An exploration of the impact of resilience interventions.

Educational professionals' views of the Growth Mindset approach and its impact on students' academic resilience.

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Declaration

This work is submitted for the award of Doctorate in Applied Educational Psychology (DAppEdPsy). It contains no material that has been submitted or assessed for any other award or qualification. It is all my own work and to the best of my knowledge contains no material previously published or written by another person, except where due reference is made.

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Overarching Abstract

This research is presented in three chapters, my systematic review, bridging document and empirical research. Chapter one involved an investigation into the impact of school-based resilience groups on the emotional well-being of children and young people. Five studies that met the search criteria were selected and reviewed, one study used a quantitative approach and the remaining four utilised a mixed methods strategy. The systematic literature review also considered children's and young people's views of the impact of school-based resilience groups from the studies identified. Potential methodological issues of the studies were explored. The findings of the systematic review suggest that school-based resilience groups have variable degrees of success. The studies measured success in terms of the reduction of depression and anxiety; changes in confidence, self-esteem, behaviour and emotional and social factors. Programmes that focused on narrative or emotion coaching techniques reported increased emotional regulation, self-esteem, confidence, reduction of disruptive behaviours and increased social and emotional competences. None of the resilience interventions reported a long term reduction in anxiety or depressive symptoms. The qualitative findings suggested that children and young people expressed that school-based resilience groups, improved their relationships with others, their skills, coping and confidence and provided them with an opportunity to explore their feelings.

Chapter two is the bridging document which explains the process of how the systematic review developed into my empirical research. It describes my personal interest in the research area and how this has progressed over time, my worldview, methodological decisions and the reflexivity involved in the process.

The third chapter is my empirical research study. This aims to explore what impact the Growth Mindset approach has on children's academic resilience from the perspective of educational professionals. A mixed method convergent parallel design was utilised with an emphasis on qualitative information. A paper questionnaire was distributed to one school in a Local Authority and an online questionnaire was used to seek the views of participants internationally. A total of 51 educational professionals completed the questionnaire from 9 different countries. Thematic analysis was used to analyse participant responses of the questionnaire. As a result, six themes were created and discussed. The quantitative information gathered from the questionnaire is relayed descriptively. The five themes identified were, perseverance, autonomous learning, peer support, optimism and self-awareness. The findings suggested the Growth Mindset approach had a positive impact on academic resilience for most students.

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Abbreviations List

BPS- British Psychological Society

CBT- Cognitive Behavioural Therapy

CR- Critical Realism

ELSA- Emotional Literacy Support Assistant

EP- Educational Psychologists

GM- Growth Mindset

IPA- Interpretive Phenomenological Analysis

LA- Local Authority

PRP- Penn Resilience Program

SENCo- Special Educational Needs Co-ordinator

TA- Teaching Assistant

UK- United Kingdom

USA- United Stated of America

WoE -Weight of Evidence

Chapter 1

Systematic Literature Review

What is the impact of school-based resilience interventions on the emotional well-being of children in the UK & Ireland?

Review Questions

This review will focus on asking the questions:

- What is the impact of school-based resilience interventions on the emotional well-being of children in the UK & Ireland?

- What are children and young people's views of the impact of resilience interventions?

Abstract

Mental Health and emotional well-being have been and continue to be, a priority in the government's national agenda. Research suggests that resilience is a positive facilitator of well-being and can support improved academic attainment (Dweck, 2006). This systematic review was conducted based on the work of Petticrew & Roberts. A total of five studies were identified in the systematic search. The characteristics of these included the participants, purpose, context, design and analysis. The quality of the studies was considered using the Weight of Evidence (WoE) tool. Both quantitative and qualitative data in the studies was considered. A thematic synthesis was utilised to provide information regarding children's views of resilience interventions. The review of the papers in this study suggested that resilience interventions do not have a long term statistically significant impact on depressive or anxiety symptoms. However, significant effects were identified for the improvement of confidence, self-efficacy and coping skills. The thematic synthesis suggested that children perceived positive impacts on their coping skills, confidence and relationships with others.

1.1. Introduction

Background

The phenomenon of resilience has evolved over time. It was initially founded in the field of medicine and its roots continued to progress in the behavioural sciences around 1970 (Cicchetti & Blender, 2006). Masten and Obradovic (2006) highlight the historical context of resilience research, there was an initial focus on psychopathy and this progressively developed into the study of biology with the consideration of potential protective factors that support resilience. Research then began to focus on how resilience can be promoted for children experiencing adversity (Alvord & Grados, 2005). In the literature, resilience is referred to as the process of 'bouncing back' from adversity (Galli, & Vealey, 2008).

Adverse circumstances can be defined as situations that threaten or challenge healthy development '(e.g., maternal depression, marital discord/domestic violence, experience of abuse, neglect and separation/loss through bereavement, divorce or separation from a significant person in the child's life)' (Greitens, 2015, p.7). The International Resilience Project (Grotberg, 1997), gathered the views of children to identify the most frequently mentioned adversities children experienced. These were, 'death of parents and grandparents, divorce, parental separation, illness of parents or siblings, poverty, moving home, accidents, abuse, abandonment, suicide, remarriage and homelessness' (Grotberg, 1997, p.7).

It is proposed that individuals who are able to respond flexibly and adaptively to a varying range of pressures and stresses are considered to be resilient (Gartrell & Cairone, 2014). Historically, resilience was viewed as a 'within individual' factor, environmental influences and social relationships that supported people to cope better with difficulties were neglected (Gartrell & Cairone, 2014). In more contemporary research, Fergusson and Horwood (2003), present a set of factors they describe as the 'predictors of resilience', which they separate into three categories; within child factors (cognitive ability, social competence, temperament and positive self-perceptions), within home factors (socio-economic status of parents/carers, education levels within the family and parental confidence), external factors (neighbourhood influences, school aspects; teacher expectations, peer influences and the level of support available). Specific attributes that are associated with resilience include, self-concept, confidence, self-efficacy, ability to problem solve, opportunities for independence and a sense of purpose (Rutter, 2006). Additionally, coping strategies, emotional regulation and

available social support have also been associated with resilience (Eisenberg et al., 2004; Werner & Smith, 1992).

As researchers began to consider the environmental factors that influence specific characteristics of resilience, the need to belong was acknowledged as a motivator for resilience (Frederickson, Baxter, Frederickson, & Dunsmuir, 2009). Stewart, Sun, Patterson, Lemerle, and Hardie (2004) suggested that school has a crucial role to play in the importance of the development of resilience and well-being through the role of building relationships and creating a sense of belonging. In addition to school; friends, support networks and valued social roles are reported to foster the emotional well-being of children and young people (Slade, Johnston, Oakley Browne, Andrews, & Whiteford, 2009).

Although, as mentioned earlier, resilience is predominantly referred to in the literature as the process of 'bouncing back' from adversity, research has demonstrated that resilience is much more complex than this (Cohen, Pooley, Ferguson, & Harms, 2011). As previously described, there are a large number of complex social influences on an individual's capacity for resilience and it can be considered a dynamic quality that is susceptible to continuous change (Gartrell & Cairone, 2014). With multiple influences interacting with each other, it is a challenge to operationalise resilience. This is perhaps a critique of the conceptualisation of resilience, how can it be measured since the process is dynamic and occurs over time? (Windle, Bennett, & Noyes, 2011).

A further question is, should we be attempting to measure resilience? There is still no uniform agreement on what constitutes resilient behaviour and whether there is a suitable method to measure it over time. What is clear from the literature is that resilience is not a one-dimensional trait that an individual does or does not possess (Giroux & Prior, 2012). It has been argued that positive outcomes across various aspects of life should be addressed when considering resilient behaviour and this should occur over time (Cicchetti & Rogosch, 1997). Thus, resilience is constructed in diverse ways by individuals and is dependent on environmental circumstances. Masten (2001) asserts that resilience theory places an emphasis on strengths rather than deficits; it considers the facilitators of healthy development and positive outcomes in response to adversity. From this perspective, resilience could belong to the positive psychology paradigm which pledges a commitment to focus on the strengths of a situation (Selekman & Todd, 1995).

The definition of resilience used in this thesis is, 'resilience involves change and transformation, which might result from experiential learning and the development of adaptive capacities, in response to a challenging or adverse event' (Giroux & Prior, 2012, p. 4). The reason that this definition was selected was due to its focus on being transformative

and linked to learning which draws a link between resilience not being static (transformative) and linked to education (learning). This definition is compatible with the research question given that it addresses identifying change in educational settings.

Focus of the review

Resilience is well explored within educational literature; however, many interventions take place in clinical settings (Tedeschi & Kilmer 2005).There appears to be a research gap in the UK around the impact of school-based interventions. There also seems to be a lack of focus on the emotional well-being outcomes of resilience interventions with more emphasis on behavioural changes (Tedeschi & Kilmer 2005). Although resilience interventions have been identified by previous systematic literature reviews as having benefits these have not focused solely on school-based interventions and the impact it has on emotional well-being (Alvord & Grados, 2005). Reviews of the value of school-based interventions are needed to synthesise the impact they have and expand our existing knowledge. Some studies argue resilience interventions are effective and some argue the evidence base is questionable (Diab, Peltonen, Qouta, Palosaari, & Punamäki, 2015).

Thus, this review will focus on asking the questions: What is the impact of school-based resilience interventions on the emotional well-being of children in the UK & Ireland? The second question explored is, what are children and young people's views of the impact of resilience interventions?

1.2. Methodological approach

Research is often approached from positivist or interpretivist viewpoints (Tuli, 2011). It is argued that the method employed to achieve coherent research is directly influenced by the hypotheses/questions that are being investigated and the data collection approach (Creswell & Zhang, 2009). Ontology, epistemology and methodology are related to a researcher's philosophical position. Ontology can be defined as 'the study of being' and is referred to as how we understand the world around us, essentially, our perception of reality (Guarino & Poli, 1993, p. 5). Epistemology can be described as how we believe knowledge should or can be studied (Audi, 1998). Methodology is related to ontology and epistemology, it can be used as a framework that articulates how particular tools or approaches were selected to explore the research question (Parahoo, 2014). Methodology can be considered to be the values that guide how research is approached (Gray, 2004).

The philosophical position adopted by researchers influences the type of data that can be collected and the way it is interpreted. Most of the studies identified in this systematic literature review were mixed methods, thus in this study both types of data were presented

to illustrate a broad account of the findings. This approach allowed for a precise, explicit approach to analysis that enabled causality statements (Mays, Pope, & Popay, 2005). Additionally, it afforded the opportunity to consider and explore the views of participants and their subjective experiences.

A mixed methods approach was used to interpret the data in this study. This involved presenting the quantitative information descriptively followed by the qualitative data and a mixed synthesis. The reason the studies were presented in this way was due to the view that quantitative and qualitative data should be analysed using their own authentic methods rather than trying to transform quantitative data into qualitative data and vice versa (Tariq and Woodman, 2013). This was also how the mixed methods studies in the review presented their information, thus it was deemed appropriate to present the information in a similar fashion for consistency. This approach involved analysing the two data types separately followed by an interpretation section that included comparison of data and findings. The quantitative and qualitative data were kept analytically distinct and analysed using techniques usually associated with that type of data; for example, thematic synthesis was used to analyse interview data. In this approach, the integrity of each data is preserved whilst also enabling an enhanced understanding from combining the two data and sets of findings (Tariq and Woodman, 2013).

Mixed method approaches have been widely debated within the literature (Sale, Lohfeld, & Brazil, 2002). At one stage, it was considered an anti-philosophical movement (Rorty, 1991). The paradigm debate for mixed methods research arose due to historic paradigm disputes between positivist and constructivist stances on undertaking research (Reichardt & Rallis, 1994). The limitation frequently discussed with mixed methods research is the issue of producing a rationale that systematically combines both qualitative and quantitative data in a field where they have often been viewed as incompatible due to their contrasting underlying worldviews (Guba & Lincoln, 1994). To address this limitation researchers have provided approaches that can be utilised in order to conduct mixed methods research that is considered defendable and trustworthy (Creswell & Clark, 2007; Teddlie & Tashakkori, 2003).

A social science worldview that is considered to be compatible with both a quantitative and qualitative approach to research is critical realism (CR) (Harden, 2010). This approach acknowledges the complexity of social phenomena through a mechanism that promotes the consideration of values and interpretive meaning. Equally, the CR approach allows explanation as a factor in the social research process (Sayer, 2000). This is the view that is

taken in this systematic literature review and will be considered when reviewing the articles identified.

Thematic Synthesis

Thomas, Harden and Newman (2013) suggest that thematic synthesis is an approach that enables an overarching understanding of a collective body of knowledge. How this is conducted is frequently determined by the type of research question and the data available. Thematic synthesis is considered a CR approach by Barnett-Page & Thomas (2009), thus it seems like an appropriate method to consider qualitative information for this review. It links the epistemological assumptions in this review and reflects the researcher standpoint. The approach is appropriate for synthesising various data types (Thomas & Harden, 2008), which is suitable for the selection of studies identified in this review.

Data was systematically coded, line by line. The only data analysed was that relating to the review question and the views of children and young people. Thomas, Harden, and Newman (2012) advised that codes can be pre-specified or generated inductively. Since the question of the review does not assume prior knowledge of the outcomes of resilience interventions, codes were generated inductively. Themes were drawn from the codes; these themes were then further synthesised and higher order themes were established.

The Petticrew and Roberts (2008) approach to the systematic review process was followed (see Table 1). This involved the use of a step by step framework to ensure the consideration of the different processes involved in systematic literature reviews as detailed below.

Table 1: Petticrew and Roberts' (2008) seven stage systematic review process.

Petticrew and Roberts' (2008) seven stage systematic review process.
1. Define review question.
2. Determine types of studies needed to answer the question.
3. Carry out a comprehensive literature search to identify studies.
4. Screen the identified studies (i.e. decide which studies meet the inclusion criteria and are not disqualified by the exclusion criteria).
5. Critically appraise these studies.

6. Synthesise the findings of the studies.

7. Disseminate the findings and conclusions of the review.

Defining the question

The question being explored in this study was, 'What is the impact of school-based resilience groups on the emotional well-being of children in the UK and Ireland?' My second question was; 'What are children and young people's views of the impact of resilience interventions?'

An initial broad scope of the literature was undertaken to ascertain existing publications around the topic of resilience and identify any gaps in the research. Although there had been copious existing literature reviews conducted on the topic of resilience, these had most often been undertaken in clinical settings and did not specifically make reference to emotional resilience. Emotional resilience has been defined as experiencing positive emotions and the ability to recover and respond promptly to negative emotional experiences (Conway & Mcdonough, 2006). Emotional well-being has been described as the ability to understand the value of emotions and utilise them in a way that has a positive impact on an individual's life (Fredrickson & Joiner, 2002). Thus, the conceptual difference between emotional resilience and emotional well-being is that one is about how individuals experience and respond to their emotions. The latter concerns how we perceive and utilise emotions to make a positive difference. Emotional well-being is not about the absence of experiencing negative emotions but involves operating from our strengths rather than focusing on weaknesses. Essentially, emotional well-being can be constructed as our capacity to deal with, control and respond to our emotions in a way that does not negatively impact our well-being (Weare, 2015).

Determine types of studies needed to answer the question

During this stage, resilience was considered a subjective term. However, the initial question posed was in some ways an objective one as it assumed an objective reality. In selecting the relevant studies, it was necessary that the studies had to refer to children's emotional well-being to remain relevant and specific to the research question. Initially, literature from sources world-wide were selected with a view that studies in other countries would be relevant to the search and could provide information regarding potential cultural complexities and demonstrate differences of resilience interventions. Articles that specifically referred to building 'resilience' in the abstracts were deemed suitable for the review.

Carry out a comprehensive literature search to identify studies

The following methods were used to identify relevant studies for this review;

- Reference harvesting;
- Grey literature searches
- Electronic database searches;
- Hand-searches of relevant journal;

Reference harvesting

'Reference harvesting' can be described as the process of using the reference list of studies to identify other studies of potential relevance for review (Littell, Corcoran, & Pillai, 2008). The titles of articles that referred to building resilience were scoped and analysed using the inclusion and exclusion criteria. Two studies were selected as a result of reference harvesting.

Grey literature search

'Grey literature' can be described as literature that remains unpublished (Littell et al., 2008). Although unpublished, the information may be of interest and should be considered to reduce publication bias. This search was conducted using the university grey literature search database.

Search Terms

To locate relevant studies, electronic databases were searched using the key terms as represented below in Table 2. The searches were undertaken between September 2016 - January 2017. The databases chosen to access the literature were, Scopus, Web of Knowledge, Psychinfo, Jstor and EBSCO. These databases were selected specifically with regards to their relevance to the field of education, psychology or social science research. Bibliographies that included reference to other relevant studies were also searched.

Screen the studies

During the screening phase, it had been identified that resilience and emotional well-being were highly interwoven. As such some studies that included the relevant factors and referred to the intervention as building resilience were included despite that not being the specific question addressed.

Definitions of search terms

Although as discussed earlier terms such as emotional well-being and resilience are subjective and multi-faceted, it is considered important to define the terms used in SLRs to create a shared understanding of key terminology. As described earlier, well-being has been defined as the ability to understand the value of emotions and utilise them in a way that has a positive impact on an individual's life (Fredrickson & Joiner, 2002).

Emotional resilience is concerned with our response to emotions, similarly to resilience, it is how we recover from adversity with reference to emotional state (Grant & Kinman 2013).These are the definitions for the search terms used in this SLR.

Table 2: Relevant search terms.

Population	Intervention	Measures	Outcome
Child*	Resilience*	well-being	effective*
young people*	resilience intervention*	emotional resilience*	impact
			evaluat*
school	resilience group*	emotional outcomes*	

Identifying studies appropriate for in-depth review

Articles were selected or dismissed through the systematic screening method which included a text review using the inclusion and exclusion criteria reported in Tables 3 and 4 below.

Inclusion/exclusion criteria

The inclusion/exclusion criteria used in this SLR aimed to be reflective of the research question being asked. The inclusion/exclusion criteria was applied in an attempt to ensure the searches were focused on what was being explored in order to find the most relevant articles. Examples of the inclusion criteria applied that focused on the question were, 'studies to make reference to a resilience intervention' with 'children or young people' and 'for the outcomes of the intervention to be reported'. All these factors address the specific research question. Further inclusion criteria that were applied relates to the quality of the articles, such as being 'peer reviewed'. In order to narrow down the search the articles needed to be up to date and published within the UK. Exclusion criteria were also applied, examples included, 'not to take place in clinical settings' and 'not to include articles that did not make specific reference to resilience in the abstract'. This exclusion criteria were applied again to focus on the research question and prevent the inclusion of non-relevant journal articles. The inclusion/exclusion criteria are documented in Tables 3 & 4 below.

Table 3: Inclusion criteria used during the search phase.

Inclusion criteria
• Based in UK & Ireland
• Undertaken in the last 10 years
• Qualitative or mixed methods approach
• Explicitly stated intervention is resilience focused
• Peer reviewed
• Children and young people aged 4-16 years
• Outcomes reported
• Written in English

Table 4: Exclusion criteria used during the search phase

Exclusion criteria	Examples from excluded studies
Inappropriate context	• Post-compulsory education settings • Clinical settings • Higher education • In the home • Studies from outside the UK & Ireland
Lack of specificity or focus on resilience and emotional outcomes	• Studies exploring the impact of teacher resilience • Studies that did not specify the term resilience in their title or abstract • Studies exploring emotional well-being as a whole
Not an empirical study	• Opinion pieces • Literature reviews • Policy documents

Figure 1: Process of initial search, systematic screening and full text review (following Petticrew and Roberts, 2008, stage 3 and 4)

Online Databases

Web of Knowledge	EBSCO (ERIC and British Education Index)	Ovid (Psych info)	Scopus	Jstor

Number of articles retrieved in initial search

165	444	256	82	75

Articles excluded after reading abstract and applying inc/ex criteria

0	4	8	1	0

Articles remaining after full text review, hand search & harvesting

5

Total number of articles identified for review.

