Newcastle University

School of Education, Communication and Language Sciences

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Teacher self-efficacy and inclusive practice: An exploration of educator self-efficacy with regards to inclusive practice within the mainstream classroom.

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Thesis Abstract

Teacher self-efficacy (TSE) is theorised to underlie teacher effort, resilience in practice, and persistence when teaching pupils experiencing difficulties with learning (Bandura, 1997; Gibson & Dembo, 1984). Pupils categorised as having 'special educational needs' (SEN) experience difficulties with learning and have disproportionately poor outcomes in comparison to their peers (Department for Education, 2011). Researching TSE and any potential relationship/s between this and practice promoting the inclusion of pupils with SEN may contribute to understanding these poorer outcomes and perhaps identify a way to challenge these in future.

An interpretative quantitative systematic review of literature regarding TSE and inclusive practice was undertaken initially in order to summarise the findings of research between 1998 and 2012. It concluded that research suggested a relationship between TSE and inclusive practice and that several factors, such as teaching experience and teacher attributions for pupil learning difficulties, may be associated with and/or moderate this relationship.

A 'bridging document' was then developed. This outlined the gap in TSE research which was selected for further empirical exploration; the increased presence of support assistants (SAs) within the mainstream classroom. It also detailed initial epistemological and methodological considerations surrounding the subsequent empirical exploration of this area.

The empirical study then undertaken aimed to explore the espoused self-efficacy beliefs of both mainstream teachers and SAs regarding their inclusive practice and teacher deployment of SAs. Consideration was given to the activities, planning, and collaboration undertaken by staff and any association between these and educator self-efficacy (ESE) levels, alongside any difference in the self-efficacy levels of teachers and SAs. A mixed methods survey methodology was employed utilising cross-sectional self-report questionnaires, containing both closed and open-ended questions, and structured observations.

The empirical study concluded that although ESE regarding inclusive practice was not statistically associated with the activities practitioners undertook or the pupils they worked with within the classroom, it was associated with elements of staff planning and collaboration, such as communication prior to lessons. Additionally, teachers held higher

ESE than SAs. This suggests that teachers may be more resilient, persistent, and possibly better placed to effectively support pupils with SEN than SAs, especially when also considering their often greater subject and pedagogical knowledge.

Acknowledgements & Dedications

I would like to thank my supervisor, Dr Simon Gibbs, for his advice and contributions to both the research process and this thesis.

This thesis is dedicated to my family for their patience, understanding and unwavering belief in me. Thank you for helping me with every step of this journey.

Table of Contents

List of Tables

List of Figures

List of Appendices

Chapter 1: Systematic Literature Review
Is there a relationship between teacher self-efficacy and inclusive practice?

1.1 Abstract

Teacher self-efficacy (TSE) is theorised to underlie teacher effort, resilience in practice, and persistence when teaching pupils experiencing difficulties with learning (Bandura, 1997; Gibson & Dembo, 1984). Pupils categorised as having 'special educational needs' (SEN) experience difficulties with learning and have disproportionately poor outcomes in comparison to their peers (Department for Education, 2011). Researching TSE and any potential relationship/s between this and practice promoting the inclusion of pupils with SEN may contribute to understanding these poorer outcomes and perhaps identify a way to challenge these in future.

In order to explore any potential relationship/s between TSE and inclusive practice two questions were developed: 'is there a relationship between teacher self-efficacy and inclusive practice?' and, if so, 'what factors moderate the relationship between teacher self-efficacy and inclusive practice?'. An interpretative quantitative systematic review of literature regarding TSE and inclusive practice was undertaken to summarise the findings of research between 1998 and 2012 in relation to these questions.

Thirteen studies were eligible for detailed review. Their data concerning TSE and inclusive practice was extracted. The majority of studies (N = 11) identified a relationship between TSE and inclusive practice. Study findings were also thematically analysed to identify factors which may be associated with and/or moderate this relationship. Several factors were identified: teaching experience; teacher type (special versus mainstream); classroom practice; special education teacher quality; sources of teacher self-efficacy; teacher beliefs about, attitudes towards, and emotional reactions to inclusion; teacher attributions for pupil learning difficulties; and referral of pupils to special education services/placements.

