف تعتقدين أنه يمكن التغلب على هذه التحديات؟

Appendix F: Detailed Plans for the Six Sessions of Creative Learning (The Research Intervention)

'Land of Creativity'

Session 1. Introduction to creative learning and teaching.	Date: 23.2.22	Session duration: 90 minutes
Session/focus 	Ice-breaker (15 minutes) 	Description of Main activities 
Introduction to creative learning and teaching. <ul style="list-style-type: none"> - Creativity in general meaning - Creativity in education - Creative teacher 	- Introduction activity to allow participants to talk about their personalities and discuss their motivations for attending.	<p>1- The task of making a 'creative ice-cream' using the provided materials (papers, colours, etc.) around 40-45 minutes. Objective: To enhance participants' imaginative thinking and creativity through the hands-on task of crafting through a practical and engaging activity.</p> <ul style="list-style-type: none"> - Groups work (20 minutes), encourage participants to brainstorm what their imaginative ice-cream would look like. This could be a representation of a flavour that doesn't exist, a visually artistic design, or an ice-cream that reflects a personal story or emotion. Encourage them to imagine and think outside the box, considering not just the appearance but also what their creation represents or symbolizes. - Sharing and Reflection (10 minutes): Once everyone has finished their creation, each group presents their ice-cream, explaining their design and the creative process they went through. - Group Discussion (10 minutes): Facilitate a discussion about the experience. Focus on what participants learned about their own creativity, the challenges they faced, and how they overcame them. Discuss the importance of creativity in adult life and various ways it can be nurtured and examples from their understanding. <p>2- Quick-Scan Reading and Discussion on Creativity in Education and its Levels, in around 40-45 minutes.</p> <p>Beyond Big and Little: The Four C Model of Creativity (Kaufman & Beghetto, 2009)</p> <p>Objective: To develop quick reading skills and facilitate a discussion on the role of creativity in education and its various levels, based on a scholarly article to link theory, practice, and research.</p> <ul style="list-style-type: none"> - Introduction: 5 minutes - Individual Quick-Scan Reading: 10 minutes - Group Discussion: 20 minutes. - Overview of the research model (Lucas et al., 2013) to understand the up-coming sessions.

		<p>3- Full Group Debrief (10 minutes): Facilitate a discussion to link the session's topic with the participants' experiences as pre-service teachers. Reassemble the entire group and invite a representative from each group to summarise the session's key points. Focus on how the explored concepts of creativity and imaginative thinking can be integrated into their current or prospective teaching practices.</p> <p>Then, prompt participants to begin writing their reflections in their journals, capturing the insights and ideas generated during the session.</p> <p>- At the end of the session, what do you predict in the journey? what do you want to do in Land of creativity?</p>
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Session 2. Imagination	Date: 10.3.22	Session duration: 120 minutes
Session focus and aims.	Ice-breaker (15 minutes)	Description of Main activities
Imagination. Sub-habits from (Lucas et., 2013): - Playing with possibilities - Making connections	 <p>Ice-breaker (15 minutes)</p>  <ul style="list-style-type: none"> - Brainstorming: Construct a word cloud related to creativity. - Re-cap of the previous session. 	 <p>1.The task of making a 'creative channel' using the provided materials (papers, colours, etc.) around 40-45 minutes. Objective: To foster creativity and imagination among participants by designing a concept for a new channel or broadcast aimed at expressing their ideas and influencing the community.</p> <ul style="list-style-type: none"> - Explain and Plan (5 minutes): Explain the task, each group have to create a creative channel or broadcast and divide participants into small groups. - Group work (20 minutes): participants brainstorm ideas for their channel or broadcast. They have to identify key components: Content: What will be featured?, Target Audience: Who are you aiming to reach?, Purpose: Why is this project important?, Potential for Innovation: Could this lead to new products, inventions, or ideas? How? - Presentation and Posting (20 minutes): Each group presents their concept. Afterward, display the work on the board for everyone to view, discuss, and provide constructive feedback on each presentation. <p>Break (10 minutes)</p>

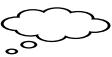
<ul style="list-style-type: none"> - Using intuition 		<p>Open discussion:</p> <ul style="list-style-type: none"> - Explain meaning of imagination and link to creativity. - The place of imagination and creativity in Saudi education. - Write a short advice for new teachers to be creative. <hr/> <p>Conclusion and Full Group Debrief (10 minutes): Facilitate a discussion to link the session's topic with the participants' experiences as pre-service teachers with their current or prospective teaching practices and summarise the session's key points.</p> <p>Then, prompt participants to begin writing their reflections in their journals, capturing the insights and ideas generated during the session.</p>
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Session 3. Inquisitiveness (Curiosity)	Date: 24.3.22	Session duration: 60 minutes
Session/focus	Ice-breaker (15 minutes)	Description of Main activities
<p>Inquisitive.</p> <p>Sub-habits from (Lucas et., 2013):</p> <ul style="list-style-type: none"> - Exploring and investigating - Wondering and questioning - Challenging assumptions 	<p>“M&Ms Question Game” is an icebreaker activity where each participant selects an M&M candy and answers a question based on the colour they pick. Each colour corresponds to a different type of question or prompt, encouraging sharing</p>	<p>In the fourth station of journey with creativity, we will discover our ability to be inquisitive with full confidence, as much as Alice in the wonderland, and how could use that in learning.</p> <p>The task: Creating Questions Poster on Interesting Topics, Exploring Curiosity Through Group Discussion (25 minutes)</p> <p>Objective: To cultivate curiosity by allowing each participant to explore and discuss an intriguing topic. In a group setting, each participant is given the opportunity to discuss an interesting topic, delving into its origin and potential implications. Following this, the group will take two minutes to collectively reflect on all the topics discussed. Then, based on this reflection, a new topic that particularly sparks the group's curiosity will be chosen for further exploration and using mind maps.</p> <p>Deep Dive: 1) Ask Questions: Formulate questions about the chosen topic to explore new ideas. 2) Seek Answers and Research: Encourage participants to share any known information or conduct quick research if resources are available. 3) Contest Ideas: Discuss and challenge the ideas and knowledge surrounding the topic, using existing knowledge and new insights.</p>