5
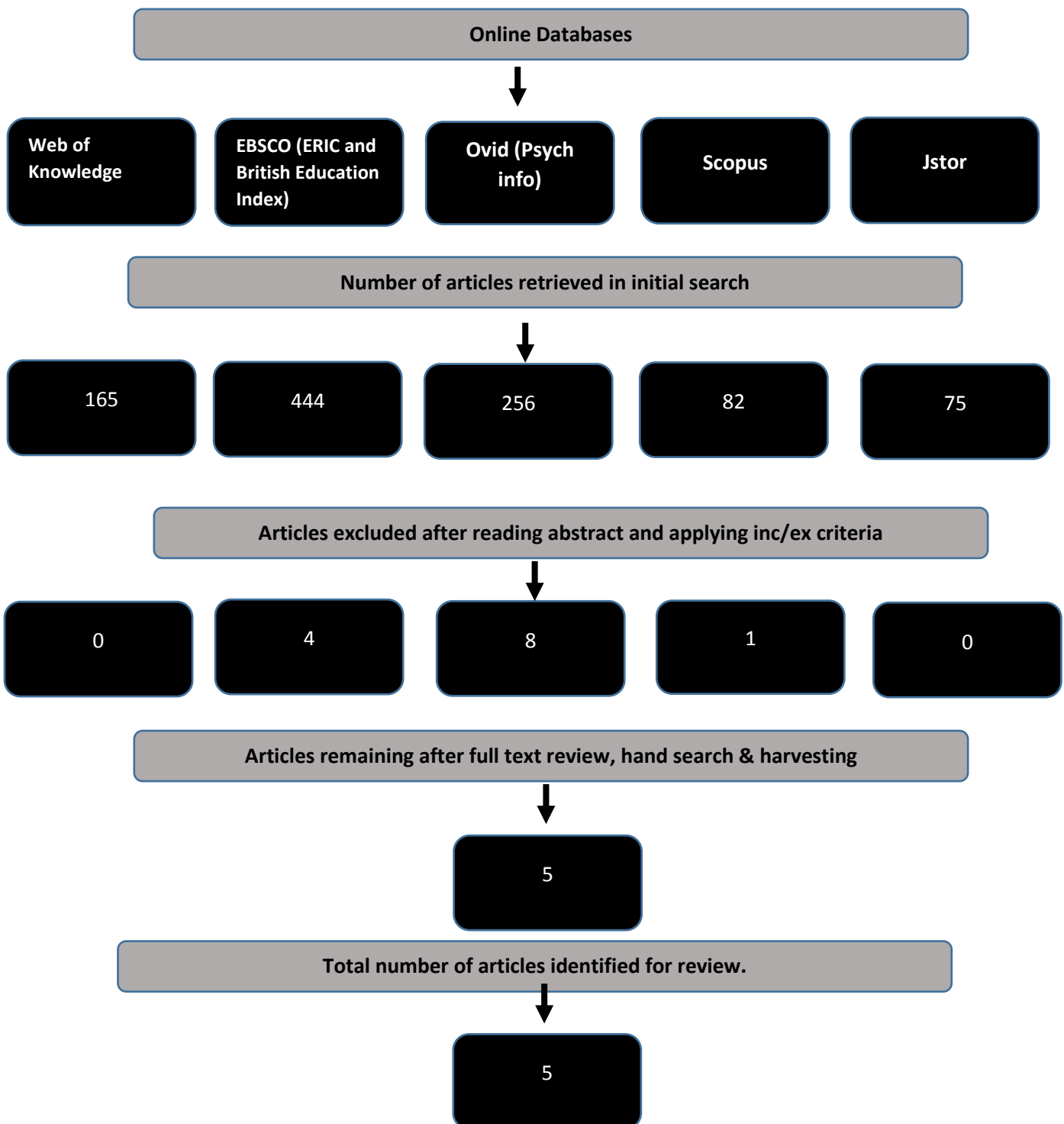
Critically appraise the studies

Mapping the findings

The studies were read, and the main points were recorded. Information noted included, context, participants, design, method and measures. On the next page, Table 5 provides a summary of the general characteristics of the five studies included within the literature review.

Table 5: General characteristics of studies

Study
Ruttledge et al (2016), A randomised controlled trial of the FRIENDS for Life emotional resilience programme delivered by teachers in Irish primary schools (UK)

Participants & Context	Type of resilience intervention	Purpose & Design	Methods & Measures	Outcomes
709 children in a total of 27 primary schools, pupils were aged 9-13 years 346 males & 363 females.

Teachers: 34 teachers took part in a two-day training programme and at least 2 teachers from each school delivered the intervention.
Parents:
Number not stated. | Teachers delivered 10 weekly Cognitive Behavioural Therapy sessions to a whole class in their school, as part of the Social, personal and Health Education (SPHE) curriculum, between January and April 2013.

The sessions were supported by Educational Psychologists. Parents of participating children were invited to attend two parent psycho-educational workshops. | **Aim**: The study was designed to replicate international evaluations of the FRIENDS for Life programme for anxiety reduction and extend the evidence base by investigating effects on strengths-based qualities such as self-concept, coping and school connectedness. For the first time in an Irish context primary school teachers were the lead facilitators of the programme. Randomised control trial either intervention or a wait-list control group. Block randomisation took place. A priori power analysis using G*Power (Faul et al., 2009) establish the number of participants required for the study. | Mixed Methods. Children, parents and teachers undertook measures at three different times (phase: 1,2 & 3) **Outcome measures:** Spence Children's Anxiety Scales (SCAS)- child & parent versions.

Beck Self-Concept Inventory for Youth (BSC-Y).

Coping Efficacy Scale (CES) FRIENDS Social Validity Measures (SVMs). | Analysis: SPSS- ANOVA (Bonferroni, a=.05)

Reduction in anxiety: Not significant

Self-concept: Significant

Coping: Significant |

Study			
Challen et al, (2013) The UK Resilience Programme: A School-Based Universal Nonrandomized Pragmatic Controlled Trial (UK).			
Participants & Context	**Type of resilience intervention**	**Purpose & Design**	**Outcome Measures**
Three Local Authorities these were geographically dispersed. Demographically varied. 16 UK secondary schools in England participated, children aged 11-12 years. Total number of participants: 2,884.	The Penn Resilience Program (PRP) is a curriculum created by a group of psychologists at the University of Pennsylvania. The initial aim was to prevent adolescent depression, but it now aims more broadly to build resilience and promote realistic thinking and adaptive coping. The curriculum teaches cognitive-behavioural and social problem-solving skills. A range of teaching methods and materials are used, including class discussion, worksheets, and games. The UKRP is the 18-hr Cognitive Behavioural intervention.	**Aim**: The study aimed to explore the effectiveness of an 18-hr cognitive behavioural group intervention in reducing depressive symptoms (and associated outcomes) using universal sample of students in mainstream schools in England. The intervention, the UK Resilience Programme (UKRP), was based on the Penn Resiliency Program for Children and Adolescents. Intervention assignment was conditional on class membership, it was largely unrelated to student characteristics. Classes of students were assigned arbitrarily into intervention (UKRP) or control (usual school provision) groups.	Youth Self-Report Form of the Child Behaviour Checklist (Achenbach & Rescorla, 2001). A semi-structured interview for qualitative information. Reduction in anxiety: Not significant

Study
Sharp et al (2016) The Team of Life: A narrative approach to building resilience in UK school children.

Participants & Context	Type of resilience intervention	Purpose & Design	Methods & Measures	Outcome measures
26 secondary schools. Year 7-10 pupils Males	The intervention involved sporting and team-building activities alongside reflective exercises taken from the Team of Life and workshops.	**Aim:** A pilot study that evaluated the impact and outcomes for the narrative team of life- programme in a UK secondary school setting. A pre-post design was adopted to generate initial preliminary evidence of intervention effectiveness based on data from two pilot groups (group one and two).	Youth Self-Report Form of the Child Behaviour Checklist (Achenbach & Rescorla, 2001). A semi-structured interview for qualitative information.	Self-esteem: Significant Confidence: Significant

Study					
Hills (2016), An evaluation of the emotional literacy support assistant (ELSA) project from the perspectives of primary school children.					
Participants & Context	**Type of resilience intervention**	**Purpose & Design**	**Methods** **& Measures**	**Outcome measures**	**Effect size**
16 primary schools children aged 4-11years, 32 males and 21 females. Children were recruited for the study using a criterion based purposive sampling strategy. Children who had been involved in the ELSA project in the last six months were included in the sample.	The ELSA project is a targeted intervention for Teaching Assistants (TAs), implemented and overseen by Educational Psychologists (EPs). The ELSA was designed to build the capacity of schools to support the needs of pupils using their own resources, recognising that children learn better and are happier in school if their emotional needs are also addressed (Burton, 2008).	**Aim**: To evaluate an ELSA project in one Local Authority from the child's perspective.	Sequential mixed methods approach. Quantitative questionnaires (phase 1) and semi-structured interviews (phase 2).	Children's perceived effectiveness of ELSA programme.	Not reported. The findings from the analysis of the children's questionnaires indicated that all of the children rated the ELSA project as effective and 42 per cent scored the maximum perceived effectiveness score.

Study			
Rose et al, (2015) Emotion Coaching - a strategy for promoting behavioural self-regulation in children/young people in schools: A pilot Study (UK).			
Type of resilience intervention	**Purpose & Design**	**Methods** **& Measures**	**Outcome measures**
Participants were trained in emotion coaching techniques (the training phase) and attended four network/booster meetings (the action research phase) to employ emotion coaching techniques in their practice over a period of one year. The action research phase aimed to address some of the identified challenges of related to implementing educational change (Fullan, 2007; Elliot, 1991). **Training Phase** Two workshop training sessions adopted an active learning, multisensory approach to support and illustrate neuroscience, physiological processes, attachment theory, meta-emotion philosophy and the development of emotion coaching skills.	**Aim:** Explore the impact of the use of emotion coaching in professional practice. This was evaluated through improved meta-emotion philosophy, adult self-regulation and positive interactions between adults and children. The study specifically considered a relational model of behaviour management, differences in self-regulation and the pro-social behaviour of children.	Mixed methods pilot study. The research tools used were pre and post-impact psychometric questionnaires, exit questionnaires, pre- and post- training behaviour indices and recordings of the network and booster meeting discussions.	Meta-emotion: Significant Emotion Coaching Questionnaire: Significant Call-outs: Significant Exclusions: Significant Consequences: Significant Rewards: Significant

Analysis of the studies took place based on their appropriateness to answer the questions they were asking and their capacity to answer the questions posed in this SLR. This was achieved through a process of utilising The Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre) data extraction and coding tool for education studies version 2.0 'Quality of the study - Weight of evidence' (see Table 5), (The Evidence for Policy and Practice Information and Co-ordinating Centre, 2007, Thomas et al., 2003). This approach attempted to assess the overall quality of the studies. Below are Tables describing the basis of judgement criteria and the outcomes.

Table 6: Quality of evidence assessment judgement criteria.

Judgement	Basis of judgement
Judgement A Soundness of the studies.	Ethics, participant selection, warrant for research design, procedure, explanation of analysis, triangulation of results, consideration of limitations, addresses unexpected findings, coherence and warrant.
Judgement B Appropriates of design	Consideration of design and analysis of answering the systematic review question.
Judgement C Relevance of study	Consideration of aim, participants, context, design and measures used.
Judgement D Overall weight	Full consideration of A, B and C.

Table 7: WOE outcomes

Study	WOE Outcome
Sharp et al (2016)	**Medium**
Rose et al (2015)	**Medium**
Challen et al (2013)	**Medium**

Hills (2016)	**High**
Ruttledge et al (2014)	**High**

1.3. Findings

Below the findings of the studies are explored and critiqued. The findings for the quantitative information is presented descriptively followed by synthesis of the qualitative data. The rationale for reporting the quantitative findings descriptively is due to the studies using different measures and ratings such as, Connor's Rating Scale, Strengths and Difficulties Questionnaire and Youth Self-report Checklist. The limited congruence between the data collection measures led to the studies being reported descriptively as they were not deemed comparable.

Participants

The studies analysed included diverse groups of participants spread out demographically. The ethnicity, backgrounds and socio-economic status of the participants were varied. The context of the studies were largely primary and secondary schools with the inclusion of some early year's settings, all based in the UK or Ireland. The study that included an early years setting did not base their findings on information gathered from primary and secondary schools despite using them for data collection (Sharp, Eames, & Shippen, 2016). It is unsurprising that the focus of the studies was on primary school pupils with the government national agenda placing great significance on the implementation of early intervention and prevention strategies (Allen, 2011).

The studies used different methods when selecting participants. One study used a criterion based purpose sampling strategy, however, this limits the researcher's capacity to suggest inferences about a population (Etikan, Musa, & Alkassim, 2016). Although one study selected children that had been described as displaying behavioural problems in school, some studies failed to acknowledge selecting children based on experiences of adverse circumstances (a factor that is commonly stated in the concept of resilience).

Several studies commented on the inclusion of rural, urban and suburban schools. Some studies mentioned the inclusion of pupils in receipt of free school meals. Studies tended to take place across several schools, with participants consisting of all students in attendance of specific resilience-building interventions. One study included three local authorities. Four of the five studies explored and considered the experiences of children, professionals and parents. Comparison groups referred to the whole class, school and local authority-wide

groups. All of the studies were undertaken on a relatively large scale including at least several schools in each study.

Research strategy

The studies in the review included both similarities and differences with regards to their research strategy. All of the studies used some form of questionnaire as an information gathering tool, these often involved agree, disagree or Likert scale questions. Although all studies collected information in relation to demographics, students were most often conceptualised or referred to as a homogenous group during discussions. All of the studies included some form of measure of depression, anxiety, coping or behaviour. This espouses a medical view of resilience (Cicchetti & Blender, 2006). Some studies also measured the impact of resilience interventions on teachers' and parents with an assumption that resilience is a within person trait (Giroux & Prior, 2012). Whilst some studies included comparison groups and measured progress across time, others were more evaluative and considered the impact across one point in time with no follow-up study.

Concepts used by studies

As already addressed, current literature espouses different conceptualisations of resilience (Greitens, 2015; Rutter, 1985). Although the specific term resilience was used in all studies, what was 'measured' to study resilience varied. For example, one study looked at goal attainment as a form of measuring resilience and others used only depression and anxiety measures, often self-rated scales. Although some studies explained their definition of resilience, this was not consistent across all of them. However, the core focus of some studies was not only resilience but to consider emotional well-being, but this was not frequently defined. Studies also measured various phenomena, making comparison difficult and at times vague. Variations may be present within the culture and traditions of the specific schools. As such the term 'resilience' may include deviations between schools. A further example can be illustrated by the way the studies described changes in behaviour. Often, they did not report any increase in resilience but a reduction in depressive symptoms or changes to behaviour, it is difficult to make inferences as to which aspect was considering resilience as areas such as behaviour are broad.

Epistemology

It is argued that a mixed methods approach has created a third methodological movement in social science research; this approach incorporates both quantitative and qualitative movements (Teddlie & Tashakkori, 2003). Although most studies were explicit in stating that a mixed methods approach was employed, 4 out of 5 studies did not justify why it was suitable for their particular research or how it strengthened the project, an important factor in any methodological approach (Harden, 2010). It is possible that word count and purpose of

the research may have influenced the decision. Considering the studies more intricately, 3 out of 5 adopted a multiple methods approach, this involved having different questions to answer using different types of data, either qualitatively or quantitatively. However, some studies used both sets of data to answer the same question, this is known as a mixed method convergent parallel approach (Harden, 2010). One study purported that their focus was mainly qualitative data and another study had reported more significantly on quantitative findings. This design is considered to be an embedded one, where one data set is given precedence over another (Harden, 2010). The remainder had approximately an equal split with some studies gathering quantitative data first making it an explanatory sequential approach. One study had taken a transformative approach stating that they used a two-phase sequential mixed methods approach, to employ methods that best served the theoretical perspective.

Linking the findings

The studies reviewed used different measures to report on various aspects of resilience and emotional well-being. Below are the findings of similar phenomena measured across the different studies.

Anxiety & Depression

Three of the five studies attempted to measure a reduction in depressive or anxiety symptoms. Challen, Machin, and Gillham (2014), purported a minor significant ($p > 0.05$) effect on the reduction of depressive symptoms post intervention. A correlation was noted regarding higher quality interventions leading to the highest reduction of depressive symptoms. However, in both year 1 and 2 follow-up studies no significant impact in the reduction of depressive symptoms was reported after intervention. The results suggested that although there was initially a small significance in the reduction of depressive symptoms, this was short lived in the follow-up studies. No significant effect post intervention in the reduction of anxiety symptoms was reported in two studies (Challen et al., 2014; Ruttledge et al., 2016). In contrast Sharp et al. (2016), reported a significantly lower reduction of internalising problems (included measures of anxiety & depression) post intervention. Cohens d indicated that the effect size was large ($d = 1.98$).

Table 8: Depression & anxiety measures

Study	Measures used
Sharp et al (2016)	Child Behaviour Checklist (CBCL) Scales.
Challen et al (2014)	Children's Depression Inventory (CDI;1992). The Revised Children's Manifest Anxiety Scale (RCMAS; 1985).
Ruttledge (2016)	*Spence Children's Anxiety Scales (SCAS)* The BSC-Y (Beck et al., 2005)- Self-concept

Emotion, Confidence & Behaviour

Contrasting results were found with regards to behaviour, confidence, and emotional regulation. Challen et al. (2014), suggested no significant impact on behaviour post-intervention. However, Sharp et al. (2016) asserted a significant reduction in externalising behaviours ('delinquent behaviour & aggression') post-intervention with a reported large size effect. Rose, McGuire-Snieckus, and Gilbert (2015) stated a significant increase in meta-emotion from Time 1. Further to this, a reported reduction in call outs, consequences and exclusions were reported as statistically significant post intervention. Ruttledge et al., 2016, reported statistically significant increased levels of self-efficacy post intervention. Ruttledge et al. (2016), also described a significant increase in participant's self-concept post intervention. Hills (2016) reported an increase in participant's confidence, however, this was relayed qualitatively. Self-esteem was also measured within depressive symptoms that reported no statistical significance (Challen et al., 2014).

Table 9: Behaviour, emotion and confidence measures.

Study	Measure
Challen et al (2014)	Strength & Difficulties Questionnaire (SDQ)
Sharp et al (2016)	Youth Self-Report Form of the Child Behaviour Checklist (2001).
Ruttledge et al (2013)	Behavioural self-report measures for children.
Rose et al (2016)	Possible pre- and post- emotion coaching training changes in pupil behaviour indices.

Interpretation

In summation and in reference to the review question, 'what is the impact of school-based resilience interventions on the emotional-wellbeing of children in the UK and Ireland?' The presented findings would suggest that the level of impact is dependent on the intervention type. Challen et al. (2014) reported a short-lived reduction in depressive symptoms and no significant impact on behaviour or anxiety. This study took a Cognitive Behavioural Therapy (CBT) approach and aimed to establish whether resilience interventions were effective when delivered by school staff. The results suggested that the impact of the resilience interventions was reduced when delivered by school staff. Some suggestions for the findings were offered, the school staff involved had no prior experience of delivering resilience interventions and the intervention was targeted at a universal level suggesting that participants may have already had positive well-being measures and not many gains could be made. Further to this, it is argued that universal interventions usually produce smaller gains than targeted interventions (Challen et al., 2014), however, the benefit of universal interventions is the non-stigmatising selection process of students.

Ruttledge et al. (2016), also used a CBT universal approach that involved teachers that were trained to deliver the intervention. Although this study found no reduction in anxiety symptoms they were able to report positive coping and self-concept gains, and this continued after a follow-up. This refutes Challen, Machin et al's (2014) conclusion that CBT resilience interventions are not effective when delivered by teachers. Perhaps this is the case for the reduction of depression and anxiety symptoms but that was not reflected for coping and self-efficacy measures. Ruttledge et al. (2016) reported that the teachers were trained and supported by Educational Psychologists (EPs) throughout the intervention. Sharp et al. (2016) relayed that there had been a reduction in depressive and anxiety symptoms, this suggests that a narrative approach to resilience interventions may be more effective for the reduction in depressive symptoms than CBT approaches. Although the narrative study was implemented by specialist trained staff such as clinical psychologists, health advisors and undertaken on a smaller scale, it also involved peer mentors to implement long-term teams to promote the continuation of impact post intervention.

With reference to the impact on emotion, confidence and behaviour, Challen et al. (2014), suggested no significant impact on behaviour post-intervention. However, Sharp et al. (2016) reported a significant reduction in externalising behaviours and Rose et al., (2015) stated a significant increase in meta-emotion and a reduction in call outs, consequences and exclusions were reported as statistically significant post intervention. This suggests that

emotion coaching and narrative interventions have a greater impact on emotion, confidence and behaviour than CBT approaches. Again, both of these studies involved specially trained professionals or regular booster sessions delivered post intervention.