The review concluded that there is a relationship between TSE and inclusive practice and that several factors may be associated with and/or moderate this relationship. Additional research focusing explicitly upon TSE and inclusive practice, perhaps incorporating consideration of the wider classroom context, would further understanding of this research area.

1.2 Introduction

This section discusses teacher efficacy research. Consideration is given to a potential relationship between teacher self-efficacy and inclusive practice. The rationale for undertaking this systematic literature review and its aims and objectives are also discussed. The personal and professional rationale behind this researcher's selection of this area for review is discussed first.

1.2.1 Teacher self-efficacy with regards to inclusive practice: Why this area was chosen for systematic literature review

The area of teacher self-efficacy in relation to inclusive practice was selected for review due to this researcher's previous personal and professional experiences and subsequent interest in the field. Having worked as a Support Assistant (SA) in a mainstream secondary school supporting pupils with special educational needs and, more recently, as a Trainee Educational Psychologist working across several schools, this researcher has observed some teachers delegating the responsibility for teaching pupils with SEN to SAs and is interested in exploring why this may occur. Although there may be several reasons/'mechanisms' underlying this observed pattern in teacher practice, such as delegating responsibility for these pupils to SAs in order to reduce workload, personal interest in self-efficacy theory led this researcher to choose this as an area for exploration; perhaps some teachers delegate their responsibility for the education of pupils with SEN to others due to the beliefs they hold about their ability to educate these pupils. The focus of this systematic literature review thus became exploring if there is a relationship between teacher self-efficacy and inclusive practice (accessed via the label of 'special educational needs'). Teacher self-efficacy and the theoretical foundations of this research area are considered next.

1.2.2 The theoretical foundations of efficacy research regarding teachers

There are two strands of efficacy research relating to teachers: research regarding 'teacher efficacy' and research regarding 'teacher self-efficacy'. Although the terms 'efficacy' and 'self-efficacy' are often used interchangeably, they are two distinct concepts. Efficacy refers to the ability of something/someone to produce a desired outcome (Tschannen-Moran & Woolfolk Hoy, 2001). Self-efficacy refers to an individual's beliefs about their ability to undertake the actions required to produce desired attainments (Bandura, 1997). In relation to research regarding teachers, these concepts originate from two different theoretical perspectives.

1.2.2.1 Rotter's Social Learning Theory: Teacher efficacy

The concept of 'teacher efficacy' (TE) was developed by researchers from the Rand organisation based upon Rotter's social learning theory (Gibson & Dembo, 1984; Rotter, 1966). Rotter's theory was centralised around the concept of locus of control (of reinforcements; LoC). LoC is an individual's generalised expectancy about the underlying causes of events in their life (Rotter, 1966). It is a belief continuum extending from external (events are controlled by others/luck/fate) to internal (the individual has power over their outcomes) (Fazey & Fazey, 2001). Due to this theoretical basis, the Rand organisation's TE concept was understood to be the extent to which teachers believe they control the reinforcement of their teaching efforts (i.e. teacher beliefs about their power over the outcomes/consequences of their teaching, such as pupil achievement) (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998).

The Rand researchers utilised two items to measure TE, one focusing upon the influence of teachers in general and underlying a concept later known as 'general teacher efficacy' (GTE) and one focusing upon the efficacy of the individual teacher later underlying the concept of 'personal teaching efficacy' (PTE) (Tschannen-Moran & Woolfolk Hoy, 2001). While GTE and PTE were explored in further research developing the two-item Rand measure, a second conceptual strand of efficacy research was emerging from Bandura's social cognitive theory (Tschannen-Moran & Woolfolk Hoy, 2001).

1.2.2.2 Bandura's Social Cognitive Theory: Teacher self-efficacy

Bandura's social cognitive theory, like Rotter's social learning theory, sought to explain how people acquire and maintain behavioural patterns (Bandura, 1997). Unlike Rotter's internal/external LoC continuum concept, Bandura saw behaviour as explicable via relationships of reciprocal causation between behaviour, cognition and personal factors, and environmental influences. He theorised that these factors interact with one another and therefore people are both producers and products of their environment (Bandura, 1986).