	and interaction in a fun way.	Group Discussion. Facilitate a discussion about the experience. Focus on the meaning of inquisitive in teaching and learning, and explore what participants learned about their own creativity, the challenges they faced, and how they overcame them.
	- Re-cap of the previous session	Open discussion (10 minutes): Break (10 minutes)
	-	3. Conclusion and Full Group Debrief (10 minutes): summarise the session's key points. Then, prompt participants to begin writing their reflections in their journals, capturing the insights and ideas generated during the session.

Session 4. Persistence	Date: 25.3.22	Session duration: 60 minutes
Session/focus	Ice-breaker (15 minutes)	Description of Main activities
Persistent. Sub-habits from (Lucas et., 2013): - Sticking with difficulty. - Daring to be different - Tolerating uncertainty -	  <ul style="list-style-type: none"> - Paper Tower Challenge is a team-building activity where participants form small groups and compete to build the tallest and most stable tower using only paper and tape. <p>This exercise fosters teamwork, creativity,</p>	 <p>1-The task of making a 'Motivational Slogan or Project'. Work in teams to develop and design a slogan that could inspire and motivate during mid-term exam periods, using the provided materials (papers, colours, scissors, etc.) in 20 minutes. Objective: To enhance participants' imaginative thinking and creativity through the hands-on task of crafting through a practical and engaging activity.</p> <ul style="list-style-type: none"> - Groups work (15 minutes), encourage participants to brainstorm what their imaginative slogan would look like. Encourage them to imagine and think outside the box, considering not just the appearance but also what their creation represents or symbolizes. - Sharing and Reflection (5 minutes): Once everyone has finished their creation, each group presents their work, explaining their design and the creative process they went through. <p>2-Open discussion:</p> <ul style="list-style-type: none"> - Explain the meaning of being persistent and link to creativity. - The place of persistence in their practice.

	<p>and problem-solving skills, within a set time limit.</p> <ul style="list-style-type: none"> - Re-cap of the previous session 	<p>3. Conclusion and Full Group Debrief (10 minutes): Facilitate a discussion to link the session's topic with the participants' experiences as pre-service teachers with their current or prospective teaching practices and summarise the session's key points.</p> <p>Then, prompt participants to begin writing their reflections in their journals, capturing the insights and ideas generated during the session.</p>
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Session 5. Collaboration	Date: 31.3.22	Session duration: 120 minutes
Session/focus	Ice-breaker (20 minutes)	Description of Main activities
<p>Collaboration.</p> <p>Sub-habits from (Lucas et., 2013):</p> <ul style="list-style-type: none"> - Sharing the product - Giving and receiving feedback - Cooperating appropriately 	 <p>Ice-breaker (20 minutes)</p>  <ul style="list-style-type: none"> - Re-cap of the previous session - Collaboratively 'Creating a Story', to foster teamwork and ignite imagination and creativity initiated by the theme of a colorful hat. Begin the story with a sentence that includes the colorful hat. For example, "In a small village, there was a hat shop known for its one extraordinarily colorful hat that held a magical secret.." Participants take turns adding a sentence or two to the story. Encourage them to build upon what the previous person said, keeping the story flowing and imaginative until the conclusion. 	<p>Description of Main activities</p>  <ol style="list-style-type: none"> 1. The session will begin with a group discussion, followed by a related activity. It provides an opportunity to reflect on past sessions and engage in a discussion focused on enhancing collaboration with an emphasis on improving learning (15 minutes). 2. Mind map using Six Thinking Hats (15 minutes): work together to create a mind map. This should capture the key benefits and challenges of collaboration, as identified in the discussion. Encourage participants to think about the factors that make collaboration effective, as well as the obstacles they might face. 3. Group sharing and discussion (10 minutes): Facilitate a discussion about the experience and teaching strategy. Focus on what participants learned about their own creativity, the challenges they faced, and how they overcame them, and examples from their understanding. <p>Break (10 minutes)</p> <ol style="list-style-type: none"> 4. Quick-Scan Reading on collaboration and team-work in classroom, in around 15 minutes, articles from the participants. <p>Objective: To develop quick reading skills and facilitate a discussion on the role of collaboration in education, based on a scholarly article to link theory, practice, and research.</p> <ul style="list-style-type: none"> - Individual Quick-Scan Reading: 10 minutes - Group Discussion: 10 minutes. <ol style="list-style-type: none"> 5. Conclusion and Full Group Debrief (10 minutes): summarise the session's key points. <p>Then, prompt participants to begin writing their reflections in their journals, capturing the insights and ideas generated during the session.</p>