The measures used in these studies are indicative of the way the researchers conceptualise resilience and children. It could be argued that many of the studies refer to within child factors to measure resilience. Although some within child factors such as temperament may be relevant to our understanding of resilience, research suggests that there is a significant influence from the environment and an ecological approach should be acknowledged (Bronfenbrenner, 1999). The approaches that have been deemed as having more of an impact, (Rose et al., 2015; Sharp et al., 2016) paid significant attention to, and reported, environmental influences such as school connectedness. Consideration of quantitative data offers limited information regarding the impact of resilience interventions, focusing on the reduction of anxiety, depression and change in behaviour. Although, where studies have considered student views reference to the environment and other factors that may influence resilience have been made. The consideration of qualitative data is important in order to understand children's perspectives and begin to build a more holistic picture of the impact of resilience interventions (Morrow, 2001).

Qualitative Data

What are children and young people's views of the impact of resilience interventions?

Table 10: Qualitative study information

Study	Data gathering	Analysis	Themes
Sharp et al (2015)	Semi-structured interviews	Thematic analysis- inductive approach at semantic level (Braun & Clarke, 2006).	**Overarching theme:** Shared experiences **Three core themes:** confidence, peer support and positive impact of sport.
Rose et al (2016)	Interviews	Inductive coding utilising constructivist grounded theory, comparative method and narrative analysis.	**Three themes:** Impact on professional practice Self-regulation Behavioural impact on children and young people (correlated with quantitative findings).

Hill (2016)	Semi-structured interviews.	Thematic analysis (Braun & Clarke, 2006).	**Three themes:** Therapeutic relationship Building resilience Dealing with feelings
Ruttledge (2013)	Questionnaire	Quotations extracted to support quantitative findings.	*Three themes:* Self-concept Coping School connectedness.

Key concepts of children's experiences

Initially sixty-one codes were identified from the studies. The codes were then reviewed, several similar and overlapping codes were identified. These items were grouped together and codes not relating to the outcome of resilience interventions were eliminated. This left thirty-three themes, which were evidenced by data from two or more of the studies. These themes were separated by five higher order themes. Two overarching subjects of internal and external impact were also devised (see appendix 7 for initial themes).

Qualitative findings

This section outlines the internal and external outcomes for children and young people who were involved in resilience interventions. Internal outcomes are related to changes in thought and external outcomes relayed the observable outcomes.

Internal impact

A total of 18 themes were considered to be internal outcomes of student's experiences of resilience interventions as illustrated above. These were separated into three higher order themes which demonstrate *Internal* impact;

The three higher order themes were:
1. Improved coping skills
2. Exploring feelings
3. Improved confidence

The first and second themes were identified from data in all four of the studies included in the thematic synthesis. Thus, these were outcomes for some children and young people in all of the studies. Although not all studies used the word coping specifically, reference to the concept was made, such as, 'feeling able to do things' and 'overcoming difficulties'.

The third theme arose from data in two different studies, thus, they were outcomes for students in half of the studies.

External impact

The two higher order themes identified as direct external outcomes for children and young people in all four studies:

(1) Improved relationships
(2) New skills

Both themes emerged in all four studies. Most reference was made to improved relationships, particularly in relation to being supported by adults in school.

Linking the findings

The quantitative findings of increased self-efficacy post resilience intervention support the qualitative findings where participants commented on having more self-belief and recognising their own skills. There were some tentative links between the reductions of depressive symptoms post intervention. One study reported a minor significant impact on the reduction of depressive symptoms post intervention (Challen, Machin, and Gillham 2014). However, the small impact was not sustained in the follow-up studies. The participants who relayed information qualitatively shared how they were more comfortable sharing their feelings and described experiencing increased happiness and optimism.

The quantitative anxiety scales contradicted information reported in the qualitative findings. Whilst Chellen et al (2015) and Ruttledge et al's (2016) quantitative findings report no reduction in anxiety symptom's post intervention, Sharp et al and Hill (2016) both relayed qualitatively that participants reported feeling more calm and less anxious. Although it is not clear how many participants reported these changes. A link could be made between the type of intervention delivered and its reported impact on anxiety symptoms. The findings would suggest that studies using CBT approaches were reported to be less effective when compared with narrative and ELSA approaches. The overall findings would suggest that CBT, narrative and ELSA interventions all had a positive impact on participant's self-efficacy.

Figure 2: Themes identified from the questionnaires regarding educational professionals' views of the GM approach and its impact on academic resilience.

External Impact		Themes	Internal Impact		
Improved Relationships	Improved Skills	Improved Coping	Improved Confidence	Exploring feelings
Teamwork	Social skills	Using coping strategies	Feeling confident	Managing feelings
Making friends	Communication skills	Feeling Calm	Feeling able to try	Sharing feelings
Better friendships	New hobbies	Feeling less anxious	Trying Hard	Changing feelings
Peer support	Enjoying sport/games	Being able to emphasise	Asking for help	Feeling good
Adult support	Problem solving	Overcoming Difficulties	Self-belief	Feeling scared
Shared responsibility		Reframing	Recognising skills	Confusion
Shared experiences		Using coping strategies		
Therapeutic relationships				
Positive regard				

1.4. Conclusions and Implications

Attention is now turned to answering the research question, addressing the limitations of this review and considering the implications for future research and practice. There appear to be no noticeable links between studies' relative contributions to the synthesis and their WoE judgement, sample size, location, overall design, or methods of data collection.

Answering the research question

Having considered the findings of the review making links to both qualitative and quantitative findings, it is appropriate to revisit the review questions and consider to what extent they have been answered by this review.

Overall findings

The included studies have reported mixed quantitative findings in terms of the reduction of depression, anxiety, confidence and coping skills. They suggest that these factors can be improved by resilience interventions apart from the reduction of depressive symptoms, however, it depends on the specific intervention and how it is delivered. For example, CBT universal interventions reported little or no reduction in depression or anxiety symptoms (Challen et al., 2014; Ruttledge et al., 2016); although one of the universal CBT interventions reported gains in self-concept and coping skills (Ruttledge et al., 2016). However, targeted interventions that focused on narrative or emotion coaching techniques reported increased emotional regulation, self-esteem, confidence, reduction of disruptive behaviours and increased social and emotional competences (Rose et al., 2015; Sharp et al., 2016). It should be noted that both studies took place on a smaller scale than the CBT intervention studies.

In relation to the qualitative findings, children and young people quoted the most reoccurring impact of resilience interventions as improved relationships with adults and peers. Children also expressed that the groups gave them more confidence and better coping skills which echoed the quantitative findings. Children also spoke about enjoying the groups and being able to explore their feelings as a positive impact of the interventions. In one study the children quoted initially feeling 'scared' and 'worried about the unknown'. It was communicated that this was due to not knowing why they had been selected for the group and how long they would be there for (Hills, 2016). This sends a clear message to researchers conducting resilience interventions, when obtaining consent, the consent must be authentic and power dynamics considered. Also, the purpose of the intervention should be clearly explained to the child or young person and the process should be transparent with the inclusion of the voice of the child. Researchers should consult with children to ensure

that they have fully understood the process before they provide consent (Greig, Taylor, & MacKay, 2012).

In summation, this review would suggest that resilience interventions do not have an impact on anxiety symptoms from a quantitative perspective. However, dependent on the intervention implemented, significant gains can be made with regards to children's ability to cope, believe in themselves, build on social and emotional competences and reduce what has been described as disruptive behaviour.

1.5. Limitations of the systematic review

Several potential limitations of this study are addressed.

Firstly, as the generic search term 'resilience' was used when searching databases, there is a possibility that potentially relevant studies were not identified. This may have occurred if the study did not use the specific term 'resilience' but used terms such as, resiliency, coping power, hardiness etc.

Secondly, some of the studies addressed resilience as part of a wider intervention, which included one or more additional factors. Thus, the information obtained is limited and positive effects on resilience could have occurred due to other variables and not necessarily due to a specific resilience intervention.

Thirdly, all of the studies were conducted in the UK and Ireland. Although arguably this produces transferability of findings to work with children in the UK, there is a lack of understanding as to how resilience interventions differ across cultures including different cultural beliefs of resilience.

The final point raised is with regards to the thematic synthesis approach. Although, I feel the qualitative data added great value to the overall study the process of thematic synthesis is a subjective one. This also means that the data in the studies have been interpreted twice by separate researchers, the inductive approach was less driven by theory. A further issue created in the process is that only limited qualitative data was available and reported on in the research studies. Due to not having access to the full transcripts, only part of the picture when considering children's views has been explored.

1.6. Implications for further research

Three areas are considered relevant for future research.

Firstly, now that an understanding has been developed on what impact resilience interventions have it would be important to address what makes specific interventions effective and others less so.

Secondly, to include the views of professionals and parents as part of the systematic review process would create a more holistic picture.

Finally, further research should be considered on how Educational Psychologists can use the principles of effective resilience interventions to support the process of promoting resilient environments for children and young people. This leads on to the empirical study.

Chapter 2

Bridging Document

Systematic literature review to empirical research.

2.1 Overview

This bridging document aims to describe and explore how the SLR led to the empirical research question, 'What impact does a Growth Mindset approach have on students' academic resilience from the perspective of educational professionals?' Firstly, the relevance that the research has for the EP profession is explored alongside the rationale for the research followed by an overview of how my thinking and exploration of the literature that motivated me to explore the Growth Mindset (GM) approach (Dweck, 2010). Finally, I consider my ontological and epistemological stance as a researcher as well as how reflexivity has influenced the process.

From resilience to Growth Mindset

The initial research area that I intended to explore before embarking on GM was about how EPs can support children seeking asylum. These two areas may seem drastically different and the figure below attempts to illustrate the key research influences and decisions that were made which impacted the direction of the research.

Figure 1: Research decisions that influenced topic

Figure 1: Research Decisions

Topic

Research Decisions

Children seeking asylum

This was the initial research interest. Reading around this prompted me to move away from victim labels and focus on resilience.

Influenced by: literature

Resilience

Consideration of ethical issues and practice experience led me to consider resilience more universally.

Practice & ethicalities

Growth Mindset

Lack of Growth Mindset research in UK particularly with reference to academic resilience.

From reading the literature I was drawn to the theory of resilience and reflected that the focus around supporting children seeking asylum should encompass aspects of resilience as opposed to the 'victim labels' that dominated the media (Pupavac, 2008). Although it is

argued that those victim discourses were used in an attempt to build sympathy for those seeking asylum it suggests that such terminology presents a narrow, medicalised construction. Westoby (2008) and Williams (2006) assert that, like others, individuals seeking asylum deserve the right to be active in the construction of their own social worlds.

Rousseau & Measham (2007), suggest that those who encounter traumatic experiences or challenging events can use the experience as a cause for growth and transformation. Marlowe (2009) comments on the importance of focusing on the resilience of those seeking asylum and reports that the subject is a 'relatively unexplored' area of research (p.133). Consequently, I began to focus on the impact of resilience interventions. However, due to a lack of literature regarding school-based resilience interventions for children seeking asylum I began to focus on resilience interventions more universally.

Change in direction

My initial intention was to explore effective resilience interventions in the literature review and consequently employ this approach within a school with a group of children who were seeking asylum. However, once I began to reflect on the ethicalities of this my research direction started to change. I initially considered that this group of children already have considerable professional involvement from multiple agencies and there can be a lack of trust due to the nature of involvement and asylum status (Ní Raghallaigh, 2013). I further contemplated that there might be children within this group that have suffered trauma and lost strong attachment figures in their lives, I considered that my short involvement may not be in their best interests and reflected that the students might not benefit from the research (Bombèr, 2007). By creating a resilience group for children seeking asylum I was potentially viewing them as a homogenous group and I was making an assumption that they needed to develop their resilience, ultimately suggesting this was something they lacked. I felt this was a form of stigmatisation that did not sit comfortably with how I intended to conduct my research (BPS, 2009). It was for these reasons that I began to think about resilience interventions more universally, in doing this I considered what educational professionals could do to support resilient contexts for all children.

I hoped to employ an approach that was relevant to the EP profession which I could use in my practice beyond the research. Thus, I thought about resilience interventions that I could potentially implement and research as a Trainee Educational Psychologist. Whilst conducting my literature review, I identified an article on the GM approach (Dweck, 2010), however, I was unable to include the article as it did not meet my inclusion criteria due to the study being conducted in the USA. This led me to explore the GM approach further and I established that there was a lack of GM research in the UK despite it being implemented with increased popularity in schools. I also noted that there was a lack of research with

particular reference to academic resilience. With these factors in mind considering that the GM approach could be adopted as a whole classroom philosophy and implemented universally, I selected this topic for my empirical study.

Thus the research question for my empirical study was, What impact does a Growth Mindset approach have on students' academic resilience from the perspective of educational professionals?

2.2 Relevance to EP profession

A review has highlighted that due to the nature of assessment and the way success is currently measured in schools, some students are disadvantaged when it comes to attaining 'satisfactory' levels (Anderman, Anderman, Yough, & Gimbert, 2010). Additionally, there are students who are attaining specific benchmarks but not attaining their potential (Anderman et al., 2010). EPs have a responsibility to ensure that students are not excluded from making academic progress (Berliner & Nichols, 2007). Thinking about academic resilience is one way of supporting this.

The GM approach I believe encapsulates both of these agendas with the claim that academic attainment can be improved when we consider the messages we are communicating to children through our language, our expectations and how this influences their internal worlds (Dweck, 2010). The everyday interactions that we have with children are a powerful force in shaping the way they come to think, feel, behave and believe in themselves (Sameroff, 2009). Understanding the mechanisms and influences of resilience and how it impacts the lives of children may contribute to supporting us to make further positive contributions to students' lives. In order to teach, we can first learn from students, this involves asking questions such as, what is it that motivates them in times of adversity? (Dweck, Walton, & Cohen, 2014).

A GM perspective is reported to enable students to concentrate on improving from their personal previous attempts and foster a vision of growth rather than making direct comparisons with their peers (Dweck, 2010). Shindler (2009) relayed that competitive environments can increase students' anxiety, perceived level of threat and creates a social hierarchy, which may have a negative impact on students' access to learning. Additionally, the current lack of financial resources available in local authorities (LA) makes the GM approach appealing to schools as it requires a change in thinking and does not have to be time or labour intensive.

A further aspect that highlights its relevance to the Educational Psychology profession is that the approach is already being adopted in many UK schools. As Educational Psychologists I believe we have a role to explore and validate the evidence base behind the research to ensure that schools are appropriately informed about the implications of the approach and the reliability of the evidence base (SEND, 2015).

Finally, GM is significant to the Educational Psychology profession because if we work towards the view that it is possible to change a student's implicit belief to one of a GM, (Cassidy and Barnes' 2012), research strongly suggests this can have positive implications on student motivation, persistence, academic attainment and resilience, all crucial factors that impact the learning process. Growth could be perceived as the central purpose of education, as Dweck (2012) states, 'the hallmark of human nature is each person's great capacity to adapt to change and grow' (p.614).

2.3 Conceptual Framework

Ontology is a set of beliefs that influence the way we view the world (Grix, 2002). A critical realist (CR) ontology as described above is adopted in this research which will be explored further below. My ontological view impacts my epistemology, which is the study of how we can acquire knowledge based on our ontological beliefs (how we view the world) (Fleetwood, 2014 in: Adler, Du Gay, Morgan, & Reed, 2014).

I used Willig's (2013) three epistemological questions (see Table 1) to consider my research approach and frame my thinking (p.59). Although Willig's (2013) questions were created to explore existing research studies in relation to their methodology and epistemological stance, I used the questions more broadly to consider the ontological and epistemological underpinnings of my own research. These questions prompted me to consider the kind of knowledge the research intended to produce, what assumptions were made and how the role of the researcher is constructed within the process.

Table 1: Willig's (2013) Three epistemological questions (p.59)

Epistemological Questions
What kind of knowledge does the methodology aim to produce?
What kinds of assumptions does the methodology make about the world?
How does the methodology conceptualize the role of the researcher in the research process?

My research question explores whether educational professionals perceive the GM approach as having an impact on student's academic resilience. The question considers

individuals' experiences and perceptions, I created it with an acceptance and expectation that individuals would experience and perceive the GM approach in different ways, given that participants were sought from different parts of the world (see p.60) and the unique beliefs, cultural history and personal circumstances of each individual would influence this process (Maxwell, 2012). For these reasons, the knowledge my question aims to produce can be described as subjective (Willig, 2013).

In addition to seeking subjective interpretation the terminology used to yield my research question assumes the existence of an identifiable reality and social process called 'Growth Mindset' and 'academic resilience' and that there is an 'impact' that can potentially be discovered. For these reasons it could be argued that my research question also holds some realist assumptions. The realist assumptions alongside seeking subjective knowledge based on individuals unique constructs reflects a CR position (Willig, 2013).

Assumptions in line with a CR approach have been established and adopted within this research. These are that, relativism and realism are acknowledged, and the exploratory mechanisms can be considered. This research was exploratory as it attempted to further our knowledge of an under-researched area of the GM approach and to identify mechanisms that influence the process.

CR is inherently critical as it assumes that knowledge is uncertain and dependent on complex and messy real-world contexts interwoven with individuals' perceptions and constructs (Grix, 2002). Thus, researchers interact with the world by describing it from a third person perspective. Consequently, knowing the exact nature of the social world is not necessarily obtainable (Grix, 2002). The uncertainty of ascertaining a view of the world translates to understanding the world as being subjective and constructed by our interpretations. Our interpretation is therefore influenced by our own experiences, the language we use and our social interactions with others. Given this ontological position, CR can adopt interpretivist methodologies that allow for individual interpretation of subjective experiences of phenomenon. This is reflected by my use of qualitative questioning and thematic analysis to interpret and present the views of educational professionals.

I have approached the research with the view that there is a reality, but human beings are entangled within the process of knowing. Our internal realities are not always accessible thus we cannot discover all there is to know about the functions of human behaviour and how people experience the world. McNiff, Lomax, Whitehead (2013, p.14) suggests that 'the researcher is inside the situation and will inevitably influence what is happening'. This is something that has been considered and reflected upon during the research process. It is

important to consider my own philosophical position when interpreting the data and reflect upon its implications (Willig, 2013).

The theories and frameworks used have been influenced by my research ontology whether this is made explicit or not. CR answers the 'what' and makes some attempts to answer the 'why' questions in supporting the development of exploratory knowledge that makes reference to the 'real world' (Archer, Sharp, Stones, & Woodiwiss, 1999). CR considers experiences, actual events and causal factors in combination. It is argued that CR constructs the world as 'an open social system' a view that is considered valuable in social research (Zachariadis, Scott, & Barrett, 2013).

Willig (2008, p. 16) notes '…the researcher seeks to generate knowledge that captures and reflects as truthfully as possible something that is happening in the real world'. Epistemologically, a relativist approach to understanding educational professionals' views and experience of the GM approach has been taken. Quantitative information was also collected in order to answer the research question considering it from a broader perspective. The qualitative data gathered is not necessarily a direct reflection of the individual, thus the process involves the interpretation of underlying structures that reflect the individuals' reality, that they may not have access to (Willig, 2008).

Some of the underlying assumptions that underpin this research process are:
- Growth Mindset is a real process and the researcher is independent of this process.
- There is an element of subjective interpretation of individuals' experiences.
- Exploration of hidden structures or patterns within the data that may not be accessible to the participants is possible.

This research has conceptualised resilience as a construct that is relative, dynamic, involves interaction between the individual, relational and contextual influences (Gu & Day, 2007). An assumption was also made that resilience research is linked to Positive Psychology as it places an emphasis on human strengths and future potential (Seligman & Csikszentmihalyi, 2014).

In summary, this research subscribes to a relativist ontology which complements a CR approach (Grix, 2002). Although CR encompasses an ontological realism, that reality exists independently of our perceptions and constructs of it (Bhaskar, 1975). CR also acknowledges an epistemological constructivism (relativist) stance as described above (Grix, 2002).

2.5 Reflexivity

Reflexivity is an active and continuous process that involves reflecting on how I have influenced the research (Guillemin & Gillam, 2004). Denscombe's (2007) asserted that 'At a fundamental level, it needs to be recognised straight away that no research is ever free from the influences of those who conducted it' (p. 300). Being reflexive involves considering the influence of my personal experiences, values and beliefs regarding the research; although, it is worth noting that there will be personal influences that contribute to the research process that I may not be consciously aware of.