From this theory came the concept of 'self-efficacy' (SE). Perceived self-efficacy is an individual's context-dependent belief in their ability to coordinate and undertake the actions required to produce desired effects/attainments (Bandura, 1997; Block, Taliaferro, Harris, & Krause, 2010). Bandura held that people decide how to behave in line with their perceptions of their abilities not their actual abilities (Bandura, 1997). Those with higher self-efficacy beliefs/'levels' expend more effort upon endeavours, persist longer when presented with obstacles, are more resilient in dealing with setbacks, and experience lower levels of stress/depression when dealing with demanding situations (Bandura, 1997). Consideration is now given to this in relation to teachers.

1.2.2.3 The difference between teacher efficacy and teacher self-efficacy

The two conceptualisations of efficacy in relation to teachers are very different. Research stemming from Bandura's theoretical perspective focuses upon individual teachers' future-oriented beliefs about their ability to produce certain actions required for attainments, whereas that stemming from Rotter's theoretical perspective is concerned with LoC and teacher beliefs about whether their actions can affect outcomes (Bandura, 1997). This distinction has been supported by empirical evidence. There is little or no identified relationship between these constructs. Perceived SE is a strong predictor of behaviour whilst LoC is a weak predictor: an individual can believe an outcome is internally controllable but have little confidence that they could accomplish it (Tschannen-Moran et al., 1998). When considering this, it is Bandura's notion of SE in relation to teachers and inclusive practice which is of interest to this review: teachers' beliefs about their ability to teach (an 'action') pupils with special educational needs (SEN) is of interest. SEN and inclusive practice are discussed next.

1.2.3 SEN and inclusive practice

The Special Educational Needs Code of Practice defines a child/young person as having SEN if they have difficulty learning that requires additional differentiation of school work and/or environment in order to accommodate for it (Department for Education and Skills, 2001). Inclusion is a broad concept extending beyond SEN (Gatt, Ojala, & Soler, 2011). Within education, inclusive practice (i.e. practice promoting inclusion) has been conceptualised as teachers recognising the needs of all of their pupils and acting to accommodate these (The Open University, 2006). However, teacher self-efficacy (TSE) regarding inclusive practice is conceptualised within this review as teachers' beliefs about their ability to teach pupils with SEN. This is discussed further next.

1.2.4 Teacher self-efficacy, SEN, and inclusive practice: The rationale for undertaking this systematic literature review

Teachers with higher levels of TSE have been found to provide pupils experiencing difficulties (i.e. those who could be categorised as having SEN) with more of the guidance they need to succeed and praise their academic accomplishments versus teachers with lower TSE (Ashton & Webb, 1986; Gibson & Dembo, 1984). TSE has also been found to predict the achievement of pupils with 'severe academic difficulties' (Ashton & Webb, 1986). Perhaps this is attributable to teachers with higher TSE viewing pupils as 'teachable' and regarding learning difficulties as conquerable by extra effort and resourcefulness (Bandura, 1997). Teachers with lower TSE tend to perceive low pupil ability as exemplifying that some pupils cannot be taught, a viewpoint conceivably stemming from their doubt in their ability to teach these pupils (Bandura,

1997). Therefore, TSE levels may influence teacher behaviours and instructional practises within the classroom.

As such, it would seem that creating learning environments and opportunities for pupil achievement are related to TSE (Bandura, 1997). Pupils with SEN are increasingly educated within mainstream settings (Russell, Webster, & Blatchford, 2013). However, recent budget cuts have left many educational establishments and front-line support services in restricted financial positions (Cockell, 2012). Consequently, a potentially greater number of pupils with SEN may be educated within mainstream settings with limited additional resources to support inclusion. Teachers are, therefore, increasingly required to engage in and take responsibility for inclusive practice, differentiating for pupil needs and delivering this differentiation within the wider classroom environment. Their belief in their ability to do this (i.e. their TSE regarding their inclusive practice) could potentially impact upon both their performance and the subsequent outcomes for their pupils.

An SEN review within England highlighted that pupils with 'SEN status' have disproportionately poor life chances (Department for Education, 2011). Therefore it is imperative to attempt to reduce the impact of SEN and SEN status upon pupil outcomes (Department for Education, 2011). When considering that research suggests teachers with higher TSE persist in teaching pupils experiencing difficulties (i.e. those pupils similar to/those with SEN), thus increasing the likelihood of pupil success (Gibson & Dembo, 1984), this may contribute to improved life outcomes for pupils. TSE research therefore presents as an area of potential importance within the current socio-political climate of inclusion.