Session 6. Discipline and teaching for creativity	Date: 6.4.22	Session duration: 120 minutes
Session/focus	Ice-breaker (15 minutes)	Description of Main activities
<p>❖ Discipline. Sub-habits from (Lucas et., 2013):</p> <ul style="list-style-type: none"> - reflecting critically - developing techniques - crafting and improving. <p>❖ Teaching for creativity,</p>	<p>A quick game of 'True or False', centred around common beliefs or statements about discipline, drawing from their personal experiences. For example: 'I wake up at 5 am daily.' After each statement, lead a brief discussion on why it might be perceived as true or false, encouraging participants to share their related thoughts and experiences.</p>	<p>1. Reflecting on Creativity and Discipline with Austen's Butterfly (20 minutes) Objective: To understand the impact of constructive feedback and disciplined revisions on creativity through the analysis of the "Austen's Butterfly" video.</p> <ul style="list-style-type: none"> - Video viewing and note-taking - Group Discussion (10 minutes): Facilitate a discussion among participants about their notes. Discuss how structured feedback and a disciplined approach to revisions can enhance the creative learning process. <p>Break (10 minutes)</p> <p>2. Teaching for Creativity: Exploring the Creativity Wheel (45 minutes) From the Rooty Hill High School's Creativity Wheel (Lucas, 2015) Objective: To explore and understand the different facets of creativity as per the Creativity Wheel model and to apply these aspects to personal and professional development.</p> <ul style="list-style-type: none"> - Ask participants to spend a few minutes examining the wheel and to note down which aspects of creativity they feel they already embody and which areas they would like to develop further. Then in a group, each group member places sticky notes on the wheel on the segments they identify with the most and the least. They should write brief reasons for their choices. - Build a creative activity and explain how it is creative. - Group Discussion and sharing (10 minutes): Each group discusses their findings, focusing on the diversity of creative strengths within their team and how they can collectively work to balance and enhance their creative practices in line with the model. 3. Open Discussion (10 minutes): Facilitate a discussion about the experience. 4. Final Conclusion and Full Group Debrief (10 minutes): summarising the key points from all sessions. Highlight the main elements discussed and the progress made throughout the sessions. Acknowledge the contributions of each participant, emphasising the value of their insights and engagement and active participation. Then, prompt participants to begin writing their final reflections in their journals, capturing the insights and ideas generated during the session.

Appendix G: Consent Form for Pre-Service Teachers (Student-teacher)

- **Invitation and brief Summary**

This study is part of a doctoral project which I am conducting. My name is Dalal Alhussein, and I am a doctoral student at Newcastle University in the School of Education, Communication and Language Sciences.

You as one of the pre-service teachers in Imam Muhammad ibn Saud Islamic University (IMSIU) in Saudi Arabia are being invited to take part in this research.

Before you decide whether or not you wish to take part it is important that you understand why the research is being done and what it will involve. Please read this information carefully and discuss it with others if you wish. Take time to decide whether or not you wish to take part. If you do decide to take part, you will be asked to sign a consent form. However, you are free to withdraw at any time, without giving any reason and without any penalty or loss of benefits.

The main aims of this study were to develop the pedagogy of creative learning and to explore the key factors of developing creative learning and teaching in order to support the use of creative pedagogy in the Saudi context.

This study employed multi qualitative data collection methods, namely focus group, reflective journal, and documents analysis. If you agree to take part in this study, you will be asked to do three tasks, which are:

- 1) attending seven sessions about creative learning and positively participating in the collaborative activities.
- 2) attending seven focus groups to discuss some elements related to creativity.
- 3) writing reflective journal after each session.

This journey from the middle of January to April 2022 (around ten weeks) could be a valuable opportunity and an enjoyable experience.

- Being in this study is completely voluntary and you do not have to take part. Your decision whether or not to participate will not affect your current or future relationship with the researchers or anyone else at the collage.
- You may decline to answer any questions or withdraw from the study without penalty of any kind.
- all data provided including audio-recordings and anonymised transcripts by participants remained confidential and was used for the academic purpose, pseudonyms were used to ensure anonymity and confidentiality.
- All data was stored in a secure personal computer that was only accessible by the researcher and on which all documents and logins and were password-protected, to ensure privacy for all participants. Furthermore, these data were destroyed after completing this study.

- The study results will be published in a thesis, and in academic or professional journals, and may be published and/or presented at conferences but you will not be identified in any report or publication.
- You have a right to receive the results of this study after the study is finished.
- This study has been reviewed and approved by the School of Education, Communication & Language Sciences Ethics Committee at Newcastle University (date of approval:

If you would like more information or have any further questions about any aspect of this study, then please feel free to contact the researcher using the contact details provided below.

Thank you again for helping with this study. Your participation is valued and very much appreciated.

- Thank you for your interest in taking part in this research. Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research study. You will be given a copy of this Consent Form.