My own epistemological stance and the psychology that underpins my practice makes assumptions that individuals are experts in their own lives and have the capability to make changes themselves. GM is based on the assumption that intelligence is 'malleable' and we all have the capacity for positive growth despite our current circumstances (Dweck, 2000, p.3). These assumptions will have impacted how I carried out my research and how I analysed the data.

From a CR standpoint, the approaches in place to reduce the potential of researcher bias, the knowledge that I hold, and my beliefs, will have influenced the coding process and the themes that were created that will ultimately shape the findings.

Corbin and Strauss (2008) assert that research will inevitably encounter some form of researcher bias. Thus, had another researcher undertaken this process then different themes and discussion points are likely to have been raised. The prior knowledge that I held enabled me to bring some meaning to the data that was potentially grounded in the current knowledge of what was being studied (Glaser, 1998). Although researcher bias can also be perceived in a positive way from a critical realist position.

Chapter 3

Empirical Research

Research Question

What impact does a Growth Mindset approach have on students' academic resilience from the perspective of educational professionals?

3.1 Introduction

Definition of resilience

The research question being addressed in this empirical research is; What impact does a Growth Mindset approach have on students' academic resilience from the perspective of educational professionals? Since the concept of resilience is being explored in this research it is crucial that resilience is defined to create a shared understanding of how resilience is constructed within this research. An ecological and culturally considerate definition of resilience is provided as follows, 'resilience is both the capacity of individuals to navigate their way to psychological, social, cultural and physical resources that sustain their well-being and their capacity individually and collectively to negotiate for these resources to be provided in culturally meaningful ways' (Ungar, 2008, p. 225). This is the definition of resilience that will be used in this research. During the research process my understanding of resilience changed thus the definition of resilience developed further since the SLR. This conceptualisation of resilience makes reference to the relational, social and ecological systems that impact the process. These are the key factors for choosing this specific definition of resilience. Ungar (2008) suggests that we should consider the contextual, political factors and the surrounding systems around a student in order to influence resources in meaningful ways that promote their resilience.

Academic Resilience

Further to the general concept of resilience is the more explicit term, academic resilience which is the focus of this study. Academic resilience developed as a context specific form of individual psychological resilience (Cassidy, 2016). It reflects the prospect of succeeding in education in spite of adversity. Some presenting characteristics of academic adversity include, overcoming challenges and failure, continued motivation, success despite increasing pressures and adverse events (Li, 2017). Waxman (2003), suggests that along with the broad definition of resilience, academic resilience is fostered and promoted within the environment rather than being viewed as a specific trait.

Wang (1994) stated that academic resilience is the increased chance of success in an educational contexts despite environmental adversities brought about by specific traits, relationships, context and experiences. Essentially, academic resilience can be described as increased levels of motivation, participation and achievement in spite of the presence of challenging events and conditions that place students in a context of risk of underperforming in school. Poverty has been cited as a barrier to academic achievement (Kanevsky, Corke, & Frangkiser, 2008) and academic resilience has been characterised as a student's capacity to overcome the impact of poverty whilst others do not (Gizir & Aydin, 2009).

Research around academic resilience has remained limited. The few studies that explore academic resilience concentrate on ethnic-minority groups and those that underachieve (Finn & Rock, 1997). At some stage all students will experience difficulties with performance, challenge and academic pressures thus academic resilience is a worthy pursuit for all learners not just specific subgroups of students (Martin & Marsh, 2006).

Some key factors of resilience that could also be associated with the promotion of academic resilience are, confidence and perseverance (Martin & Marsh, 2006), feeling acknowledged for skills (Brown, D'Emidio-Caston, & Benard, 2001), being exposed to new experiences (Ungar, Dumond, & McDonald, 2005) and promoting optimism (Rouse, Bamaca-Gomez, Newman, & Newman, 2001). In addition, teachers having high expectations (Castro, Kelly, & Shih, 2010) and teachers that promote a positive and optimistic worldview (Parker & Martin, 2009). These attributes all share similarities with the GM philosophy.

Studies have indicated a positive relationship between academic resilience and academic attainment, strengthening it as a worthy research pursuit (Fallon, 2010). The GM approach is a theory that proposes a universal approach for all children holding the assumption that resilience can be learned (Dweck, 2010). Thus, this study took the perspective of approaching resilience from a universal standpoint that could impact all children in the classroom.

Growth Mindset & Resilience

The GM theory could be compared to the positive psychology movement of developing resilience (Seligman, 1998) which asserts that there are particular strengths that an individual possesses that could foster positive emotional well-being thus the development of resilience. The strengths described in positive psychology that can be compared with the principles of the GM approach are optimism, hope and perseverance (Seligman & Csikszentmihalyi, 2014). The positive psychology movement, along with the Growth Mindset approach, fosters the view that research should explore ways that can promote inherent human strengths (Seligman & Csikszentmihalyi, 2014). Although the focus may be on developing a student's individual strengths, there is an implication that strengths are best promoted by changing the beliefs of the adults in the context surrounding them (Richardson, 1996).

Growth Mindset

Dweck's research spans over four decades asserting the notion of intelligence as being malleable and having the capacity for growth. Dweck compiled her findings in a book called 'Mindset: The New Psychology of Success' (2006). Dweck also published a plethora of academic papers that support her claims (Blackwell, Trzesniewski, & Dweck, 2007; Dweck,

2007; Dweck & Master, 2008). Goldstein, Brooks, and DeVries (2013) suggested that mindset in education can be described as follows; 'Mindsets are assumptions and expectations we have for ourselves and others that guide our teaching practices and our interactions with students, parents, and colleagues' (p.74). I hold the view that mindset for children and adults is an internal and dynamic concept that influences a person's thoughts, attitudes, beliefs and behaviour. Like others, I believe that the attitudes we possess are fluid and influenced by external environmental factors (Wentzel, Elliot, & Dweck, 2005).

The Growth Mindset (GM) approach makes frequent reference to 'self-theories of intelligence', this theory was based on research that explored how people developed beliefs about their own intelligence (Blackwell et al., 2007). It has been argued that self-theories impact a person's internal psychological world, shaping a person's thoughts, feelings and behaviour (Dweck, 2010). Dweck's theories have attempted to offer an explanation as to why some students are motivated to contribute a significant amount of effort towards tasks and why others develop a sense of helplessness when faced with challenge and assert less effort than others. Duckworth, Peterson, Matthews, and Kelly (2007) describes 'persistence, determination, resilience, and effort' as the prominent indicators of student success. I am inclined to agree that 'theories of self' are critically important for learning. However, I feel it is imperative to acknowledge that other wider environmental factors should also be considered, something which Dweck's early work around motivation neglects (Bronfenbrenner, 1999).

Dweck (2010) explained that students often hold one of two theories of intelligence, the entity or the incremental view. The entity view is a belief about the nature of intelligence that is described by Dweck as the 'Fixed Mindset', viewing intelligence as a trait that is fixed and innate (Blackwell et al., 2007; Kernis & Waschull, 1995). An incremental view of intelligence constructs it as a fluid concept, susceptible to change that can be developed over time, this view was termed the 'Growth Mindset'.

GM interventions have asserted that having a GM promotes greater attainment, particularly for students who are economically disadvantaged (Aronson, Fried, & Good, 2002; Blackwell et al., 2007). It has been noted that GM online programmes have resulted in improved grades and attendance (Paunesku et al., 2015; Yeager & Dweck, 2012). Although there has been a plethora of research promoting the benefits of using a GM approach in education, there has been research that has also called the theory into question. Yeager and Dweck (2012) assert that the GM approach promotes resilience and Snipes, Fancsali, and Stoker (2012) argue that GM promotes the development of grit.

Research in the UK has countered previous claims made in the US and suggested that the approach has little or no impact on student attainment (Wilkinson, 2015). It has been

reported to be predominantly successful in the US, it would appear that this is not necessarily the case in the UK. Thus, further exploration of the impact the approach has on resilience and academic attainment in the UK and internationally will be beneficial to develop our understanding of its overall effectiveness. There is no doubt that the GM approach has gained momentum and increasing popularity in schools over recent years. This makes it more important to explore it further in terms of the validity and impact of the approach in classrooms.

3.2 Methodology

The methodology section will include my choice of design frame and the latter sections describe participant selection, design and ethical considerations.

I hope to ascertain educational professional's perceptions of whether the GM approach has an impact on student's academic resilience. If this is the case I believe it is an important message to communicate with schools and will support me on my Educational Psychology journey.

Due to the epistemological stance that influenced the way the question was constructed; a mixed methodology was pursued to answer the research question. A mixed methodology enables the exploration of the individuals' subjective view of the world, using a qualitative method, and an investigation of the 'objective' world, through the application of a quantitative method. The intention of its use was to try and incorporate elements of the 'real world/reality' in addition to individual perceptions of this to provide us with a broader understanding of the GM approach which fits with my ontological position.

Methodological Decisions

Research design

A mixed methods research methodology was selected due to my ontological position which influenced the nature of the questions being asked. As this study used both sets of data to answer the same question, it can be described as a mixed method convergent parallel approach (Harden, 2010). As its focus was mainly qualitative data the design is considered to be an embedded one, i.e. when one data set is given precedence over another (Harden, 2010). The question is seeking to understand the views of those who have employed the GM approach whilst attempting to determine the impact the approach has on academic resilience. Also, more of an emphasis was placed on the qualitative data whilst simultaneously gathering exploratory quantitative data. The purpose of the quantitative

design in this mixed methods study was to explore the frequency of responses and identify patterns within the data which may suggest causality.

Method

The figure below illustrates the thought processes and some guiding questions that I considered whilst designing the research method.

Figure 1: Guiding questions about research methodology
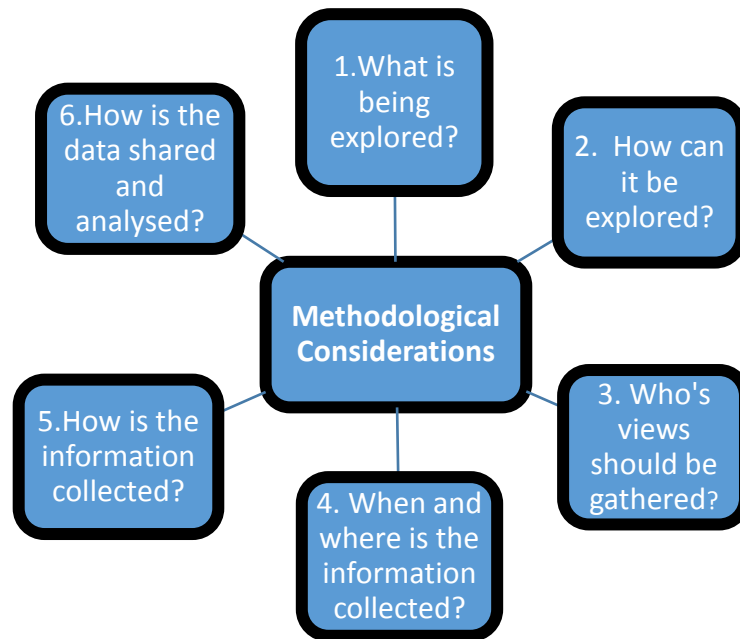
Procedure

1. Application for ethical approval sought from Newcastle University
2. Ethical approval authorised for research to be carried out
3. One primary school interested in the Growth Mindset approach selected
4. Headteacher of the school was contacted
5. The purpose and nature of the research was relayed via posters and information sheets
6. Staff who were interested in the training attended an after-school session
7. Written consent was sought from those who attended
8. Two further training sessions were delivered to all school staff and again written consent sought
9. Online and paper questionnaires were sent out to the school 12 weeks after the training
10. A further questionnaire was designed and then distributed online via social media Growth Mindset groups
11. Questionnaires were collected, and data was analysed

Materials

The materials used in this research involved the delivery of a training session and a follow-up questionnaire. Three GM training sessions were delivered to all school staff in one

school. The training sessions included the Headteacher, senior management, teachers, the special educational needs co-ordinator (SENCo), learning support staff and business administrative staff. A PowerPoint presentation was used to illustrate suggested changes in classroom culture related to views of intelligence, teacher expectations, use of language, feedback and promoting the value of learning from mistakes. The training sessions involved discussions on how the GM approach can be applied in the classroom and used as a philosophy. A questionnaire was distributed twelve weeks after the training session to gather the views of the education professionals on whether they believed the GM approach had an impact on students' academic resilience.

The second phase of the research involved international participants sourced via GM social media groups to seek potential participants to undertake an online questionnaire. This was carried out due to initial uncertainty that school respondents would reply to the questionnaire. This phase of the research attempted to answer the research question, however, the training was not delivered by me thus comparisons between groups are explored.

Participants

Random opportunity sampling was used, for the first phase, based on which participants were available that met the research criteria as being educational professionals and using the GM approach within their practice in schools. Educational professionals were chosen for this project for a number of reasons. One reason was due to the lack of studies in the UK of the impact of the GM approach. Additionally, Dweck argues that educational professionals are responsible for raising the awareness of how a GM can develop, helping children to understand that intelligence is malleable and evolves over time. Worsley (2015) suggests that using staff who have already formed connections with students was more effective for promoting resilience.

After initially experiencing a lack of response rates with the questionnaire I decided to widen the participant criteria to an international perspective and opened up the questionnaire to online participants that included all educational professionals. Ethical approval was sought. As the data was sourced through GM online groups, there is a potential limitation of bias in the sample as it could be argued that those who are members of the group have a positive view of the approach.

Demographics

There were in total 51 participants who completed the questionnaire, 42 participants were female and 9 male. Ages ranged from 25 to 74 years.

Table 1*: Participant characteristics*

Number of participants	Gender	Age Range	Countries	Job roles	Age of students
51	42 Female 9 Male	25-74	Australia, Belgium Brazil Canada Finland Netherlands New Zealand Sweden UK USA	Head teacher Principal Deputy Headteacher Classroom Teacher Cover Teacher Special Educational Needs Teacher SENCo Social Science Teacher Curriculum Leader Phase Leader School Psychologist Child Psychologist Psychologist Art Teacher PE Teacher ASN Teacher Coach	3-19 years

Ethical considerations

The BPS code of ethics (2014) was utilised to identify potential ethical issues in relation to consent, confidentiality and participants right to withdraw. Below, the steps taken to address them are considered. The project was subsequently approved by the university ethics

committee at Newcastle University. Careful consideration of ethical procedures safeguards participants during research.

Consent & Confidentiality

For the target school, consent was sought from all participants including the Headteacher (see appendix 2 & 4). Consent was obtained electronically for all international online participants (see appendix 3). Paper responses were stored securely in a locked cupboard and destroyed at the end of the research project. All online data was stored in a secure online password protected webpage on a password protected laptop. The final research report will be saved as a pdf file and submitted on the secure university system.

Right to Withdraw

Both groups of participants were informed at the outset of the research that they did not have to take part in the study. This was information was included in the information sheet and reiterated once the participants had submitted their data on the debrief form (see appendix 5). Participants were provided with a cut-off date to request the withdrawal of their data in order to allow adequate time for the data to be analysed.

Data Collection Rationale

I decided a self-completion questionnaire was appropriate as the participant size was potentially large. Thus, I sought an approach that was deemed appropriate for gathering a large volume of views (Kelley, Clark, Brown, & Sitzia, 2003). Both open and closed questions were included. Aleamoni and Spencer (1973) suggested that questionnaires could be effectively used to identify people's attitudes and opinions. Paper and online questionnaires were chosen rather than face-to-face ones due to time limitations. I hoped that a self-administered questionnaire would allow for open and honest responses. An anonymous open-ended questionnaire is described as an appropriate tool to allow participants to express their views in their own words (Reja, Manfreda, Hlebec, & Vehovar, 2003). The questionnaires were distributed to school participants twelve weeks after the initial training session.

The rationale for using a questionnaire involved the consideration of several factors. It could be argued that a questionnaire is not the most appropriate method to elicit qualitative data thus I will describe my rationale for choosing this method.

Due to delivering training to all school staff, a questionnaire was deemed an appropriate tool to collate larger volumes of data than possible in an interview or focus group. The use of a focus group was considered. However, barriers of arranging suitable times for all participants to attend, compounded with potential barriers of 'group dynamics, power dynamics' and the

possibility of some participants not feeling heard or comfortable in sharing their views in an open forum led to this approach being dismissed (Robson, 2002, p. 284). Although questionnaires may produce less data it was hoped that participants would feel comfortable to share their views as authentically as possible opposed to dealing with the most dominant view or the general consensus; a risk of using focus groups.

Determining the questions

The Academic Resilience Scale (ARS-30) was used to inform the questions. This was chosen to ensure the aim of the study and the questions asked were closely linked. Questions were established by researching the literature, the resilience scale and considering what information was required to address the research question. The ARS-30 is a recently developed resilience measure that considers academic resilience within the context of academic success. The founder of the ARS-30 resilience scale defines academic resilience as demonstrating perseverance and success in the face of adverse situations (Cassidy, 2016). This is a definition that sits comfortably with the perception of academic resilience used in this research. In addition to this, it has been described as 'a multi-dimensional construct' focusing on both cognitive affective and behavioural responses to academic adversity (p.1). This definition also links closely with some of the underlying theories of the GM approach.

The scales include perseverance, reflection, seeking help, and emotional responses. It was reported to be significantly internally reliable. A further factor that was influential in the choice of this resilience scale to inform the questions was that it considered the process of resilience rather than simply an outcome. Waxman (2003) highlight that an exploration of resilience should factor in a response to adversity. In order to consider exploring resilience, it is asserted that there should be a consideration of adversity and how the adversity is responded to (Riley & Masten, 2005).

Earlier exploration suggested that resilience should not be considered as merely an outcome, such as completion of a task or overall academic success (McCubbin, 2001) but also must reflect the process in terms of protective factors such as persistence and strong work ethic. The scale contemplates behavioural as well as attitudinal responses.

Data Analysis

The data was analysed using thematic analysis. Interpretive Phenomenological Analysis (IPA) was considered as the research intended to explore participants' subjective experiences. However, IPA in its purest form is intended to explore rich data and it has been argued that high quality IPA studies have fewer participants (Reid, 2005). Less is considered more in IPA. Additionally, it has been suggested that it is difficult to make comparisons

between groups using IPA as comparisons require a greater number of participants which would reduce the overall quality of IPA (Hefferon & Gil-Rodriguez, 2011).

Thematic analysis was the method selected to analyse the findings and identify themes within the questionnaires. It is argued that thematic analysis can be used to analyse different types of data and small or large data groups (Clarke & Braun, 2013). This method was selected as it seeks to relay interpretations of individual's experiences (Clarke & Braun, 2013). Thematic analysis is considered an appropriate method of analysis for seeking interpretations. A theme potentially captures and presents significant meaning from the data that is linked to the research question (Braun & Clarke, 2006).

The themes were developed through interaction with the data which is known as a flexible approach consistent with a CR stance. Thematic analysis has been critiqued for its lack of structure (Attride-Stirling, 2001). In order to provide structure to the process, Braun and Clarke's (2006) phases of thematic analysis were utilised to create transparency (see appendix 8). The steps listed in Table 1 were followed. During the process there were complexities that occurred such as deciding where to place data that potentially overlapped with multiple themes. An inductive approach was employed to establish key themes within the data. This method involves themes being derived directly from the data rather than previous research findings (Ryan & Bernard, 2003). However, although the research was approached from this stance, as a researcher it is not possible to completely disregard all information I had learned from the previous research. Thus, it may have influenced the theming of the data at an unintentional unconscious level.

The thematic analysis was approached at a semantic level. This involved analysing and grouping data based on surface meanings rather than at a deeper latent level. The implications of this approach to thematic analysis is that patterns and meaning in the data are explored rather than the underlying assumptions and ideologies. Sandelowski (1995) suggested that this is an appropriate method of analysis for questionnaire data alongside identifying patterns that reoccur. This approach was chosen due to the short nature of the responses which would not have been detailed enough to consider linguistic characteristics such as metaphors (see appendix 8 for audit trail).

3.4 Findings

Qualitative findings
The questionnaires from the education staff were used to answer the research question, 'What impact does a GM approach have on students' academic resilience from the

perspective of educational professionals?' The experiences of educational staff that contribute towards answering the research question have been demonstrated through five main themes. Educational professionals suggest that GM has an impact on children and young people's perseverance, peer support, autonomous learning, self-awareness and optimism. The data suggests the impact on these areas was of a positive nature; although it could be argued that the questions were framed in a way that elicited such information. Below an illustration of the themes identified in the questionnaire (Figure 2) followed by examples of the data that linked to the overarching themes. A table of subthemes is included as an appendix (see appendix 7).