Researching teacher beliefs about their ability to teach pupils with SEN is essential in order to both further support those who believe they are able to do this and to begin to develop the TSE of those who currently believe they are unable to do this. Teachers are responsible for the education of every pupil in their class, including those with SEN. In order to develop inclusive education we need to develop a greater understanding of teacher beliefs in their ability to educate all pupils.

1.2.5 Aim

This review aims to synthesise the findings of recent research regarding TSE and inclusive practice to explore if a relationship between the two is suggested and, if so, identify what factors appear to moderate this. It aims to further understanding of TSE in relation to inclusive practice and identify areas for additional empirical research.

1.2.6 Objectives

Two questions are addressed by this review:

- 'Is there a relationship between teacher self-efficacy and inclusive practice?' and, if so
- 'What factors moderate the relationship between teacher self-efficacy and inclusive practice?'.

1.3 Methodology

This section details the methodology and methods employed to provide a transparent and replicable process. Discussion of the design, implementation, and ethical issues surrounding this review and the dissemination of the information collated is undertaken.

1.3.1 Methodological approach

Research can be approached from positivist or interpretivist perspectives. The approach employed is determined by the hypotheses/questions to be investigated and the data obtained (Creswell, 2009). Due to the variety of quantitative data extracted from the reviewed studies and when considering the questions this review sought to answer, a combination of both positivist and interpretivist approaches was employed (see Table 1).

Table 1: Methodological approaches.

Methodological approach	Description
Positivist	Positivist research attempts to exclude the bias of human perspectives and rely on 'absolute' measures (Robson, 2002). It gathers quantitative data, i.e. numerical data that allows statistical analysis. It measures and tests variables and employs a deductive approach to hypotheses testing (Bryman, 2008). The studies reviewed here all employed a positivist (quantitative) methodology in order to obtain data for statistical analysis to investigate a possible relationship between teacher self-efficacy and inclusive practice.
Interpretivist	Interpretivist research values the views, experiences, and perspectives of individuals and sees meaning as being co-created throughout the research process (Cohen, Manion, & Morrison, 2011). It utilises qualitative data (i.e. non-numerical data) which is inductively analysed (i.e. interpreted). Meanings and emergent themes are identified by the researcher/s and the research itself may adapt in order to interpret and explore its findings (Creswell, 2009).
This review	A 'balance' between positivist and interpretivist perspectives can be gained via the use of a mixed-methods approach (Creswell, 2009). Obtaining both quantitative and qualitative data in data collection and/or employing both quantitative and qualitative data analysis techniques is an attempt to strengthen any conclusions drawn as this may allow a greater depth of understanding than if either approach had been employed in isolation (Creswell, 2009). This review applied qualitative interpretation to the variety of quantitative data extracted from the reviewed studies. It is an interpretative quantitative systematic review; it utilises a mixed-methods approach to data analysis.

1.3.2 Methods

A systematic review was undertaken to investigate previous research regarding TSE and inclusive practice in order to explore any relationship/s between the two. Although criticised for not producing new data, grouping concepts together to facilitate analysis, and being time-limited (Littell, Corcoran, & Pillai, 2008; Torgerson, 2003), systematic reviews amalgamate, critique, and condense previous findings to identify emergent themes within a research area in an attempt to further understanding of the topic and highlight both heavily investigated areas and those which warrant further research (Chalmers & Altman, 1995; Littell et al., 2008; Petticrew & Roberts, 2006; Torgerson, 2003).

1.3.3 Design

This review utilised the systematic review process outlined by Petticrew and Roberts (2006). See Table 2.

Table 2: Petticrew and Roberts' (2006) seven stage systematic review process.

Systematic review stage	Description of stage
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.

1.3.4 Sampling

The selection (i.e. inclusion/exclusion) criteria for research included in a systematic review must be stringent to prevent reviewing work of poor quality or little relevance to the research question which would offer no legitimate contributions to the research area and reduce the quality of the review and its conclusions (Torgerson, 2003). Several methods were utilised to obtain a sample of studies for this review:

- electronic database searches;
- hand-searches of relevant journals;
- reference harvesting;
- citation searches; and
- grey literature searches.