Please initial box to confirm consent		
1.	I confirm that I have read the information sheet dated for the above study, I have had the opportunity to consider the information, ask questions and I have had any questions answered satisfactorily.	
2.	I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.	
3.	I consent to the processing of my personal information [<i>name, age, major of study, phone number, email</i>] for the purposes of this research study, as described in the information sheet.	
4.	I consent to my [<i>anonymised/ pseudonymised</i>] research data being stored and used for the research purpose.	
5.	I understand that my data within this research may be published as a report.	
6.	I understand that my research data may be looked at by individuals for the research purpose such as translators or research' supervisors where it is relevant to my taking part in this research.	
7.	I understand that being audio recorded is optional and therefore not necessary for my participation in this research.	
8.	I understand that the products and objectives during the sessions will be photographed as images and stored anonymously on password-protected software and used for research purposes only. - Any images taken will be stored digitally on a secure server.	
9.	I consent to being <i>audio</i> recorded and understand that the recordings will be <i>stored anonymously on password-protected software and used for research purposes only</i>	
10.	I agree to take part in this research project.	
	<i>Participant</i> <hr/> <i>Name of participant</i>	<i>Signature</i> <hr/> <i>Date</i>

Dalal Abdullatif I Alhussein

Name of researcher

Signature

Date

d.a.i.alhussein2@newcastle.ac.uk

Consent Form Version 1/ Date 22/11/2020

Appendix H: Consent Form for Teacher educators, Supervise and Mentor of PSTs

- **Invitation and brief Summary**

This study is part of a doctoral project which I am conducting. My name is Dalal Alhussein, and I am a doctoral student at Newcastle University in the School of Education, Communication and Language Sciences.

You as one of supervisors and mentors of pre-service teachers in Imam Muhammad ibn Saud Islamic University (IMSIU) in Saudi Arabia, are being invited to take part in semi-structured interview in this research.

Before you decide whether or not you wish to take part it is important that you understand why the research is being done and what it will involve. Please read this information carefully and discuss it with others if you wish. Take time to decide whether or not you wish to take part. If you do decide to take part, you will be asked to sign a consent form. However, you are free to withdraw at any time, without giving any reason and without any penalty or loss of benefits.

The main aims of this study were to develop the pedagogy of creative learning and to explore the key factors of developing creative learning and teaching in order to support the use of creative pedagogy in the Saudi context.

This study employed multi qualitative data collection methods namely focus group, reflective journal, and documents analysis and semi-structured interview.

- Being in this study is completely voluntary and you do not have to take part. Your decision whether or not to participate will not affect your current or future relationship with the researchers or anyone else at the collage.
- You may decline to answer any questions or withdraw from the study without penalty of any kind.
- all data provided including audio-recordings and anonymised transcripts by participants remained confidential and was used for the academic purpose, pseudonyms were used to ensure anonymity and confidentiality.
- All data was stored in a secure personal computer that was only accessible by the researcher and on which all documents and logins and were password-protected, to ensure privacy for all participants. Furthermore, these data were destroyed after completing this study.
- The study results will be published in a thesis, and in academic or professional journals, and may be published and/or presented at conferences but you will not be identified in any report or publication.

- You have a right to receive the results of this study after the study is finished.
- This study has been reviewed and approved by the School of Education, Communication & Language Sciences Ethics Committee at Newcastle University (date of approval:.....)

If you would like more information or have any further questions about any aspect of this study, then please feel free to contact the researcher using the contact details provided below.

Thank you again for helping with this study. Your participation is valued and very much appreciated.

- Please complete this form after you have read the Information Sheet and/or listened to an explanation about the research study. You will be given a copy of this Consent Form.

Please initial box to confirm consent		
1.	I confirm that I have read the information sheet dated for the above study, I have had the opportunity to consider the information, ask questions and I have had any questions answered satisfactorily.	
2.	I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.	
3.	I consent to the processing of my personal information [<i>name, years of service, major of study, phone number, email</i>] for the purposes of this research study, as described in the information sheet.	
4.	I consent to my [<i>anonymised/pseudonymised</i>] research data being stored and used by others for future research.	
5.	I understand that my data within this research may be published as a report.	
6.	I understand that my research data may be looked at by individuals for the research purpose such as translators or research' supervisors where it is relevant to my taking part in this research.	
7.	I consent to being <i>audio</i> recorded and understand that the recordings will be <i>stored anonymously on password-protected software and used for research purposes only</i>	
8.	I agree to take part in this research project.	
<p><i>Participant Signature:</i></p> <p><i>Date</i></p> <p>Researcher: Dalal Abdullatif I Alhussein, Date: 25-01-2021 d.a.i.alhussein2@newcastle.ac.uk</p>		

Appendix I: Results of Thematic Analysis of the Pilot Study of Pre-Service Teachers.

(Codes, Categories, and Themes)

N	Open coding	Instruments of data collection			Grouping codes	Building thematic map	Notes
		Focus group	PSTs' reflective journal	Researcher' reflective journal			
1.	Creativity is for all people. (everyone can be creative)	X FG1	X P1RJ1, P2RJ1		PSTs' notion of creativity	PSTs' understanding of creativity	RQ1 How do Saudi pre-service teachers develop their approach based on the pedagogy of creative learning?
2.	Creativity is usefulness.	X FG1, FG3					
3.	Creativity can be developed across the curriculum.	X FG3	X P1RJ1, P3RJ1				
4.	Creativity and effective teaching have common goals at schools.		X P2RJ1				
5.	Creativity is more than just arts.	X FG2	X All RJ1				
6.	Creativity involved motivation.	X FG1					
7.	Creativity is about useful solutions.	X FG1, FG2	X P1RJ1, P2RJ1				
8.	Creativity depends on the social context	X FG3					
9.	Creativity and Maslow's hierarchy of needs		X P2RJ1				
10.	Creative learning is a specific part of creativity that is related to education.	X FG1			Creativity in education	PSTs' understanding of creative learning definitions	
11.	Creative learning encourages pupils to learn.	X					
12.	Mini creativity can be developed at school level	X	X P3RJ2, P2RJ2				
13.	Creative learning and teaching is crucial at primary schools						