Figure 2: Identified *themes from all participants*

Themes and Subthemes

Perseverance	Peer support	Autonomous learning	Self-awareness	Optimism
Open to making mistakes	Helping peers	Using initiative	Feeling confident	Positivity towards learning
Learning from mistakes	Seeking help	Self-motivation	Feeling able to try	Enthusiastic
Encouraging themselves	More participation	More independent	Self-belief	Using GM language
Problem solving	Challenging each other	Ownership of own learning	Recognising GM	More relaxed
More resilience	Changed ethos			Embracing feedback
Increased effort	Less competitive			Views of success
Seeking challenge	Shared language			

Themes

Perseverance

When interpreting the accounts of educational staff, it became apparent that the theme of perseverance was prominent throughout the transcripts. 34 out of 51 participants made direct reference to increased perseverance in their qualitative responses. Many of the quotes made reference to not giving up and trying new strategies.

One participant provided a case example of how a student used perseverance;

> '….I had a student struggling with sounding out a word during reading and she started to get tears in her eyes. As she finally got the word after many yries (sic), she smiled and said, "I didn't give up! It was hard, but I finally did it'.

Many participants made reference to students trying new strategies and not giving up in the face of challenge;

> '….Students are more comfortable with getting the 'wrong' answer (particularly in math). They see the value in making mistakes and how realizing their mistakes causes them to think more carefully and try more approaches when solving a math question'.

> '….Trying hard on all tasks and actively choosing tasks that appropriately challenge themselves, where as previously they may have chosen an easier option'.

Two participants made specific reference to the impact the GM had on developing mathematical skills;

> '….When stuck on a maths problem support in not giving up, show they can do it rather than they can't'.

In summary, this theme demonstrated that educational staff noticed a difference in students' approach to learning in relation to overcoming challenges. This was observed as students demonstrating more perseverance when faced with making mistakes.

Peer support

Although there were no direct questions in relation to peer support, this was a theme that came through frequently within the questionnaires. 12 out of 51 participants made reference to increased peer support in the classroom.

Here participants suggest a potential change in classroom ethos:

> '....More friendly en (sic) helpful to each other More often practice (repetitive in e.g guitar playing) Climate in class has changed overall, kids are learning and playing in a more relaxed way. Less rivalry'!

> '....I've noticed my students asking to help others more often, without me prompting''....Peer support more obvious'.

> '....The children encouraging each other to say 'yet' instead of I can't'.

Analysis has suggested that participants experienced a change in the ethos of the classroom, one of a more supportive and collaborative culture.

Autonomous learning

One theme that emerged from the questionnaire was students becoming more autonomous and taking more ownership of their learning. A total of 22 of 51 participants made reference to increased autonomous learning as a consequence of the GM approach.

Participants noted a change in student's attitudes towards learning:

> '....They have an attitude of responsibility for their learning. I think they realise (sic) that they have an impact on their own learning'.

> '....Considering their next steps, taking more responsibility for their own learning'

> '....They work hard on their goals, but their goals need to be visible. They definitely accept feedback and many (not all) take it on and make changes accordingly. Many put in a great effort, particularly those who realise it does make a difference. Some are still learning this'.

> '....I support a teenager in planning his schoolwork. He always said that he simple cannot plan. After having done it together a few times, evaluating it the week after focusing on what worked well and what was his part in this was he started to take the initiative to work on his own'.

Other participants commented how the GM approach had increased motivation to persist:

> ....The do ask for help, the become more independent, the won't give up easily'

> '....By being much more participative, by trying again and again, using different strategies'

In summary, the above theme has demonstrated that educational staff observed a difference in the student's approach to learning in response to the GM theory. Participants reported that perseverance played a positive role in supporting students to overcome learning challenges.

Self-awareness

Self-awareness was a theme identified from the analysis with 10 out of 51 participants commenting on this.

> *'…. More self awareness and ability to say they can't do something YET and that's okay'.*

> *'….They became very cognizant of times they are in the Growth Mindset'.*

Other participants commented on the impact it had upon student's internal worlds:

> *'….Much more confidence when sharing'*

> *'….More self esteem, More resilience in hard tasks'*

This theme suggested that the GM approach had the potential to increase students' self-awareness in relation to learning and could positively influence their internal belief system.

Optimism

This theme encompassed those times when educational staff observed and commented on children and young people presenting as more optimistic about their learning and their own belief in their ability to achieve success. 20 out of 51 participants made comments that linked in with this theme.

Participants referred to the positive effects on the general ethos and learning when using GM language;

> *'….Many children use "yet" a lot and have a different view on what makes you successful, it´s more about training than talent'!*

> *'….Use each other to bounce off, using gm language to boost comnradery (sic) towards improving'.*

> *'….When we 'bansho' our math work, they will often say "Hey our brains just grew!" whenever I point out how the question could have been solved differently'*

Some participants referenced specific characteristic changes of the approach such as humour, enthusiasm and increased positivity;

> *'….More enthousiasm (sic) for new tasks (instead of sighing and oh nooo they now say 'yes!' and have twinkly eyes)'*

> *'….Positivity increase towards learning'.*

Summary of qualitative data

Thematic analysis has suggested that the GM approach facilitated more perseverance, autonomous learning, self-awareness and optimism in the classroom. This impacted students' views of success and approach to learning. A particularly interesting finding was that educational professionals had reported increased peer support in the classroom as a result of implementing the GM approach. This is something that has not been previously identified in the literature and it was not mentioned in any of the questions.

Quantitative findings

I have not undertaken a detailed statistical analysis of the quantitative findings. The focus of the study was mainly a qualitative one with an emphasis on individual interpretation thus the quantitative information represented here is to demonstrate visually the frequency in which participants responded to the questions and emerging patterns in the data. The study did not use any pre and post measures or control groups thus it is not deemed necessary or appropriate given the structure of the questions to undertake any detailed statistical analysis (Pallant, 2010). The intention is to relay the data simply, thus the data is clearly presented and accessible for interpretation across a wide range of audiences. The data is presented in a descriptive manner below;[1]

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[1] The questions above do not follow in numerical order as there was a mixed set of closed and open questions on the research questionnaire. Only the closed questions are reported on in this section.

Table 2: Frequency of responses for the type of GM strategies used by educational professionals.

Question five: Which aspects of the Growth Mindset approach have you employed in your classroom?	
GM strategy	**Number of times selected**
Power of yet phrase	30
Praising effort and process	26
Power of failure	19
Visual Displays	18
Future feedback	16
All	13
GM video	12
Famous Growth Mindsetters	9
The brain is a muscle	9
GM books	7
GM worksheets	7
None	2
Other	1

A wide range of GM strategies were employed by the participants with 'the power of yet' and 'praising effort and process' being the most frequently selected.

The graph shows the number of participants that selected a category. Participants were able to select more than one choice.

Graph 1: Differences of GM strategies applied between target school and international participants.
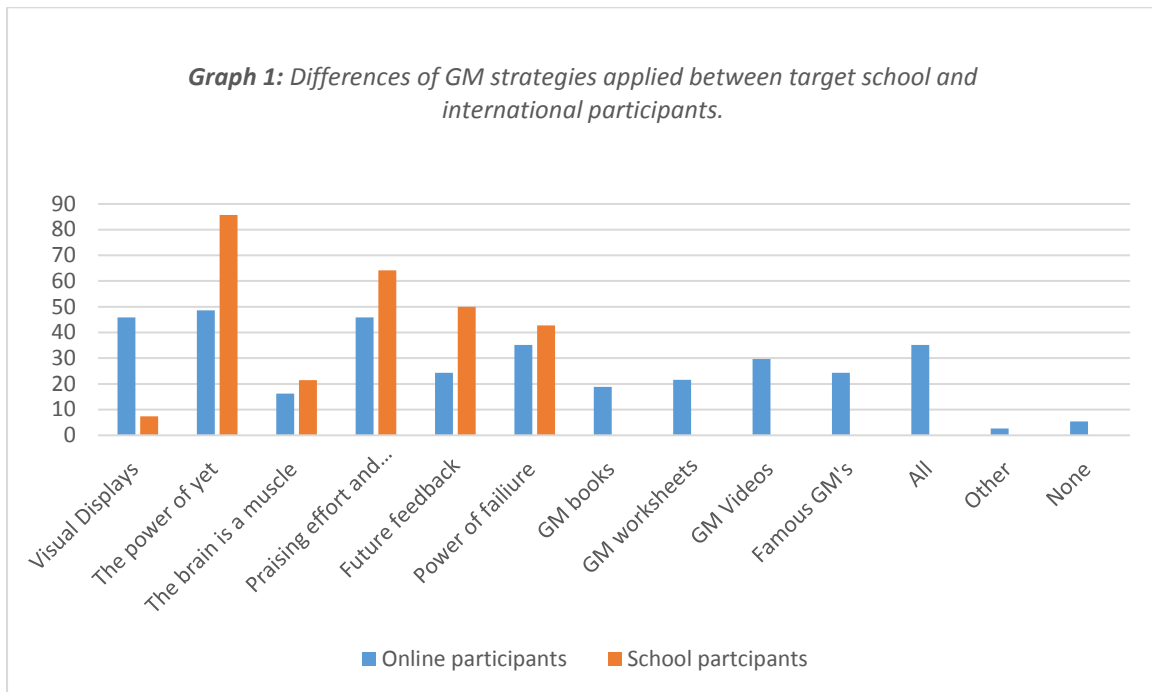
The graph suggests that there was a much broader range of strategies applied by the online participants.

Table 3: *Frequency of responses to whether participants noticed a difference in the way students responded to challenging work.*

Question 8: After implementing the strategies have you noticed a difference in the way children in your class respond to challenging work?		
Response selection	**Number of participants**	**Percentage of participants**
Yes	45	88%
No	6	12%

As reported in the Table the majority of participants in the study relayed that they believed implementing GM strategies in the classroom provoked a change in the way students responded to challenging work.

Table 4: Comparison of target school and online responses in relation to challenging work.

Question 8: After implementing the strategies have you noticed a difference in the way children in your class respond to challenging work?				
Response selection	Target school responses	Percentage of target school responses	Online responses	Percentage of online responses
Yes	12	86%	33	89%
No	2	14%	4	11%

Overall findings were similar when making comparisons between the target school and online participants.

Table 5: *Frequency of participant responses in relation to student's perseverance.*

Q.10. After implementing Growth Mindset strategies in your classroom did you notice a difference in children's perseverance? (can select multiple)		
Participant Choices	Number of responses	Percentages (to the nearest whole number)
Not giving up	33	68%
Hard work and effort	29	57%
Accepting and utilising feedback	23	45%
Treating adversity as an opportunity to meet challenges and improve	15	29%
Sticking to goals and plans	8	16%
Imaginative problem solving	8	16%
Other	5	10%

None	4	8%

This table illustrates that many participants reported noticing a difference with regards to a student's perseverance towards tasks that involved not giving up and hard work and effort being the most frequently reported.

Table 6: *Frequency of participant responses in relation to student's reflection and approach to learning.*

Q.12. After implementing growth mindset strategies in your classroom did you notice a difference in children's reflection and approach to learning? (can select multiple)		
Participant Choices	**Number of responses**	**Percentage (to the nearest whole number)**
Monitoring efforts and achievements	20	39%
Reflecting on strengths and weaknesses	18	35%
Reduced anxiety	15	29%
None	13	25%
Altering Approaches to learning	11	22%
Increased self-efficacy	10	20%
Seeking support and encouragement	9	18%

The most frequently reported categories were monitoring efforts and achievements and reflecting on strengths and weaknesses. Few participants reported an impact on reflection and overall approach to learning when compared with perseverance in the Table above.

Q.14.How many of your students do you think showed increased academic resilience as a consequence of using the GM strategies in the classroom?

Figure 3: Percentages *of participant responses of whether the GM approached increased student's academic resilience.*
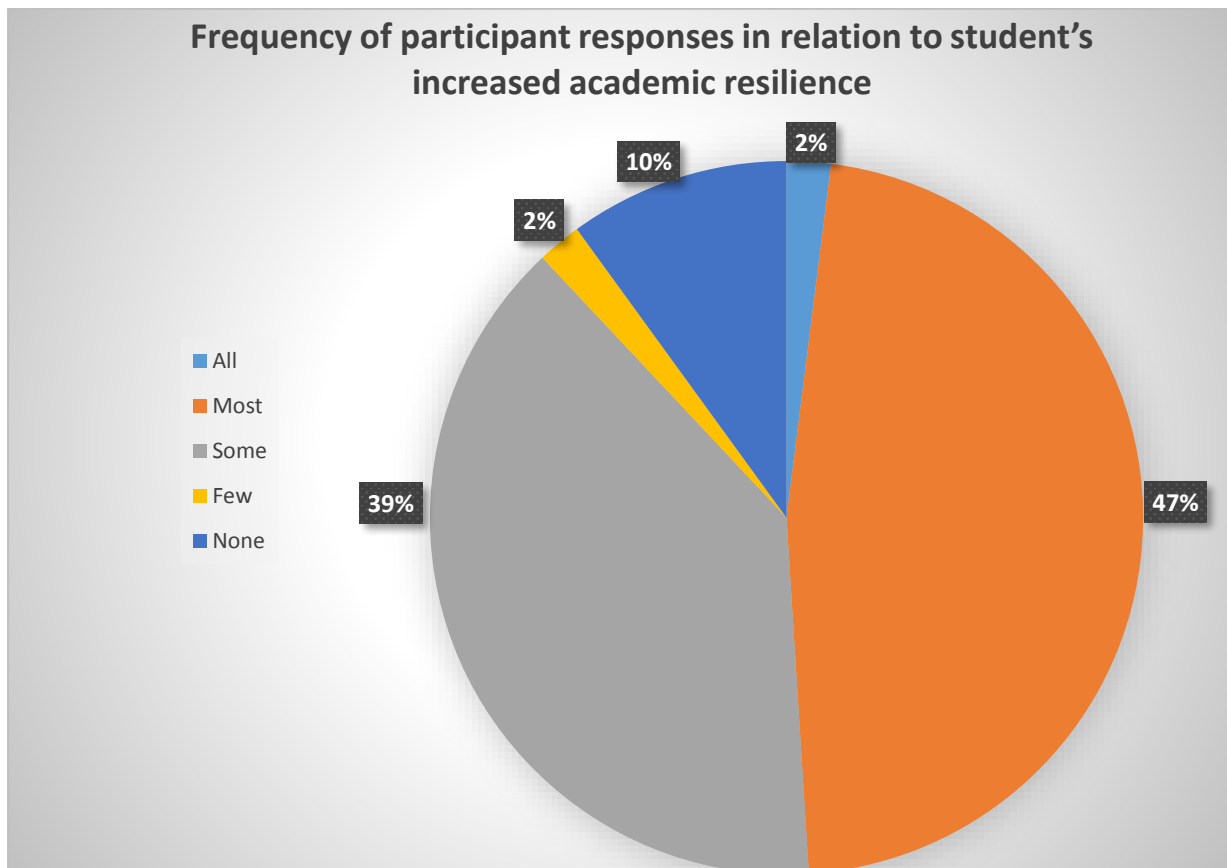
The majority of participants reported that most students showed increased academic resilience after the implementation of GM strategies.

Table 7: *Frequency of participant responses in relation to student's approach to learning*.

Q.16. Have you participated in any training on the GM approach?		
Participant choices	**Participant responses**	**Percentages (to the nearest whole number)**
Yes	33	70%

No	10	21%
Other	4	9%

Most of the participants reported participating in GM training those who selected 'other' referred to different types of events such as attending conferences and assemblies.

Table 8: *Frequency of participant responses of whether participants desired more GM training.*

Q.17. Do you feel like you would benefit from more training on the Growth Mindset approach?		
Participant choices	**Participant responses**	**Percentages (to the nearest whole number)**
Yes	32	63%
No	16	31%
Other	3	6%

More than half of the participants felt that they would benefit from more training. This is not necessarily due to the participant's self-efficacy of implementing the approach as some commented that they desired more training as they are always looking to develop their learning which suggests more training is not a reflection of their self-efficacy of implementing the approach.

Summary of quantitative information

Although this study was focused on seeking qualitative information of people's perceptions the quantitative data did present some interesting patterns. Below the key patterns within the data are identified.

Table 2 and graph 1 demonstrates how professionals employed recommended GM strategies differently. This information highlighted potential biases with the training session that was delivered. The graph illustrates that the participants from the target school implemented 6 of the 10 GM strategies whilst online participants appear to be more evenly distributed using most of the 10 named strategies. Considering the training that was delivered, more emphasis was placed on the strategies that the target school had employed. However, implementing different strategies did not seem to influence educational

professional's views of the impact the approach had on students' academic resilience in comparison with online participants. Other influencing factors with regards to the various ways the approach was applied could be due to the information online participants had been exposed to. In the online groups, where the questionnaire was posted, individuals frequently share resources including worksheets and videos which may influence the way participants use the GM theory in their classroom and explain the increase in those strategies.

There appeared to be a pattern between those who employed the approach as a one-off exercise rather than a classroom philosophy. A total of 3 of the 4 participants who used it as a one-off exercise reported observing a positive impact on academic resilience. The participant who did not report any impact had not undertaken any GM training whilst others who did report an impact had received training. Thus, those who utilised the approach as a one-off exercise and relayed that they had not received any training reported observing no difference in students' academic resilience. The combination of receiving no training and implementing it as a one-off exercise presented as key factors in influencing the outcome. Other participants that had received no training but implemented it as a classroom philosophy and those who had received training but implemented the approach as a one-off exercise reported a positive impact on students' academic resilience.

The approach being successful as a one-off exercise is supported by recent research. Busch, (2018) relayed that Duckworth, Dweck and Yager (2018) released conclusions about their latest findings in a pre-print article that suggested that watching GM video clips can improve students' academic attainment as cited in the BPS Research Digest (Busch, 2018). The article did not report whether teachers had received GM training. This was also reflected in this study as some of the participants that only implemented one strategy for example, 'the power of yet', reported positive effects on students' academic resilience.

Of the 10 participants that reported they did not receive any GM training, 8 stated that they had noticed an increase in academic resilience. This suggests that teachers may not require specific training input on the GM approach for it to have an impact on students' academic resilience. Although as relayed above, the approach tends to be less successful for those with no training employing it as a one-off exercise. A recent study suggested that teachers did not feel confident in employing a GM in the classroom and there was a strong desire for further training (Yettick, Lloyd, Harwin, Riemer, & Swanson, 2016). This research would support the view with 63% of participants relaying that they would benefit from more training. Although it is unclear whether participants were confident in implementing the approach as there were no direct questions relating to this. For those that had not received any formal training, some participants commented that they had initiated their own reading before, and

whilst, implementing the approach. This suggests that these participants were intrinsically motivated by the approach which may have influenced their enthusiasm and commitment to employ the approach in the classroom (Deci & Ryan, 2010).

All participants that reported using a whole school approach stated that they had noticed an increase in student academic resilience and all of these participants stated that the strategies impacted 'most' students. This supports recent research that suggested if students receive a GM intervention that goes against the general ethos of the school, it is unlikely to be successful (Flannery, 2016).

Summary of quantitative information

The quantitative data suggests that the majority of participants described GM as having a positive impact on students' academic resilience. Perhaps, unsurprisingly, the type of training participants received influenced the GM strategies employed. There is also an indication that staff formal training is not required to observe a difference in students' academic resilience; although it must be implemented as a classroom philosophy or whole school approach to be successful. Using a one-off exercise of the GM approach has been reported to have a positive impact on children's academic resilience if participants have received training. There is an assumption made from the data that the impact on academic resilience can be sustained over time as participants reported positive effects after just 3 weeks up until 6 years. Finally, participants demonstrated a wide range of effects on academic resilience as a consequence of implementing the GM approach. These ranged from not giving up, seeking help and increased self-efficacy. This could be a reflection of how participants construct academic resilience differently and may be more likely to observe specific behaviours as a result.

Although the data suggests that the majority of the educational professionals believed that the GM approach has a positive impact on student's academic resilience this was not the case for all participants, with 10% of participants suggesting it had not had an impact on any of their student.

Synthesis of findings

The findings demonstrated that 88% of educational professionals reported observing a difference in the way students responded to challenging tasks. A total of 68% of participants suggested this was demonstrated through not giving up, 57% noted it was through hard work and effort, 45% reported a difference in accepting and utilising feedback. This was supported with qualitative information where participants noted students showed 'increased

perseverance', 'tried harder', 'responded more positively to feedback' and 'choosing tasks that appropriately challenged themselves'.