Three search terms were utilised during these searches; 'teacher', 'efficacy', and 'special' (see Table 3). With these three terms the subjects/targets are defined (teachers), the issue is defined (efficacy), and the issue is focused on a more relevant sample (special). Three search terms were utilised as fewer terms produces a more specific as opposed to sensitive search by retrieving fewer irrelevant studies (Petticrew & Roberts, 2006). Retrieved studies still require manual assessment for relevance as search terms narrow the field but do not precisely identify relevant studies (Torgerson, 2003). If the search terms above were used within the title and/or abstract of a study in a combination relevant to the context of this review then the study fulfilled the first stage screening process (see Figure 1).

Table 3: Justification for the three search terms utilised in the study sampling process.

Search term	Justification for use
Teacher	• Teachers were the target sample. It is their self-efficacy which was of relevance to the review questions. • Tschannen-Moran et al. (1998) also utilised this as a key search term in their review of teacher efficacy literature.
Efficacy	• 'Efficacy' was selected for use as opposed to 'self-efficacy' as an informal preliminary review of the literature suggested that some researchers refer to teacher 'efficacy' when discussing 'self-efficacy' and vice versa. Utilising the search term 'efficacy' retrieved both teacher efficacy and teacher self-efficacy research to be filtered manually for relevance to self-efficacy. • Tschannen-Moran et al. (1998) also utilised this as a key search term in their review of teacher efficacy literature.
Special	• The review questions are concerned with inclusive practice. Studies related to the Special Educational Needs Code of Practice (Department for Education and Skills, 2001) were of particular relevance as the English SEN system is what this systematic review was undertaken within and what further empirical research based upon the findings of this review would be conducted within. • 'Special' was selected for use as it encompassed topics/phrases such as 'special educational needs', 'special needs', and 'special education'. These terms were used in a variety of ways relevant to the review questions depending upon the country within which the research was conducted. • Studies identified from these key words which were related to an issue which would be considered a 'special educational need' within the SEN Code of Practice (Department for Education and Skills, 2001), for example dyslexia or behavioural difficulties, were deemed relevant even if they did not contain the word 'special' within their title and/or abstract.

1.3.4.1 Electronic database searches

Several electronic databases were searched utilising the search terms. See Figure 1 for details of these searches.

Figure 1: Flow chart detailing the electronic database searches.

Search terms:
Teacher;
Efficacy; Special.

Database	Number of search results	Number of relevant studies after first stage screening*
Scopus	147	38
Web of Knowledge	166	19
Proquest	384	27
British Education Index	30	4
Australian Education Index	81	2
Ebsco	208	4
Total	1, 016	94

**First stage screening consisted of studies of potential relevance being identified on the basis of their title and/or abstract only; consideration was given to the context within which the search terms were used (Torgerson, 2003).*

***Second stage screening involved the application of detailed inclusion and exclusion criteria to studies in order to identify those relevant for inclusion within this review (Torgerson, 2003) (see Table 8).*

Database	Number of relevant studies after first stage screening*	Number of studies found in this database only	Number of studies found in this database and also replicated in others
Scopus	38	20	18
Web of Knowledge	19	6	13
Proquest	27	15	12
British Education Index	4	2	2
Australian Education Index	2	2	0
Ebsco	4	3	1
Total before de-duplication	94	48	46
Total after de-duplication		48	20
		68	

De-duplication is the removal of duplicate results. 46 of the 94 studies retrieved at first stage screening had or were duplicates of studies within other databases. When each study was counted only once (i.e. de-duplicated), 20 studies remained.

Application of second stage screening process**

Number of relevant studies for review
13

1.3.4.2 Hand searches of relevant journals

Sixty-eight studies met the first stage screening criteria. One item was an unpublished thesis and 67 were journal articles. Table 4 provides justification for which journals were selected to be hand searched for further studies of relevance.

Table 4: Journals which produced studies of interest at first stage screening.