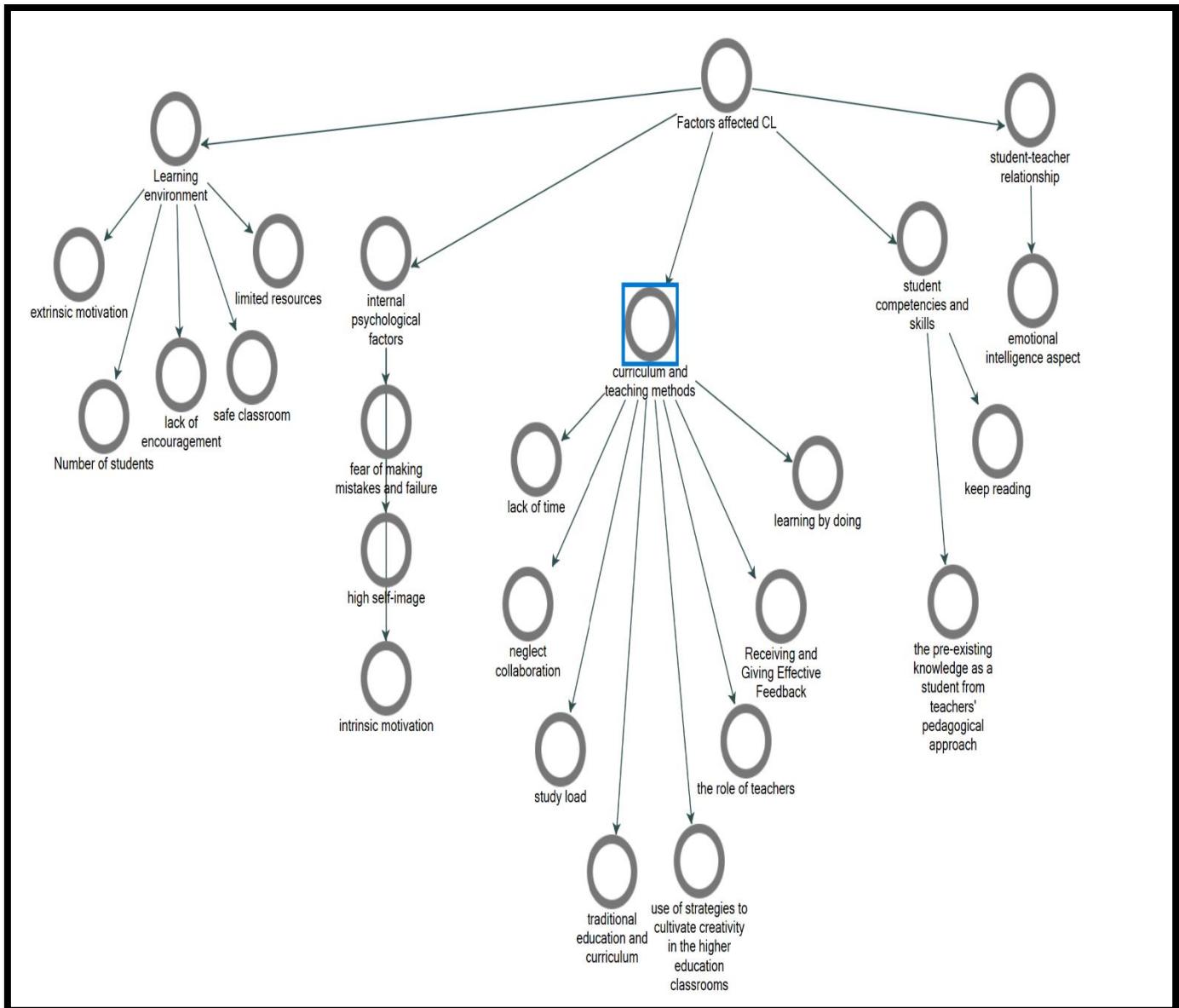
14.	Creative learning depends on two sides of motivation: intrinsic and extrinsic motivation.	X FG2	X P3RJ1		Creative learning and motivation				
15.	Motivation leads to creative learning and vice versa.	X FG1							
16.	Creative learning develops individuals based on their needs	X FG1			Benefits of creative learning in life				
17.	Creative learning allows students to express themselves.	X FG3							
18.	Teacher patient, caring, kind	X FG1	X All RJ1		Personality traits	Understanding creative learning characters for teachers			
19.	Teacher' smile and body language	X FG1	X P3RJ1						
20.	decision-making skills	X FG1							
21.	Open-minded	X FG1							
22.	teacher is taking risk	X FG1							
23.	The teacher's tone of voice	FG1	X P3RJ1						
24.	The friendly relationship between teacher and students	X FG1	X P3RJ2						
25.	Remember students' name	X FG1							
26.	Passion for teaching	X FG1	X P2RJ1						
27.	teacher self-confidence in the classroom	X FG1	X P2RJ1, P3RJ1						
28.	Good understanding of the subject knowledge (Subject content knowledge)	X FG1	X P3RJ1, P4RJ1, P5RJ1						
29.	Good understanding of the pedagogical content knowledge (teaching methods)	X FG1, FG2	X P1RJ2, P2RJ2						
30.	teacher stimulates curiosity	X	X						