Participants also reported observing a difference in students approach to learning and overall reflection. A total of 39% of participants relayed that children were more open to monitoring efforts and achievements, 35% of participants reported students were reflecting on strengths and weaknesses and 29% of participants observed reduced anxiety. The qualitative information echoed these findings, participants said; 'trying again and again', 'using different strategies', 'recognising that learning is challenging' and 'accepting feedback'. One participant commented that 'not all children are able to be reflective yet'.

Due to the demographics of the participants being so varied it was difficult to draw out direct comparisons within a small sample size. However, one observation was made in relation to participants responses to increased perseverance which was reported more frequently in primary aged children. A change in reflection and approach to learning was reported more frequently in secondary aged children and less so in primary aged pupils.

3.5 Strengths of the study

My research took place within a naturalistic environment, Maxwell (2012), supports the view that research undertaken in this way promotes further insight into individuals' lived authentic life experiences. It could also be argued that exploring reoccurring themes and patterns within the data is a strength of this research (Maxwell, 2012). A further strength of this study is the sample of 51 participants. This suggests that the findings can be generalised to wider populations. Furthermore, the demographics were varied such as ethnicity, age, profession, thus increasing the generalisability of the findings to different cultural and geographical groups.

3.6 Limitations of the study

A potential limitation is the barrier of further exploring the responses and ideas raised in the questionnaire data. In addition to a questionnaire, an interview, focus group or case study could have been undertaken to further establish the views of the participants and generate more in-depth data from the responses of the questionnaire. The reason that no additional information gathering, or follow-ups were carried out was due to the time constraints that undertaking interviews, focus groups or case studies would have required.

A further limitation of the data collection was the questionnaires themselves. Gillham (2008) highlights that a questionnaire provokes less enthusiastic responses from participants who prefer to respond with dialogue and human interaction. The questions were developed in response to previous research around academic resilience as discussed earlier. They were designed to be open-ended in an attempt to ensure that they explored educational professionals lived experiences. However, the questions were predetermined, thus influenced by my subjective knowledge and experience. This may have shaped the way participants responded, potentially reducing the overall quality. It is possible that participants may well have been constrained in their responses, particularly around reporting any negative experiences of the GM approach. The online participant selection may present as a biased sample. These participants were volunteers who had shown an interest in the GM approach and therefore can be considered to have had a vested interest in the approach and may be likely to view it in a positive light.

3.7 Impact and importance

It is proposed that this research has provided a unique contribution to academic literature. It is one of the few studies in the UK that seeks the views of educational professionals and also sought participants internationally. The study has highlighted that the GM approach has a positive impact on peer relationships.

3.8 Suggestions for further research

The research findings highlight a number of areas for possible future research. As the study suggested, educational professionals relayed that the GM increased peer support thus it would be interesting to explore further relational perspectives. For example, whether students believe that a GM approach impacts the way educational professionals support them. A further area of exploration is cultural variations of the approach and how the GM is perceived differently across different contexts as it was not possible to consider this in the scope of this review.

3.9 Discussion

Previous research has suggested that having a GM positively affects student attainment (Dweck, 2006; Gregory & Kaufeldt, 2015; Jenson, 20015; Ricci, 2013). One example of this is the Brainology intervention which was designed to teach students how learning happens emphasising the brain as a muscle (Dweck,2008). Blackwell et al. (2007) stated that this intervention has positive results for fostering students understanding of GM and increasing

attainment. Although, research around the GM and its impact on academic resilience remains limited. Previous researchers have found that students who believe their intelligence can be developed are more likely to push through when learning gets difficult and seek support when they do not understand or need clarification (Dunning, 1995; Hong et al., 1999; Nussbaum & Dweck, 2008). This research is also supported by the findings in the systematic literature review that suggested interventions that aimed to promote resilience were reported to improve student's confidence and self-efficacy. This is consistent with Dweck's theory of mindsets (Dweck, 2006; 2010) implying that those fostering a GM are more likely to be resilient and proactive in the face of challenge or set back.

The themes identified in the GM questionnaire; perseverance, autonomy, optimism and self-awareness have all been associated with the construct of academic resilience with research suggesting those factors are prerequisites or predictors of academic resilience (Fallon, 2010; Rouse et al., 2001). These are also the constructs that have been linked to the GM approach (Dweck, 2006). This suggests that the GM and academic resilience are intertwined and it could be argued they are dependent on each other. In addition to this, it supports the view that constructs such as resilience/academic resilience are not simply traits that we do or do not possess but they are multi-faceted and dependent on contextual as well as intrinsic factors (Cassidy, 2016).

Research that explores whether the GM approach impacts academic resilience remains limited. The data gathered in this research suggests that educational professionals believe the GM approach does positively influence academic resilience (Snipes et al., 2012).Using the GM approach in the classroom has the potential of increasing students' autonomy, positively influencing their perseverance, self-awareness, optimism and demonstrated an increased support towards their peers. Increased peer support was a surprising finding as there were no specific questions in relation to peer support, however, it still came through persistently in the data. Although not directly linked to previous GM research, increased peer support could be linked with findings from the systematic literature review that suggested resilience interventions can improve relatedness to others. Baumeister and Leary (1995) relayed that positive social connections are of great importance to human beings suggesting that it is a fundamental influence of psychological motivation, influencing the way we think, feel and how we behave. This is a significant observation to be made by educational professionals and adds a new dimension to existing GM research (Snipes et al., 2012; Yeager & Dweck, 2012).

The findings in this study have demonstrated how wider systems around students can positively influence their self-belief and the way they approach learning from the perspective

of educational professionals (Olsen et al, 2003 and Ungar, 2008). This has also highlighted the importance of having supportive staff who are invested and motivated to drive and foster a culture of learning which supports the GM theory in order for it to be worthwhile. 'Developing knowledge of the ways teachers influence student mindset is crucial for leveraging the many benefits of Growth Mindset for students.' (Sun, 2015, p. 12).

Implications for EP practice

The Currie Report (2002) highlights both training and research as a core function of the EP role. This research incorporated both of those elements of the EP role and it was identified that employing an approach was most effective when there was an intrinsic motivation from the educational professionals in relation to engaging with the GM approach. This is something that should be considered when engaging in projects with schools.

A further key function for EPs is undertaking research, thus supporting changes to future EP practice. The research investigating and evaluating the GM approach is scarce in the UK, it is still a relatively new concept. It was interesting to discover that educational professionals commented that the approach had a positive impact on most but not all students. As such, it may be useful to further investigate why the approach was deemed not successful for some children.

This research has highlighted that a potential role for the EP would be to consider the implementation of the GM approach. The research highlighted that the systems we work in sometimes promote a Fixed Mindset approach, for example high stakes testing and ability groupings. These systemic contradictions should be further explored and discussed with school staff before the GM approach is implemented.

An ever growing number of schools both nationally and internationally are expressing interest in adopting the GM approach thus there is an important role for a clear rationale and knowledge of the impact that it may have; it could be argued that an EP is in a privileged position to gather this information and ensure schools are sufficiently informed about the approach and facilitate problem solving approaches for challenges educational professionals may encounter.

4.1 Conclusions

This study aimed to ascertain whether the GM approach had an impact on students' academic resilience, from the perspective of educational professionals. The findings of this study suggest that educational professionals believe that the approach has a positive impact on students' academic resilience. Participants provided many examples of how this was

demonstrated by students. This research supports previous research that suggests the approach does promote the resilience of those in education (McNiff, 2013).

The research has highlighted some interesting ideas regarding the application of the GM approach in the context in which the current research was carried out. For example, it can be utilised as a one-off exercise with educational professionals still suggesting a positive impact on academic resilience. Also, that participants did not necessarily have to have undertaken any formal training for it to have a perceived positive impact, although this was subject to how the approach was implemented.

Overall, despite this study's limitations, it adds to and expands current knowledge of the GM approach internationally and offers a focus for future consideration and research.

5.1 References

Adler, P. S., Du Gay, P., Morgan, G., & Reed, M. I. (2014). *The Oxford handbook of sociology, social theory, and organization studies: Contemporary currents*: Oxford Handbooks.

Aleamoni, L. M., & Spencer, R. E. (1973). The Illinois course evaluation questionnaire: A description of its development and a report of some of its results. *Educational and Psychological Measurement, 33*(3), 669-684.

Allen, G. (2011). Early intervention: the next steps. In: London: HM Government.

Alvord, M. K., & Grados, J. J. (2005). Enhancing Resilience in Children: A Proactive Approach. *Professional Psychology: Research and Practice, 36*(3), 238-245

Anderman, E. M., Anderman, L. H., Yough, M. S., & Gimbert, B. G. (2010). Value-added models of assessment: Implications for motivation and accountability. *Educational Psychologist, 45*(2), 123-137.

Archer, M., Sharp, R., Stones, R., & Woodiwiss, T. (1999). Critical realism and research methodology. *Alethia, 2*(1), 12-16.

Aronson, J., Fried, C. B., & Good, C. (2002). Reducing the effects of stereotype threat on African American college students by shaping theories of intelligence. *Journal of Experimental Social Psychology, 38*(2), 113-125.

Attride-Stirling, J. (2001). Thematic networks: an analytic tool for qualitative research. *Qualitative research, 1*(3), 385-405.

Audi, R. (1998). Moderate intuitionism and the epistemology of moral judgment. *Ethical Theory and Moral Practice, 1*(1), 15-44.

Barnett-Page, E., & Thomas, J. (2009). Methods for the Synthesis of Qualitative Research: A Critical Review. *BMC Medical Research Methodology, 9*(59). doi:10.1186/1471-2288-9-59

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological bulletin, 117*(3), 497.

Berliner, D. C., & Nichols, S. L. (2007). High-stakes testing is putting the nation at risk. *Education Week, 26*(27), 36-48.

Bhaskar, R. (1975). *A Realist Theory of Science, *. Leeds: Alma Books.

Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child development, 78*(1), 246-263.

Bombèr, L. M. (2007). *Inside I'm hurting: practical strategies for supporting children with attachment difficulties in schools*: Worth.

BPS. (2009). *British Psychological Society. Code of ethics and conduct* Leicester; BPS.

BPS. (2014). Code of Human Research Ethics. [online] Retrieved from http://www.bps.org.uk/system/files/Public%20files/code_of_human_research_ethics_dec_2014_inf180_web.pdf

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology, 3*(2), 77-101.

Bronfenbrenner, U. (1999). Environments in developmental perspective: Theoretical and operational models. *Measuring environment across the life span: Emerging methods and concepts*, 3-28.

Brown, J. H., D'Emidio-Caston, M., & Benard, B. (2001). *Resilience education*: Corwin Press.

Busch, B. (2018). This cheap, brief "growth mindset" intervention shifted struggling students onto a more successful trajectory. *Research Digest*.

Cassidy, L., & Barnes, G. (2012). Understanding household connectivity and resilience in marginal rural communities through social network analysis in the village of Habu, Botswana. *Ecology and Society, 17*(4), 173-187.

Cassidy, S. (2016). The Academic Resilience Scale (ARS-30): a new multidimensional construct measure. *Frontiers in Psychology, 7*, 1787. doi:10.3389/fpsyg.2016.01787.

Castro, A. J., Kelly, J., & Shih, M. (2010). Resilience strategies for new teachers in high-needs areas. *Teaching and Teacher Education, 26*(3), 622-629.

Challen, A. R., Machin, S. J., & Gillham, J. E. (2014). The UK Resilience Programme: A school-based universal nonrandomized pragmatic controlled trial. *Journal of Consulting and Clinical Psychology, 82*(1), 75-89.

Cicchetti, D., & Blender, J. A. (2006). A Multiple-Levels-of-Analysis Perspective on Resilience. *Annals of the New York Academy of Sciences, 1094*(1), 248-258.

Cicchetti, D., & Rogosch, F. A. (1997). The role of self-organization in the promotion of resilience in maltreated children. *Development and Psychopathology, 9*(4), 797-815.

Clarke, V., & Braun, V. (2013). Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. *The Psychologist, 26*(2), 120-123.

Cohen, L., Pooley, J. A., Ferguson, C. A., & Harms, C. A. (2011). Psychologists' understanding of resilience: implications for the discipline of psychology and psychology practice.

Conway, A. M., & Mcdonough, S. C. (2006). Emotional resilience in early childhood. *Annals of the New York Academy of Sciences, 1094*(1), 272-277.

Corbin, J., & Strauss, A. (2008). Basics of qualitative research: Techniques and procedures for developing grounded theory.

Creswell, J. W., & Clark, V. L. P. (2007). Designing and conducting mixed methods research.

Creswell, J. W., & Zhang, W. (2009). The application of mixed methods designs to trauma research. *Journal of Traumatic Stress, 22*(6), 612-621.

Deci, E. L., & Ryan, R. M. (2010). *Self-determination*: Wiley Online Library.

Diab, M., Peltonen, K., Qouta, S. R., Palosaari, E., & Punamäki, R.-l. (2015). Effectiveness of psychosocial intervention enhancing resilience among war-affected children and the moderating role of family factors. *Child Abuse & Neglect, 40*, 24-35.

Donohoe, C., Topping, K., & Hannah, E. (2012). The impact of an online intervention (Brainology) on the mindset and resiliency of secondary school pupils: a preliminary mixed methods study. *Educational Psychology, 32*(5), 641-655.

Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: perseverance and passion for long-term goals. *Journal of personality and social psychology, 92*(6), 1087.

Dweck, C. S. (2006). *Mindset: The new psychology of success*: Random House Incorporated.

Dweck, C. S. (2007). The perils and promises of praise. *ASCD, 65*(2), 34-39.

Dweck, C. S. (2010). Even geniuses work hard. *Educational Leadership, 68*(1), 16-20.

Dweck, C. S. (2012). Mindsets and human nature: Promoting change in the Middle East, the schoolyard, the racial divide, and willpower. *American psychologist, 67*(8), 614.

Dweck, C. S., & Master, A. (2008). Self-theories motivate self-regulated learning. *Motivation and self-regulated learning: Theory, research, and applications*, 31-51.

Dweck, C. S., Walton, G. M., & Cohen, G. L. (2014). Academic Tenacity: Mindsets and Skills that Promote Long-Term Learning. *Bill & Melinda Gates Foundation*.

Eisenberg, N., Spinrad, T. L., Fabes, R. A., Reiser, M., Cumberland, A., Shepard, S. A., .Thompson, M. (2004). The relations of effortful control and impulsivity to children's resiliency and adjustment. *Child development, 75*(1), 25-46.

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1-4.

Fallon, C. M. (2010). *School factors that promote academic resilience in urban Latino high school students.* Loyola University Chicago,

Fergusson, D. M., & Horwood, L. J. (2003). Resilience to childhood adversity: Results of a 21-year study. *Resilience and vulnerability: Adaptation in the context of childhood adversities*, 130-155.

Finn, J. D., & Rock, D. A. (1997). Academic success among students at risk for school failure. *Journal of applied psychology, 82*(2), 221.

Flannery, M. (2016). Growth mindset and its impact on learning and school culture.

Fleetwood, S. (2014) Bhaskar and critical realism. In: Adler, P., Du Gay, P., Morgan, G. and Reed, M., eds. (2014) *Oxford Handbook of Sociology, Social Theory and Organisation Studies: Contemporary Currents.* Oxford: Oxford University Press, pp. 182-219

Frederickson, N., Baxter, J., Frederickson, N., & Dunsmuir, S. (2009). Belonging. *Measures of Children's Mental Health & Psychological Wellbeing. London: GL Assessment*.

Fredrickson, B. L., & Joiner, T. (2002). Positive emotions trigger upward spirals toward emotional well-being. *Psychological Science, 13*(2), 172-175.

Galli, N. & Vealey, R. (2008). "Bouncing Back" From Adversity: Athletes' Experiences of Resilience. The Sport Psychologist, 22, 316-335.

Gartrell, D., & Cairone, K. B. (2014). Fostering Resilience: Teaching Social-Emotional Skills. *YC Young Children, 69*(3), 92.

Gillham, B. (2008). *Developing a questionnaire*: A&C Black.

Giroux, J., & Prior, T.; Factsheet Expressions of Resilience: From 'Bounce Back' to Adaptation; *Center for Security Studies (CSS)*, ETH Zurich; 2012.

Gizir, C., & Aydin, G. (2009). Protective factors contributing to the academic resilience of students living in poverty in Turkey. *Professional School Counseling, 13*(1), 38-49.

Glaser, B. G. (1998). *Doing grounded theory: Issues and discussions*: Sociology Press.

Goldstein, S., Brooks, R., & DeVries, M. (2013). Translating resilience theory for application with children and adolescents by parents, teachers, and mental health professionals. In *Resilience in children, adolescents, and adults* (pp. 73-90): Springer.

Gray, D. E. (2004). Theoretical perspectives and research methodologies. *Gray, DE Doing*.

Greig, A. D., Taylor, J., & MacKay, T. (2012). *Doing research with children: A practical guide*: Sage.

Greitens, E. (2015). *Resilience: Hard-won Wisdom for Living a Better Life*: Houghton Mifflin Harcourt.

Grix, J. (2002). Introducing students to the generic terminology of social research. *Politics, 22*(3), 175-186.

Grotberg, E. (1997). The international resilience project. *A charge against society: the child's right to protection*, 19-32.

Gu, Q., & Day, C. (2007). Teachers resilience: A necessary condition for effectiveness. *Teaching and Teacher Education, 23*(8), 1302-1316.

Guarino, N., & Poli, R. (1993). *Toward principles for the design of ontologies used for knowledge sharing.* Paper presented at the In Formal Ontology in Conceptual Analysis and Knowledge Representation, Kluwer Academic Publishers, in press. Substantial revision of paper presented at the International Workshop on Formal Ontology.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research, 2*(163-194), 105.

Guillemin, M., & Gillam, L. (2004). Ethics, reflexivity, and "ethically important moments" in research. *Qualitative inquiry, 10*(2), 261-280.

Harden, A. (2010). Mixed-methods systematic reviews: Integrating quantitative and qualitative findings. *Focus: A Publication of the National Center for the Dissemination of Disability Research (NCDDR) Technical Brief*(25).

Hefferon, K., & Gil-Rodriguez, E. (2011). Interpretative phenomenological analysis. *The Psychologist*.

Hills, R. (2016). An evaluation of the emotional literacy support assistant (ELSA) project from the perspectives of primary school children. *Educational & Child Psychology Vol 33 No 4 December 2016: Mental Health and Wellbeing in Schools., 33*(4), 50-65.

McNiff,J. Jack Whitehead, P. (2013). *You and Your Action Research Project*. London and New York: RoutledgeFalmer.

Kanevsky, L., Corke, M., & Frangkiser, L. (2008). The academic resilience and psychosocial characteristics of inner-city English learners in a museum-based school program. *Education and Urban Society, 40*(4), 452-475.

Kelley, K., Clark, B., Brown, V., & Sitzia, J. (2003). Good practice in the conduct and reporting of survey research. *International Journal for Quality in Health Care, 15*(3), 261-266. doi:10.1093/intqhc/mzg031

Kernis, M. H., & Waschull, S. B. (1995). The interactive roles of stability and level of self-esteem: Research and theory. *Advances in experimental social psychology, 27*, 93-141.

Li, H. (2017). *The 'secrets' of Chinese students' academic success: academic resilience among students from highly competitive academic environments* (Vol. 37).

Li, Y., & Bates, T. (2017). Does mindset affect children's ability, school achievement, or response to challenge? Three failures to replicate.

Lindström, B. (2001). The meaning of resilience. In: De Gruyter.

Littell, J. H., Corcoran, J., & Pillai, V. (2008). *Systematic reviews and meta-analysis*: Oxford University Press.

Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child development, 71*(3), 543-562.

Marlowe, J. M. (2009). Conceptualising refugee resettlement in contested landscapes. *Australasian Review of African Studies, The, 30*(2), 128.

Martin, A. J., & Marsh, H. W. (2006). Academic resilience and its psychological and educational correlates: A construct validity approach. *Psychology in the Schools, 43*(3), 267-281.

Martyn, D. (2007). *The Good Research Guide Paperback*. UK: Open University Press.

Masten, A. (2001). Ordinary magic: Resilience processes in development. *American psychologist, 56*(3), 227.

Masten, A. S., & Obradović, J. (2006). Competence and resilience in development. *Annals of the New York Academy of Sciences, 1094*(1), 13-27.

Maxwell, J. A. (2012). *Qualitative research design: An interactive approach* (Vol. 41): Sage publications.