		FG1		Creative habits of teachers	Active teaching strategies (learner centered approach)	Creative teaching And Teaching for creativity	Factors support teachers' creative learning and teaching?
31.	teacher values and activates imagination	X FG1, FG2	X P1RJ2, P3RJ2,				
32.	Collaboration skills	X FG2	X P6RJ1				
33.	Differentiating teaching practices	X FG1	X P1RJ2, P3RJ2				
34.	Dialogues foster creativity	X FG1, FG2	X All RJ1				
35.	Brainstorming	X FG1	X All RJ1				
36.	Use stories	X FG1	X All RJ1				
37.	Mind maps	X FG1	X All RJ1				
38.	Practical activities (Learning by doing)	X FG2, FG3	X P3RJ2, P2RJ2				
39.	Open inquiry	X FG1, FG3	X				
40.	Clear instructions of the task	X FG2	X P2RJ2				
41.	Offer freedom space	X FG2					
42.	Giving the pupil a choice	X FG2					
43.	Offer enough time to complete the task	X FG2	X P2RJ2				
44.	It is important to focus on examples from life (how to solve daily life problems)	X FG2	P1RJ2, P2RJ2 , P2RJ3				
45.	Encourage different experiences	X FG2, FG3					
46.	Developing time management skills to meet deadline.		X P2RJ2				

47.	Sharing ideas and construct on group discussion		X P2RJ1, P2RJ2				
48.	Understanding the importance of collaboration and planning.	X FG2	X P6RJ1				
49.	lack of informal activities	X FG1, FG3			Obstacles in the physical environment of the college	Factors hinder creative learning for PSTs	
50.	lack of knowledge and experience regarding creativity in teacher education	X FG3					
51.	Lack of time in practicum	X FG3					
52.	planning lessons under time pressure that destroy creativity	X FG3					
53.	Lack of resources	X FG1, FG3					
54.	PSTs' feeling stress and burn out	X FG3					
55.	lack of learning facilities in college	X FG3					
56.	objective and subjective feedback	X FG3	X P2RJ1		Constructive feedback		
57.	The impact of negative feedback	X FG2	X P3RJ2				
58.	Enjoying in the sessions (the participants were satisfied with sessions)	X	X All RJ1 All RJ2		Joy in learning	The effects of collaborative sessions on the perspective of	
59.	Weekly writing supports teaching improvement	X FG3	X			pre-service teachers of creative learning and teaching	
60.	Reflective writing is difficult and important at the same time	X FG3	X P2RJ2		Reflective writing and thinking		
61.	Reflective journal is difficult/ not familiar tool within teacher education.	X FG3					
62.	Useful session to extend knowledge	X	X				

		FG3	All RJ1				
63.	After the second session, the understanding of creativity was developed.	X	X P5RJ1, P1RJ2, P3RJ2				

Appendix J: Thematic map generated using NVivo, illustrating participants' perceptions of factors influencing creative learning, derived from initial coding.



Appendix K: Outline of pre-service teachers' data within the sessions of creative learning

Outline of Pre-service Teachers Session Attendance																
Sessions	N	Ola	Fouz	Huda	Nouf	Noor	Ranim	Dima	Lina	Haifa	Nawal	Lama	Duaa	Jood	Bdoor	Manar
S.1	11	X	X	X	X	X	X	-	X	X	X	X	-	X	-	-
S.2	15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S.3	7	X	X	X	X	X	-	X	-	-	-	X	-	-	-	-
S.4	11	X	X	X	X	X	X	X	X	-	X	X	X	-	-	-
S.5	12	X	X	X	X	X	X	X	X	-	X	X	X	X	-	-
S.6	11	X	X	X	X	X	X	X	-	X	-	-	-	X	X	X

Outline of Pre-service Teachers' Reflective Journals																
Sessions	N	Ola	Fouz	Huda	Nouf	Noor	Ranim	Dima	Lina	Haifa	Nawal	Lama	Duaa	Jood	Bdoor	Manar
S.1	11	X	X	X	X	X	X	-	X	X	X	X	-	X	-	-
S.2	15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S.3	7	X	X	X	X	X	-	X	-	-	-	X	-	-	-	-
S.4	11	X	X	X	X	X	X	X	X	-	X	X	X	-	-	-
S.5	11	X	X	X	X	X	X	X	X	-	X	X	X	X	-	-
S.6	10	X	X	X	X	X	X	X	-	-	X	-	-	-	X	X

Outline of Pre-service Teachers' Focus Group																
Research metho	N	Ola	Fouz	Huda	Nouf	Noor	Ranim	Dima	Lina	Haifa	Nawal	Lama	Duaa	Jood	Bdoor	Manar
Focus Group	10	-	X	X	X	X	X	-	X	-	-	X	-	X	X	X

Appendix L: Six individual analyses using reflexive thematic analysis, regarding Section (4.2.2)

N	Main Theme	Points	Examples/ extracts	Note and comment
1. Ola	Perspective on Creativity	The subjectivity of creativity.	I saw that our notions of creativity differed depending on the person's position	<p>Ola's journal demonstrates a clear evolution in her perspective on creativity. Throughout her entries, there's a noticeable progression in her understanding of the concept. This growth aptly captures the various stages and nuances of the topic as she navigates through the sessions.</p> <p>Therefore, I pose the question from Ola's journal: How to teach Arabic lessons that foster a positive and creative personality?</p>
		The importance of reflection and continual growth in teaching.	Discussion, idea sharing, ... this is how we learn and grow our ideas. ... Learning can be fun. I recognise there are different types of imagination in activities but how can these be used in Arabic lessons? ... It shifted my perspective in various ways by allowing me to share my thoughts and experiences. Because teachers keep learning, that altered my perspective on how to encourage creativity in the classroom. (Entry 1) + Entry 5, 6	
		Evidence-based practices: practical experience and evidence gathering are critical. The role of teacher as action researcher.	To be effective educators, we must be able to form our practices based on our observations. In order to use cooperative work, for example, we must apply it and analyses the results. (Entry 5)	
		A multifaceted understanding of creativity in teaching.	- Entries 2, 3, 5 "As an Arabic teacher, Teaching creativity involves more than one creative habit, such as participation, imagination, perseverance and curiosity... We have to focus on two areas, allowing students and teachers to develop knowledge and proficiency in their field, and encouraging thinking skills development".	
		The link between creativity in teaching and professional development:	Creativity and professional development go hand in hand. "Teachers continue to develop throughout their careers. Therefore, discipline is a part of being a creative teacher" (Entry 6).	
		The role of teachers	my role as the session tutor (mentioned in Entries 1 and 3); the role of teacher educators within the college staff (discussed in Entries 2 and 3); and the pivotal role of school teachers, as illustrated in Entries 1, 4, 5, and 6	
2. Fouz	The teacher's role as a creative model for students	Belief in teachable creativity and teaching approach in primary school	<ul style="list-style-type: none"> - Creative teachers as teacher who creates an attractive classroom, "finds a new and attractive way of thinking, learning, and problem-solving" (Entry 1). She believes that a creative teacher plays a crucial role in fostering student's creativity. - Dialogue was good way to encourage our thinking, and I believe that there is a close relationship between the use of dialogue on different topics in a positive way and creativity... It was great to see the tutor being constructive 	<p>Fouz's journal demonstrates a clear evolution in her perspective on the role of teachers concerning creativity. Throughout her entries, a noticeable progression emerges in her understanding of the aspects and roles of creative educators, both in primary schools and higher education. Furthermore, she underscores the importance of the environment as a foundational element to nurture learning and</p>

			<p>and interested in hearing our opinions and providing equal time to each participant. So, it was very enjoyable to discuss things in a fun atmosphere</p>	<p>creativity. This evolution aptly captures the multifaceted nature of the topic, as she delves deeper throughout the sessions. Given Fouz's introspection, a pertinent question arising from her journal would be: What does a creative teacher look like?</p>
		Perseverance and resilience in creativity. Socio-cultural impacts on learning	<p>“The challenges teachers face, particularly within the constraints of the Saudi educational system” (Entry 3)</p>	
		Body language and teacher silent behaviour	<p>This session was rewarding and beneficial to me. The tutor explained what curiosity is in teaching. Because of exams, there were fewer participants, but she encourages us with her smile and positive attitude throughout all the activities. In my experience, the behaviour of a teacher, their voice, body language, and smile, can deeply impact the way students perceive and engage with the lesson. Therefore, a creative teacher must be mindful of these aspects to foster a positive learning environment. (Entry 3)</p>	
		Positive learning environment	<p>Fun learning (Entry 1) Positive environment for learning and creativity (Entry 3)</p>	
		Creativity in Higher education	<p>“Even teaching staff in High education can form learning teams, brainstorm, pose intriguing questions and create a student-centered approach” (Entry 5).</p>	
3. Huda	A progressive understanding of the concept of creativity	Creativity is multifaceted. Imagination and creativity dangerous of creativity	<p>“I discovered that creativity is not a gift that few people are born with“ “as a skill, not a gift” (Entry1)</p>	<p>Huda's journal reveals a progressive understanding of the concept of creativity. From the analysis, three distinct facets emerge. First, she identifies the multifaceted nature of creativity, acknowledging its intricate dimensions. For example, she views creativity as something that can be nurtured and developed, rather than merely an inherent trait. She then delves into the dual nature of creativity, recognising both its advantages and challenges. Finally, Huda pinpoints the sociocultural factors that influence creativity. Specifically, she emphasises that the acceptance and expression of creativity are molded by sociocultural norms. Furthermore, Huda underscores the significance of feedback in enhancing and refining creative outputs. Overall, she showcases a nuanced comprehension of the concept of creativity in education.</p>
		Role of Sociocultural Factors	<p>“...sometimes the product or the process is not creative because of social or cultural reasons.” (Entry6)</p>	
		Importance of feedback in creative processes:	<p>“After the session discussion, I discovered that I had participated in several group study assignments... but I had received very little effective feedback...” (Entry5)</p>	
		Reflection on Teaching Methods		