Mays, N., Pope, C., & Popay, J. (2005). Systematically reviewing qualitative and quantitative evidence to inform management and policy-making in the health field. *Journal of health services research & policy, 10*(1_suppl), 6-20.

McCubbin, L. (2001). Challenges to the Definition of Resilience.

Morrow, V. (2001). Using qualitative methods to elicit young people's perspectives on their environments: some ideas for community health initiatives. *Health education research, 16*(3), 255-268.

Ní Raghallaigh, M. (2013). The causes of mistrust amongst asylum seekers and refugees: Insights from research with unaccompanied asylum-seeking minors living in the Republic of Ireland. *Journal of Refugee Studies, 27*(1), 82-100.

Pallant, J. (2010). SPSS survival manual: A step by step guide to data analysis using SPSS.

Parahoo, K. (2014). *Nursing research: principles, process and issues*: Palgrave Macmillan.

Parker, P. D., & Martin, A. J. (2009). Coping and buoyancy in the workplace: Understanding their effects on teachers' work-related well-being and engagement. *Teaching and Teacher Education, 25*(1), 68-75.

Paunesku, D., Walton, G. M., Romero, C., Smith, E. N., Yeager, D. S., & Dweck, C. S. (2015). Mind-set interventions are a scalable treatment for academic underachievement. *Psychological Science*, 0956797615571017.

Petticrew, M., & Roberts, H. (2008). *Systematic reviews in the social sciences: A practical guide*: John Wiley & Sons.

Pupavac, V. (2008). Refugee advocacy, traumatic representations and political disenchantment. *Government and opposition, 43*(2), 270-292.

Reichardt, C. S., & Rallis, S. F. (1994). The Qualitative-Quantitative Debate: New Perspectives. *New directions for program evaluation, 61*, 1-98.

Reid, K., Flowers, P. & Larkin, M. (2005). Exploring lived experience. *Psychologist, 18*(1), 20.

Reja, U., Manfreda, K. L., Hlebec, V., & Vehovar, V. (2003). Open-ended vs. close-ended questions in web questionnaires. *Developments in applied statistics, 19*(1), 159-177.

Richardson, V. (1996). The role of attitudes and beliefs in learning to teach. *Handbook of research on teacher education, 2*, 102-119.

Riley, J. R., & Masten, A. S. (2005). Resilience in context. In *Resilience in children, families, and communities* (pp. 13-25): Springer.

Robson, R. (2002). *Real World Research: A resource for social-scientists and practitioner-researchers.* Oxford: Blackwell.

Rorty, R. (1991). *Objectivity, relativism, and truth: philosophical papers* (Vol. 1): Cambridge University Press.

Rose, McGuire-Snieckus, R., & Gilbert, L. (2015). Emotion Coaching-a strategy for promoting behavioural self-regulation in children/young people in schools: A pilot study. *The European Journal of Social & Behavioural Sciences, 13*(2), 1766.

Rouse, K. A. G., Bamaca-Gomez, M. Y., Newman, P., & Newman, B. (2001). Educationally Resilient Adolescents' Implicit Knowledge of the Resilience Phenomenon.

Rousseau, C., & Measham, T. (2007). Posttraumatic suffering as a source of transformation: A clinical perspective. *Understanding trauma: Integrating biological, clinical, and cultural perspectives*, 275-293.

Rutter, M. (1985). Resilience in the face of adversity. Protective factors and resistance to psychiatric disorder. *The British Journal of Psychiatry, 147*(6), 598-611.

Rutter, M. (2006). The promotion of resilience in the face of adversity.

Ruttledge, R., Devitt, E., Greene, G., Mullany, M., Charles, E., Frehill, J., & Moriarty, M. (2016). A randomised controlled trial of the FRIENDSfor Life emotional resilience programme delivered by teachers in Irish primary schools. *Educational and Child Psychology, 33*(2), 69-89.

Ryan, G. W., & Bernard, H. R. (2003). Techniques to identify themes. *Field methods, 15*(1), 85-109.

Sale, J. E. M., Lohfeld, L. H., & Brazil, K. (2002). Revisiting the quantitative-qualitative debate: Implications for mixed-methods research. *Quality and quantity, 36*(1), 43-53.

Sameroff, A. (2009). *The transactional model*: American Psychological Association.

Sandelowski, M. (1995). Qualitative analysis: What it is and how to begin. *Research in nursing & health, 18*(4), 371-375.

Sayer, A. (2000). *Realism and social science*: Sage.

Selekman, M. D., & Todd, T. C. (1995). Co-creating a context for change in the supervisory system: The solution-focused supervision model. *Journal of Systemic Therapies, 14*(3), 21-33.

Seligman, M. E. (1998). What is the good life. *APA monitor, 29*(10), 2.

Seligman, M. E., & Csikszentmihalyi, M. (2014). Positive psychology: An introduction. In *Flow and the foundations of positive psychology* (pp. 279-298): Springer.

SEND. (2015). Special educational needs and disability code of practice: 0 to 25 years. Retrieved from https://www.gov.uk/government/publications/send-code-of-practice-0-to-25

Sharp, H., Eames, V., & Shippen, C. (2016). The Team of Life: A narrative approach to building resilience in UK school children. *Educational and Child Psychology, 33*(2), 57-68.

Shindler, J. (2009). *Transformative classroom management: Positive strategies to engage all students and promote a psychology of success*: John Wiley & Sons.

Slade, T., Johnston, A., Oakley Browne, M. A., Andrews, G., & Whiteford, H. (2009). 2007 National Survey of Mental Health and Wellbeing: methods and key findings. *Australian and New Zealand Journal of Psychiatry, 43*(7), 594-605.

Snipes, J., Fancsali, C., & Stoker, G. (2012). Student academic mindset interventions. *Retrieved from online http://www. impaqint. com/sites/default/files/project-reports/impaq, 20.*

Stewart, D., Sun, J., Patterson, C., Lemerle, K., & Hardie, M. (2004). Promoting and building resilience in primary school communities: evidence from a comprehensive 'health promoting school'approach. *International Journal of Mental Health Promotion, 6*(3), 26-33.

Tariq S, Woodman J. 2013. Using mixed methods in health research. JRSM short reports. 4(6).

Teddlie, C., & Tashakkori, A. (2003). Major issues and controveries inthe use of mixed methods in the social and behvioral sciences. *Handbook of mixed methods in social & behavioral research*, 3-50.

Tedeschi, R. G., & Kilmer, R. P. (2005). Assessing Strengths, Resilience, and Growth to Guide Clinical Interventions. *Professional Psychology: Research and Practice, 36*(3), 230-237

Thomas, J., & Harden, A. (2008). Methods for the Thematic Synthesis of Qualitative Research in Systematic Reviews. *BMC Medical Research Methodology, 8*(45). doi:10.1186/1471-2288-8-45

Thomas, J., Harden, A., & Newman, M. (2012). Synthesis: combining results systematically and appropriately.

Thomas, J., Harden, A., & Newman, M. (2013). Synthesis: Combining results systematically and appropriately. In D. Gough, S. Oliver, & J. Thomas (Eds.), *An Introduction to Systematic Reviews*. London: Sage.

Thomas, J., Sutcliffe, K., Harden, A., Oakley, A., Oliver, S., Rees, R., . Kavanagh, J. (2003). Children and healthy eating: a systematic review of barriers and facilitators.

Tuli, F. (2011). The basis of distinction between qualitative and quantitative research in social science: reflection on ontological, epistemological and methodological perspectives. *Ethiopian Journal of Education and Sciences, 6*(1).

Ungar, M. (2008). Resilience across Cultures. *The British Journal of Social Work, 38*(2), 218-235. doi:10.1093/bjsw/bcl343

Ungar, M., Dumond, C., & McDonald, W. (2005). Risk, Resilience and Outdoor Programmes for At-risk Children. *Journal of Social Work, 5*(3), 319-338.

Wang, M. C., Haertel, G. D., & Walberg, H. J. (1994). Educational resilience in inner cities. In M. C. Wang & E. W. Gordon (Eds.), Educational resilience in inner-city America: Challenges and prospects (pp. 45-72). Hillsdale, NJ, US: Lawrence Erlbaum Associates, Inc. (1994). Educational resilience in inner cities. *ducational resilience in inner-city America: Challenges and prospects*.

Waxman, H. C., Gray, J.P., & Padron, Y. N. . (2003). *Review of Research on Educational Resilience*. Retrieved from University of California, Santa Cruz:

Weare, K. (2015). What works in promoting social and emotional well-being and responding to mental health problems in schools. *Advice for Schools and Framework Document. Partnership for Well-Being and Mental Health in Schools*.

Wentzel, K. R., Elliot, A. J., & Dweck, C. (2005). Peer relationships, motivation, and academic performance at school. *Handbook of competence and motivation*, 279-296.

Werner, E. E., & Smith, R. S. (1992). *Overcoming the odds: High risk children from birth to adulthood*: Cornell University Press.

Westoby, P. (2008). Developing a community-development approach through engaging resettling Southern Sudanese refugees within Australia. *Community development journal, 43*(4), 483-495.

Wilkinson, D. (2015). *Changing Mindsets Evaluation report and Executive summary*. London: National Institute of Economic and Social Research.

Williams, L. (2006). Social networks of refugees in the United Kingdom: tradition, tactics and new community spaces. *Journal of ethnic and migration studies, 32*(5), 865-879.

Willig, C. (2008). Introducing Qualitative Research in Psychology Adventures in Theory and Method. In (2nd ed.). Maidenhead: Open University Press.

Willig, C. (2013). *Introducing qualitative research in psychology*: McGraw-Hill Education (UK).

Windle, G., Bennett, K. M., & Noyes, J. (2011). A methodological review of resilience measurement scales. *Health and quality of life outcomes, 9*(1), 8.

Worsley, L. (2015). *The resilience doughnut: The secret of strong kids* (Vol. 1): Australian eBook Publisher.

Yeager, D. S., & Dweck, C. S. (2012). Mindsets that promote resilience: When students believe that personal characteristics can be developed. *Educational Psychologist, 47*(4), 302-314.

Yettick, H., Lloyd, S., Harwin, A., Riemer, A., & Swanson, C. B. (2016). Mindset in the classroom: A national survey of K-12 teachers. *Education Week Research Center*.

Zachariadis, M., Scott, S. V., & Barrett, M. I. (2013). Methodological Implications of Critical Realism for Mixed-Methods Research. *MIS quarterly, 37*(3), 855-879.

Zolli, A. (2012). Learning to bounce back. *New York Times, 2*.

6.1 Appendices

Appendix 1: Participant information sheet

Appendix 2: Headteacher information sheet

Appendix 3: Questionnaire consent

Appendix 4: School participant consent form

Appendix 5: Debrief information

Appendix 6 Questionnaire

Appendix 7: Initial themes drawn from line by line code (SLR).

Appendix 8: Thematic analysis audit trail

Appendix 1 – Information sheet

Your ★ Matters

Opinion

I am a Trainee Educational Psychologist from Newcastle University, I have spent the past year on placement with ******* Council. As part of my training I am carrying out a study looking at teacher experiences of the Growth Mindset approach in schools. Growth Mindset is a concept created by a psychologist named Carol Dweck. It is based on the principle that if people believe in themselves, work hard and preserve, their academic work and achievements will improve. I am writing to ask if you would be willing to give permission to take part in some Growth Mindset research. This will involve you attending a training session and providing feedback via a questionnaire about the Growth Mindset approach being used in the classroom and its impact on children's resilience. This will help to evaluate the approach and suggest ways that schools can support children with their learning and well-being. This project will be supervised by Billy Peters and Dave Lumsdon at Newcastle University. The data collection will take place during normal school hours and will take between 10-30 minutes of your time. Your participation in this research will be treated confidentially and all information will be kept anonymous so that teacher's views are not identifiable.

Many thanks in advance for your consideration of this project. Please let me know if you need more information. I would appreciate it if you could complete the attached permission slip and return it to myself if you would like to take part.

Kind Regards,

Kayleigh Sumner

Trainee Educational Psychologist

Contact details

Kayleigh Sumner

Trainee Educational Psychologist

Tel: **********

Email:
Kayleigh.sumner@
*****.gov.uk

Appendix 2- Headteacher information sheet

Headteacher Information Sheet

Dear Headteacher,

I am writing to invite your teachers and school SENCo to take part in a research project commissioned as part of my doctoral research. I am a 3rd year Trainee Educational Psychologist from Newcastle University currently on placement in *******.

For my research project I wish to ask: **What impact does a growth mindset approach have on students' academic resilience?**

Background of the study

The Growth Mindset approach has been widely researched and implemented in America. Over recent years UK schools have adopted this approach often as a classroom philosophy in schools. Although UK research has suggested it can have a positive impact on the academic attainment of pupils, the research around the plausibility of the intervention nurturing children's resilience is limited in the UK. It is this research gap that I intend to explore during my research, specifically taking into account teacher views of children's resilience. There has been little research conducted into the experience of the Growth Mindset approach from a teacher perspective. I believe the stories and experiences of the teachers involved in the Growth Mindset approach are vital in understanding how the process works and whether it does foster resilience.

What will happen if your school takes part?

If you are comfortable with the proposal, I will deliver a training session for staff interested in using the Growth Mindset approach in their classroom. The following term I will seek feedback from teachers regarding the Growth Mindset approach in the form of a questionnaire. I will send letters to obtain informed consent to teachers before distributing the questionnaires. It will be made clear to the teachers that they do not have to fill in a questionnaire. If they do choose to take part their information will be anonymised and kept confidential. If teachers so request, their data can be removed from the study and destroyed at any time before the 12th December 2017. The research report will contain no information allowing specific teachers or schools to be identified.

It would be helpful if you could support me in finding suitable staff members that are keen to know more about the Growth Mindset approach and implement the philosophy within their daily classroom practice. The Information sent to teachers will include contact details should they wish to ask any questions about the research. Teacher information and consent letters will be provided by myself. Your allocated EP time will not be affected and there will be no charge to the school. Before conducting research, my proposal has sought ethical approval from the ethics board at Newcastle University.

If you are interested in assisting with this research project, or if you would like any further information, please do not hesitate to contact me, Kayleigh Sumner via the details below.

I look forward to hearing from you.

Yours Sincerely

Kayleigh Sumner

Trainee Educational Psychologist

******* Council

Email: Kayleigh.sumner@*******.gov.uk

Does the Growth Mindset approach have an impact on children's academic resilience?

Firstly, I would like to thank you for participating in this questionnaire as part of my Doctoral research project. The questionnaire aims to seek your views about the implementation of the Growth Mindset approach. The questions you will be asked are regarding your views on whether the Growth Mindset approach influences children's academic resilience. Your responses will help to evaluate the approach and support the consideration of whether it has an impact on children's learning. This questionnaire should take between 5-10 minutes to complete and your participation in this research project will be treated confidentially. All information you provide will remain anonymous and you will not be identifiable in the written report. You are able to withdraw from this study at any point by closing the browser. My final report will be a summary of information provided about the Growth Mindset approach and I am able to provide you with copies of this on request.

Thank you in advance for completing this questionnaire.

For further information regarding this research please contact;

Kayleigh Sumner
King George VI Building
Queen Victoria Road
Newcastle upon Tyne
NE1 7RU
Email: k.j.******@newcastle.ac.uk

I have read and understood the above information.

I agree to answer an online questionnaire.

I know how to contact the researcher if I have questions about this study

I understand that I am free to withdraw from the study without giving a reason by exiting the browser.

I understand that for anonymous questionnaire studies, once I have completed the study and submitted my questionnaire, the data cannot be withdrawn.

I understand that non-identifiable data from this study might be used in academic research reports or publications.

By clicking 'Begin', I am giving consent for my data to be used for the present study and I am agreeing to participate

Does the Growth Mindset approach have an impact on children's academic resilience?

Firstly, I would like to thank you for participating in this questionnaire as part of my Doctoral research project. The questionnaire aims to seek your views about the implementation of the Growth Mindset approach. The questions you will be asked are regarding your views on whether the Growth Mindset approach influences children's academic resilience. Your responses will help to evaluate the approach and support the consideration of whether it has an impact on children's learning. This questionnaire should take between 5-10 minutes to complete and your participation in this research project will be treated confidentially. All information you provide will remain anonymous and you will not be identifiable in the written report. You are able to withdraw from this study at any point by closing the browser. My final report will be a summary of information provided about the Growth Mindset approach and I am able to provide you with copies of this on request.

Thank you in advance for completing this questionnaire.

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I agree to answer an online questionnaire.

I know how to contact the researcher if I have questions about this study

I understand that I am free to withdraw from the study without giving a reason by exiting the browser.

I understand that for anonymous questionnaire studies, once I have completed the study and submitted my questionnaire, the data cannot be withdrawn.

I understand that non-identifiable data from this study might be used in academic research reports or publications.

By clicking 'Begin', I am giving consent for my data to be used for the present study and I am agreeing to participate

Appendix 4- School consent form

Teacher consent form

Your ⭐ Matters

Opinion
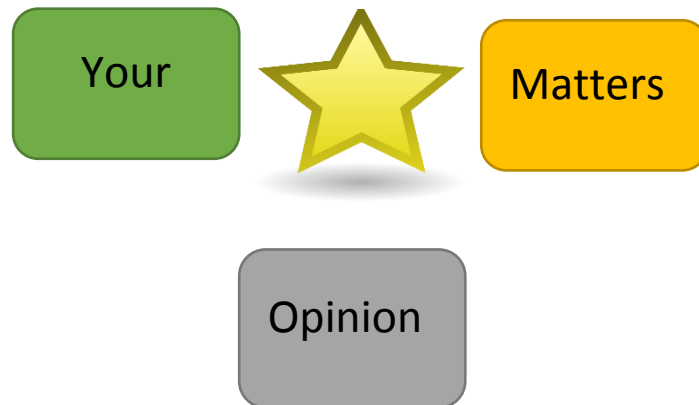
Please circle YES or NO as applicable

I understand that my participation in this project will involve: Taking part in a, questionnaire, in which I will be asked questions about their views on using a Growth Mindset approach in school.

YES / NO

I am aware that I can withdraw from this study at any time, up until the formal report is completed. I understand that my participation will be treated confidentially and all information will be stored anonymously and securely.

YES / NO

I have had an opportunity to ask questions.   YES / NO

I have read and understood the information pack provided to me   YES / NO

Information may be gathered via questionnaires. Any data collected will be anonymised to ensure no one is identifiable. No personal identifying data will be included in the questionnaire write up.

I am happy that I have had chance to ask any other questions I have, have received satisfactory answers and so I am willing to take part in this study. I give my informed consent.

☐ I understand that I don't have to take part and that I am free to withdraw at any time, without giving reason.

☐ I confirm that I have read and understand the information sheet for this study and had the opportunity to ask questions.

☐ I am happy to take part in this study.

My name is: _____

Today's date is: _____

Researcher information:

Kayleigh Sumner (Trainee Educational Psychologist)

Email: Kayleigh.sumner@******.gov.uk   **Phone:** *******

Debrief

Thank you for taking part in this research. I value that you took the time to share your own views and experiences. I hope that the information you have shared will help us to be further informed about the Growth Mindset approach and what impact it has on children's resilience and learning.

My final report will be a summary of information provided about the Growth Mindset approach and I am able to provide you with copies of this on request. As stated earlier, no identifying information will be included in the written report. If you decide that you no longer want the information you have provided to be included in the research, then please let me know before 10th of January 2018 using the contact details below.

If you have any further questions or would like an update regarding the research then please get in contact.

Kayleigh Sumner (Trainee Educational Psychologist)
Email: k.j.****@newcastle.ac.uk

Appendix 6- GM Paper Questionnaire

Does the Growth Mindset approach have an impact on children's academic resilience from the perspective of teachers?

Firstly, I would like to thank you for attending the Growth Mindset training in September, your participation was greatly appreciated. As I mentioned during the training, part of my research project involves seeking your views about the implementation of the Growth Mindset approach. The questions you will be asked are regarding your views on whether the Growth Mindset approach influences children's academic resilience**.** Your responses will help to evaluate the approach and support the consideration of whether it has an impact on children's learning. This questionnaire should take between 10-30 minutes to complete and your participation in this research project will be treated confidentially. All information you provide will remain anonymous and you will not be identifiable in the written report. Please be aware that you do not have to take part in this questionnaire and you have the right to withdraw your data up until the 10th January 2017. Please do not provide personal information or names in the comments box.

Thank you in advance for completing this questionnaire.