				<p>Given Huda's introspection, a pertinent question arising from her journal.</p> <p>Given Huda's introspection, a pertinent question arising from her journal would be: What else is included in creativity?</p>
4. Nouf	The significance of collective exploration, deep thinking, and fun learning	The value of collective exploration & deep thinking + Participation and discussion	(From Entry 1)	<p>Nouf's reflections focused on two themes: first, the significance of collective exploration and deep thinking; and second, the attributes of a creative learner. Additionally, a recurring motif throughout her journal is the place of fun learning within creativity. Collectively, these themes shed light on her understanding and appreciation of creativity in education.</p> <p>Given Nouf's introspection, a pertinent question arising from her journal would be: Nouf: Is creativity pursued for fun, or is fun found in the creative process?</p>
		Collaborative learning: beyond group formation	In the classroom, it is wonderful to encourage pupils to develop opinions through debate. There are usually two sides to every debate, but if you use 'six thinking hats',... (From Entry 5)	
		The interplay of imagination, perseverance, and product creation	(From Entry 5)	
	The attributes of a creative learning and teacher	Joy of learning The qualities of a creative educator	"learning should be enjoyable" (Entry 2), "educators must inspire students to love learning, flourish and strive for excellence"(Entry 3) + Entry 6	
5. Noor	The meaning of creativity.	Creativity is multifaced.	"Every person has unique thoughts and approaches to solving problems" (Entry 1). creativity is about solving problems, saying "finding smart solutions using imagination" (Entry 2). "creativity means the focus on new ideas in a simple and collaborative way" (Entry 5) "Creativity is the result of hard work..." (Entry 6)	Noor's reflective journal illustrates a marked progression in her comprehension and appreciation of creative learning. Throughout her entries, she consistently emphasises the pivotal role of discussions in refining understanding, addressing misconceptions, and enhancing teaching methodologies. Such emphasis suggests that these discussions played a crucial role in challenging, shaping, or reaffirming her beliefs about creativity.
	The pivotal role of discussions	Influence of Discussions on Thought Processes.	"The discussion touched on several areas of my thinking" (Entry 1).	Moreover, Noor demonstrates a commendable analytical approach, particularly when she dissects and critiques prevalent misconceptions surrounding creativity.
		Misconceptions about Creativity	She analysed and criticised the misunderstanding of creativity, such as being synonymous with intelligence.	

		Application of Discussions in Practical Teaching	“During our discussion of 'Bloom's Taxonomy for Cognitive Objectives', I found that some comments and experiences of participants are useful in preparing lessons.” (Entry 4)	Furthermore, her reflections pivot to the practical implications of theoretical discussions. A recurring sentiment in her journal, encapsulated by the question “How do I become an optimistic, confident, and creative teacher?
	self-confidence	The significance of confidence for pre-service teachers and for the effective application of creative teaching methods in the classroom.	“As a pre-service teacher, I believe confidence is crucial not only for our personal growth but also for effectively implementing creative pedagogy in the classroom. It's the bridge between knowledge and its practical application.” (Entry 3) “Confidence is highlighted as a foundational element for successful and in personal development as educators... ”. “To truly harness the power of creative pedagogy, we pre-service teachers must first find confidence within ourselves”. (Entry 6) “I can say it is not an easy practice, but as educators we can accomplish it!” (Entry 6)	
6. Ranim	The role of reflection in teaching experience as pre-service teacher.	Reflection supports to solve fears and anxieties of teaching in a real-world classroom setting	“I realised that I shouldn't be frightened to explain the first lesson or evaluation in front of the school teacher and the placement training mentor.. that I am able to analyse, understand, and refine my teaching practices. Every classroom experience, interaction with students, and feedback offers invaluable learning opportunities. By consistently reflecting on these experiences, I can identify areas of strength and aspects that need improvement”. (Entry 1).	Ranim's reflections consistently highlighted the transformative impact of the sessions and underscored the essence of pedagogy for creative educators. The first theme that emerges prominently is the centrality of reflection in navigating her experiences as a pre-service teacher. Her journal entries capture a journey from initial apprehensions to a more grounded optimism, drove by her evolving understanding of creative learning. The second theme focuses on the significance of collaboration in creative teaching. Through her reflections, Ranim progressively deepens her grasp of what truly embodies creative teaching, emphasising the imperative of meaningful collaboration. Thus, I found the question “What if we turned our teaching worries into creative and reflective directions?” captures the essence of taking worries and challenges and using them as catalysts for creative growth. As her enthusiasm for creativity is
		Essential qualities in creative learning.	“critical thinking abilities and a sense of risk for a creative learner” (Entry 2).	
		Reflection on feedback and discussions	Despite the complexity of the issue, I appreciated my peers' comments about how questioning fosters creativity, imagination and tenacity. I will work to discover activities that foster each of these traits. ... As a new teacher, I continue to make an effort to carefully design the class activities... (Entry 4)	
	The role of collaboration in creative teaching	Applying collaboration to her lessons.	“I plan to do cooperative learning with imaginative tasks not because it was mandated by the school administration but to improve learning, foster social connections and hone abilities”. (Entry 5)	

		<p>Teacher role in collaboration</p> <p>“The value of being supportive and friendly with pupils!” (Entry 5) use “mind maps” (Entry 6), in order to support pupils’ creativity.</p>	amplified by her dual identity as both a teacher and a learner.
		<p>The need for collaboration in the Saudi context</p> <p>“Teamwork can foster creative learning, and the importance of teamwork in promoting creative learning has grown recently” (Entry 5)</p> <p>These sessions helped me to realise the creative potential for teaching and learning 21st-century skills, particularly in the Saudi context, and about Vision 2030 and the change in the country. There is an increasing emphasis on fostering collaboration in classroom learning. My enjoyment of creativity and challenge is increased by my roles as a teacher and learner. (Entry 6)</p>	