For further information regarding this research please contact;

Kayleigh Sumner
King George VI Building
Queen Victoria Road
Newcastle upon Tyne
NE1 7RU
Email: k*******@newcastle.ac.uk

Firstly, you will be asked some personal questions, this is not to make you identifiable but will enable demographic comparisons to be made during the data analysis.

Demographics

Please circle or write the relevant information below;

What is your gender?

Male   Female

Which age bracket do you fall into?

18-24ears old   25-34 years old   35-44 years old

45-54 years old   55-64 years old   65-74 years old

What is your job role?

_____

Which year group do you work with?

_____

Next will follow a set of questions about your views on the Growth Mindset approach and its impact on children's academic resilience;

1. Following the training which aspects of the Growth Mindset did you employ in your classroom? Please circle;

   1.Visual Displays   2. Praising effort (effort meter)   3.Future feedback

   4.The power of yet   5. The brain is a muscle   6. The power of failure

   7.Growth Mindset books   8. Growth Mindset videos

9. Growth Mindset worksheets   10.Famous Growth Mindsetters

11. All of the examples

Any other exercises or approaches not listed?

_____

2. Did you implement the approach as a classroom philosophy or a one-off exercise?

_____

3. After implementing the strategies have you noticed any changes in the way children in your class respond to challenging work?
(please circle)

   Yes   No

If yes could you provide some examples of the way children demonstrated this?

_____

_____

_____

_____

4. After implementing Growth Mindset strategies in your classroom did you notice a difference in children's perseverance?
(please circle below)

Hard work and effort

Not giving up

Sticking to plans and goals

Accepting and utilising feedback

Imaginative problem solving

Treating adversity as an opportunity to meet challenges and improve

Something else

None of the above

If yes, please provide examples of when children demonstrated this;

_____

_____

_____

_____

5. After implementing Growth Mindset strategies in your classroom did you notice a difference in children's reflection and approach to learning? (please circle)

Reflecting on strengths and weakness

Altering approaches to learning

Seeking help Support and encouragement

Monitoring effort and achievements

Reduced anxiety

Increased self-efficacy

Something else

None of the above

If yes, please provide examples of this;

_____

_____

_____

6. How many of your students do you think showed increased academic resilience as a consequence of using Growth Mindset strategies in the classroom?

   None   Some   Most   All

7. Do you feel like you would benefit from more training on the Growth Mindset approach? (please circle)

      Yes   No

8. Other than the examples provided would you like to provide any further information or case examples regarding the Growth Mindset approach?

_____

_____

_____

_____

Thank you for taking part in this questionnaire, teacher views of the Growth Mindset approach are an understudied research area, your views are important and will make a valuable contribution to evaluating the approach.

Appendix 7-Initial themes after line by line coding

Study	Themes (line by line)
Ruttledge et al (2013	Coping skills Feelings about school Feelings Able to manage feelings Thoughts Solved problems Helped friendships Started hobby Rating of group Use new skills in future Green thoughts No worries
Hills (2016)	Therapeutic relationship Importance of teacher characteristics Being kind showing unconditional positive regard Being able to talk to teacher Work together on a problem share responsibility. Dealing with feelings Managing and exploring feelings Sharing and changing feelings Being able to talk about feelings

	Reframing
	Improving confidence
	Coping strategies
	Better friendships
	Less anxious
	Able to ask for help
	Feeling scared
	the unknown
	Building resilience
	A lack of understanding
Rose et al (2016)	*Learning Calm down*
	Regret it
	Apologise
	Adults listen to you
	Adults make sure you are ok
	Adults ask how you are feeling
	Teachers talk to me
	I don't get picked on
	Nice and peaceful
Sharp (2016)	*Shared experiences*
	Confidence
	Social skills
	Peer support
	Positive impact of sport

	Making new friends
	Feeling able to do things
	Positive impact on mood
	Recognising skills
	Communication
	Overcoming difficulties
	Self-belief
	Trying hard
	Friendship
	Shared difficulties
	Feeling supported
	Having things in common
	Learning different skills
	Enjoyment of new experiences
	Playing games
	Being a team

Appendix 8- Analysis audit trail

Thematic analysis audit trail

Braun and Clarke

Step 1- Familiarising yourself with the data

In order to become familiar with the data the researcher read, then re-read the responses and wrote all the participant responses to the open-ended questions on a A4 notepad. These were then typed up on a word document which enabled the researcher to start to think about the possibilities for the initial codes and themes. At this stage initial ideas were noted for potential codes.

Step 2- Generating initial codes

The recorded questionnaire responses were re-read to identify initial codes. Every line in the data was coded. The initial codes were then recorded in a table and then reviewed for duplication and potential amalgamation. All similar and connecting codes were then grouped together.

Step 3- Identifying themes

A document with coded questionnaire responses was created. This document was then split into sections according to the code that was most relevant. These sections were studied to identify any similarities across codes enabling the research to carefully group the codes together.

Step 4- Reviewing potential themes

The researcher began to compile the coded questionnaire extracts in groups, these were then reviewed to ensure they were situated in the most relevant themes. A thematic map of the data was created to identify key themes.

Step 5- Defining and naming themes

As a result of the earlier steps the researcher created names of key themes and subthemes.

Step 6- Producing the report

The thematic analysis findings were presented within the research report.

Coding complexities

The process of coding was an iterative process that involved moving back and forth between the data and the codes searching for new meaning. This involved creating and omitting codes accordingly. A further complexity was that some codes could have been associated with more than one theme. For example, 'seeking help' could

have been placed in the persistence or peer support theme. Again, 'more independence' could have been placed with the perseverance or autonomous learning theme. Also, the code/subtheme 'more resilience' could have fitted with any of the overarching themes. In these instances of subtheme conflicts, the researcher went back to the original questionnaire transcripts to seek extra context and meaning from the code based on the question the participant was answering and what other information was included.

Stage 1

Getting to know the data and initial ideas listed from school participants
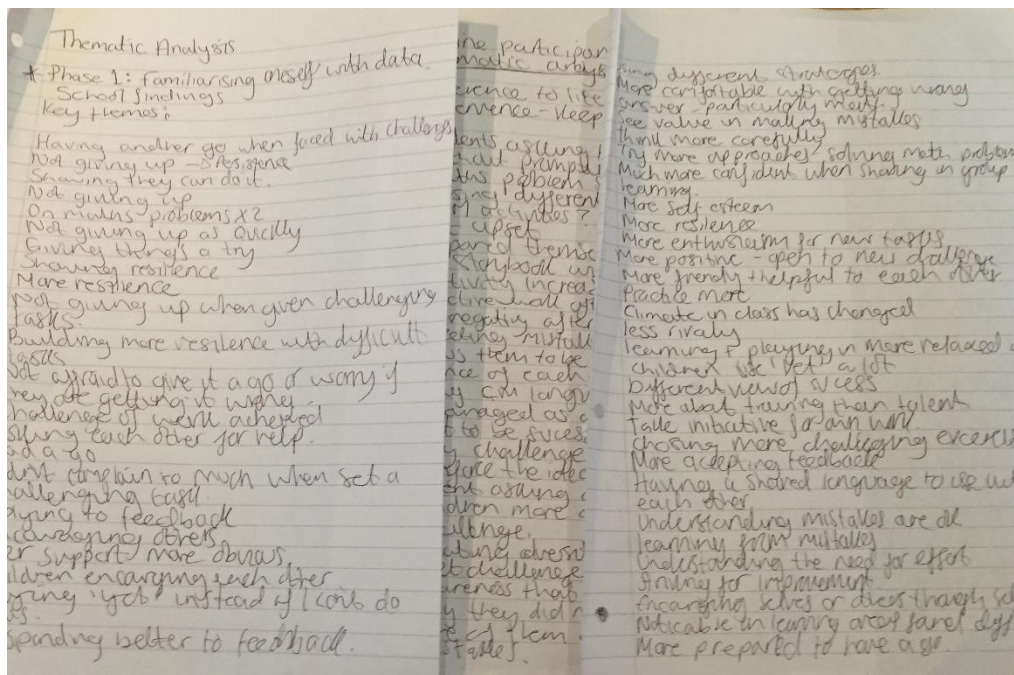
- Having another go
- Overcoming challenges
- Not giving up
- Showing they can do it
- Not giving up as easy on maths problems
- Not giving up as quickly
- Giving things a try
- Showing resilience
- More resilience
- Persisting in the face of challenge
- Building resilience with challenging tasks
- Not afraid to give it a go
- Not worried to get it wrong
- Challenge of work achieved
- Asking others for help
- Having a go

- Less complaining when faced with challenges
- Responding to feedback
- Encouraging others
- Peer support more obvious
- Children encouraging each other
- Saying 'yet' instead of 'I cant'
- Responding positively to feedback

Stage 2
Generating initial codes

- Not giving up
- Perseverance
- Keep trying
- Persistence
- Asking to help others more
- Initiating help
- Solving maths problems
- Choosing different strategies
- Not getting upset
- Compared themselves with to story characters with GM
- Positivity to learning increased
- Less negativity
- Detective work after feedback
- Open to correcting mistakes
- Able to be themselves
- Bounce of each other
- Using GM language to improve
- Correcting mistakes
- Reinforce the idea of yet
- Aware of the need for challenge
- Challenge each other
- Viewing adversity as an opportunity
- Using adversity to improve
- Valued challenge for development
- Upset about making mistakes
- Not getting everything right for first time
- Pleased they were praised for effort not just outcomes
- Keep trying
- Build up stamina
- Attitude of responsibility for their learning
- Realise they have an impact on their learning
- Worked hard on their goals
- Accepting feedback
- Responding to suggestions
- Making changes
- Put in effort
- Realise effort makes a difference
- More self-aware
- Cant do something yet
- Viewing challenge as part of learning
- More open to participate
- Less worried about making mistakes
- More willing to do homework

- Open to challenges
- Ready to help
- Asking for help
- Became more independent
- Did not give up easily
- Sense of humour
- Being more participative
- Trying again
- Using different strategies
- More comfortable with getting wrong answer
- Improved maths
- Recognition of value of mistakes
- Thinking more carefully
- Using different approaches to solve math problems
- More confident in sharing group learning
- Improved self-esteem
- Improved resilience
- More enthusiasm for new tasks
- More positive
- Open to more challenge
- More friendly to each other
- More helpful to each other
- Practice more
- Class climate changed
- Less rivalry
- Learning and playing in more relaxed way
- Use 'yet' a lot
- Acknowledgment of growing brains
- Different view of success
- More about training than talent
- Take initiative for own work
- Choosing more challenging exercise
- More accepting of feedback
- Shared language with each other
- Understanding mistakes are ok
- Learning from mistakes
- Understanding the need for effort
- Striving for improvement
- Encouragement of self
- Encouragement of others
- Self-talk
- More prepared to have a go

Initial coding

Generating initial codes
1. Students showing perseverance
2. Helping peers
3. Using initiative
4. Not noticed change in perseverance yet
5. Problem solving
6. Trying different strategies
7. Less upset when faced with challenge
8. Recognising GM
9. Compared themselves to other GM characters
10. Positivity towards learning
11. Less negativity

12. Correcting mistakes
13. Can be themselves
14. Using GM language
15. Whole school approach
16. Challenging each other
17. Parental interest
18. Awareness of challenge
19. Upset about making mistakes
20. Making mistakes
21. Targeted marking
22. Valued being praised for effort
23. Ownership of own learning
24. Working hard
25. Goals need to be visible
26. Increased effort

27. Self-awareness
28. Extra support reduced GM
29. Valuing challenge
30. Mare participation
31. Less worried about making mistakes
32. More open to mistakes
33. Ready for challenges
34. Seeking help
35. More independence
36. Humour
37. Thinking more
38. Solving maths problems
39. More confidence
40. Group learning
41. Increased self-esteem

42. More resilience
43. Enthusiastic
44. More friendly with peers
45. Practice more
46. Changed ethos
47. Students more relaxed
48. Less competitive
49. Views on success
50. Embracing feedback
51. Shared language
52. Learning from mistakes
53. Encouraging themselves
54. Next steps
55. Persistence

Coding Revised
Amended codes in red
1. Students showing perseverance
2. Helping peers
3. Using initiative
4. Not noticed change in perseverance yet Reason: Too broad
5. Problem solving
6. Trying different strategies Reason: Duplication with code 5
7. Less upset when faced with challenge Reason: Duplication with code 33
8. Recognising GM
9. Compared themselves to other GM characters
10. Positivity towards learning
11. Less negativity Reason: similar to code 10
12. Correcting mistakes
13. Can be themselves

14. Using GM language
15. Whole school approach Reason: Not related to research question
16. Challenging each other
17. Parental interest Reason: Not related to the research question
18. Awareness of challenge
19. Upset about making mistakes
20. Making mistakes Reason: Duplication code 19
21. Targeted marking Reason: Not linking with research question
22. Valued being praised for effort Reason: Not linking with research question
23. Ownership of own learning
24. Working hard
25. Goals need to be visible Reason: Not linking with research question
26. Increased effort
27. Self-awareness
28. Extra support reduced GM

29. Valuing challenge
30. Mare participation
31. Less worried about making mistakes
32. More open to mistakes
33. Ready for challenges
34. Seeking help
35. More independence
36. Humour
37. Thinking more
38. Solving maths problems
39. More confidence
40. Group learning
41. Increased self-esteem
42. More resilience
43. Enthusiastic

44. More friendly with peers
45. Practice more
46. Changed ethos
47. Students more relaxed
48. Less competitive
49. Views on success
50. Embracing feedback
51. Shared language
52. Learning from mistakes
53. Encouraging themselves
54. Next steps Reason: Not relevant to research question
55. Persistence Reason: Duplication with code 1

Coding Revised X2
1. Students showing perseverance
2. Helping peers
3. Using initiative
4. Problem solving
5. Recognising GM
6. Compared themselves to other GM characters Reason: lack of relevance to research question
7. Positivity towards learning
8. Correcting mistakes Reason: Duplication code 1
9. Can be themselves
10. Using GM language
11. Challenging each other
12. Awareness of challenge Reason: Duplication code 33

13. Upset about making mistakes   Reason: Duplication code 32
14. Ownership of own learning
15. Working hard   Reason: Duplication code 26
16. Increased effort
17. Self-awareness
18. Extra support reduced GM
19. Valuing challenge   Reason: Duplication code 33
20. Mare participation
21. Less worried about making mistakes   Reason: Duplication code 32
22. More open to mistakes
23. Seeking challenge (name change from 'ready for challenge)
24. Seeking help
25. More independence
26. Humour
27. Thinking more   Reason: Duplication code 5

28. Solving maths problems Reason: Duplication code 5
29. More confidence Reason: Duplication code 31
30. Group learning Duplication code 2
31. Increased self-esteem
32. More resilience
33. Enthusiastic
34. More friendly with peers Reason: Duplication code 2
35. Practice more Reason: Duplication code 26
36. Changed ethos
37. Students more relaxed
38. Less competitive
39. Views on success
40. Embracing feedback
41. Shared language
42. Learning from mistakes

43. Encouraging themselves – (name change- self motivation)

Stage 3- Identifying themes

Coding Revised
1. **Students showing perseverance**
2. **Helping peers**
3. **Using initiative**
4. **Problem solving**
5. **Recognising GM**
6. **Positivity towards learning**
7. **Can be themselves**
8. **Using GM language**
9. **Challenging each other**
10. **Ownership of own learning**
11. **Increased effort**
12. **Self-awareness**

13. **Mare participation**	
14. **More open to mistakes**	
15. **Seeking challenge**	
16. **Seeking help**	
17. **More independence**	
18. **Humour**	
19. **Increased self-esteem**	
20. **More resilience**	
21. **Enthusiastic**	
22. **Changed ethos**	
23. **Students more relaxed**	
24. **Less competitive**	
25. **Views on success**	
26. **Embracing feedback**	
27. **Shared language**	

28. ==Learning from mistakes==
29. ==Self-motivation==

Example of coding questionnaire extract

Question	Response	Code
Q8. After implementing the strategies have you noticed any changes in the way children in your class respond to challenging work? Q9. If you answered yes please could you provide some examples of the way children demonstrated this?	'They challenge each other. They reinforce the idea of 'yet' with each other. I've had parent coming in asking about it. Children have become more aware of the need for challenge'.	1. **Challenging each other** 14. **Using GM language** 2. **Parental interest**
Q10. After implementing Growth Mindset strategies in your classroom did you notice a difference in children's perseverance? Q11. If yes, please provide examples of how children demonstrated this.	'Children became aware that when the challenge was too easy they did not develop. Some of them were very upset because they were making mistakes but for others it was the first time they had not got everything right. I told them that I finally knew what they could do and we developed the marking so that we targeted carefully'.	3. **Awareness of challenge** 4. **Upset about making mistakes** 5. **Making mistakes** 6. **Targeted marking**
Q12. After implementing growth mindset strategies in your classroom did you notice a difference in children's reflection and approach to learning? Q13. If yes, please provide examples of how children demonstrated this.	'They were pleased that they were praised for their effort and not outcomes'.	7. **Valued being praised for effort**

Stage 4

Reviewing Themes
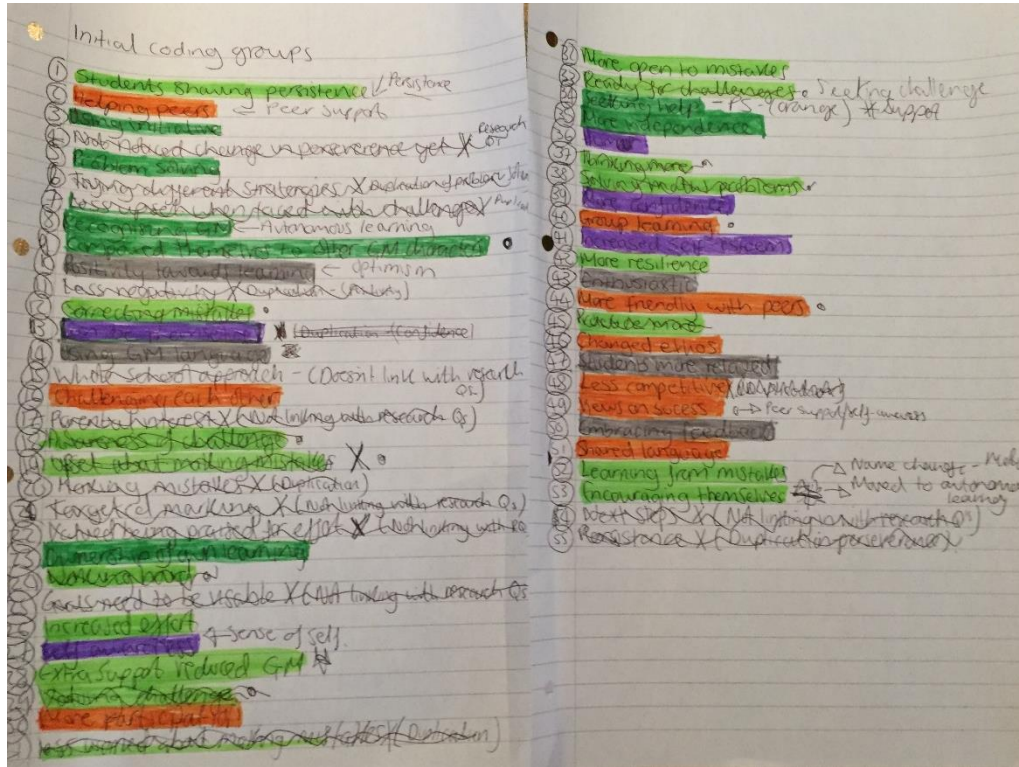
Stage 5

Identifying final themes

Theme map- Defining and naming themes

Key
Theme 1: Perseverance
Theme 2: Peer support
Theme 3: Autonomous learning
Theme 4: Sense of self
Theme 5: Optimism

Theme 1: Persistence

Subthemes:

Seeking challenge

Open to making mistakes

Learning from mistakes

Encouraging themselves

Problem solving

Increased effort

More resilient

Theme 2: Peer support

Subthemes:

Helping peers

Seeking help

Challenging each other

More participation

Changed ethos

Less competitive

Shared language

Theme 3: Autonomous learning

Subthemes:

Using initiative

Problem solving

Ownership of own learning

More independent

Self-motivation

Theme 4: Sense of self

Can be themselves

Self-awareness

Humour

Increased self-esteem

Recognising GM

Theme 5: Optimism

Subthemes:

Positivity towards learning

Enthusiastic

Using GM language

More relaxed

Embracing feedback

Views of success