Journal title	**Number of studies retrieved from each journal** ***(from the 67 identified)***
• Asia-Pacific Journal of Teacher Education • Behavioral Disorders • Bilingual Research Journal • Early Childhood Education Journal • Early Childhood Research Quarterly • Education • Education and Training in Developmental Disabilities • Education and Urban Society • Educational & Child Psychology • Educational Psychology • Elementary School Journal • Exceptional Children • Focus on Autism and Other Developmental Disabilities • International Journal of Whole Schooling • Journal of Behavioural Education • Journal of Early Childhood Teacher Education • Journal of School Health • Learning Disabilities: A Multidisciplinary Journal • Mental Retardation • Psychological Reports • Psychology in the Schools • School Psychology International • School Psychology Quarterly • The Journal of School Nursing	1
• British Journal of Educational Psychology • International Journal of Disability, Development and Education • Journal of Learning Disabilities • Journal of Research in Special Educational Needs	2
• International Journal of Inclusive Education • Journal of Educational Research • Journal of Intellectual Disability Research • Remedial and Special Education	3
• The Journal of Special Education	4
• Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children	5
• European Journal of Special Needs Education	6
• International Journal of Special Education	8

Four journals produced a relatively large number of studies at first stage screening:

- International Journal of Special Education;
- European Journal of Special Needs Education;
- Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children; and
- The Journal of Special Education.

These were hand searched to identify any other relevant studies omitted by the electronic database searches. Studies were screened using their title and abstract (see Table 5). No additional studies were identified for review.

Table 5: Studies identified via hand searches of relevant journals.

Journal title	Number of studies identified at first stage screening via electronic database searches	Number of additional studies identified at first stage screening via hand searches
International Journal of Special Education	8	0
European Journal of Special Needs Education	6	0
Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children	5	0
The Journal of Special Education	4	0

1.3.4.3 Reference harvesting

'Reference harvesting' is the process of using the reference list of key studies to identify other studies of potential relevance for review (Littell et al., 2008). Two studies were selected for this. Sharma, Loreman, and Forlin (2012) was recent and related specifically to special needs and inclusive practice thus was deemed worthy of reference harvesting. Also, Klassen et al. (2011) was selected as it summarised recent self-efficacy research. Their references were assessed for eligibility for review (see Table 6). No additional studies were identified for review.

Table 6: Studies identified via reference harvesting.

Article	Number of references	Number of references suitable for review
Sharma, Loreman, and Forlin (2012)	44	0
Klassen et al. (2011)	69	0

1.3.4.4 Citation searches

Key studies within the research area were identified via preliminary reading. Two articles, Tschannen-Moran et al. (1998) and Tschannen-Moran and Woolfolk Hoy (2001), were frequently cited by studies identified during first stage screening. As this review sought to analyse recent research, reference harvesting from these articles would have likely produced references to studies too old for review. As such, studies which have cited these articles were screened for eligibility for review (see Table 7).

Table 7: Studies identified via citation searches.

Article	Number of studies citing article in Scopus (as of 05.10.2012 when search carried out)	Number of studies citing article in Scopus eligible for review and not already identified via database searches
Tschannen-Moran et al. (1998)	422	0
Tschannen-Moran and Woolfolk Hoy (2001)	327	0

The citation searches were undertaken in Scopus as this database produced the greatest number of relevant studies for review (see Figure 1). No additional studies were identified for review.

1.3.4.5 Searching the 'grey literature'

'Grey literature' refers primarily to unpublished literature (Littell et al., 2008). Although unpublished, this information is still of interest and should be addressed in an attempt to overcome publication bias (The Cochrane Collaboration, 2002). Some of the electronic databases searched in this review accessed records of items other than journal articles, for example conference proceedings and unpublished theses, therefore encompassing 'grey literature' (Bryman, 2008). Newcastle University's electronic library catalogue was also searched for items of relevance. This included theses, books, and other resources available to the library. When searching the library records with the three key search terms a variety of items were initially retrieved. However, upon first stage screening of their relevance, none were deemed eligible for further analysis.

The search for studies to review was then stopped as no further relevant studies were being identified.

1.3.4.6 Second stage screening

Second stage screening involves the application of detailed inclusion/exclusion criteria to studies in order to identify those relevant for review (Torgerson, 2003). Table 8 details the

inclusion/exclusion criteria, including the timeframe selected for review, utilised during both first and second stage screening.

Table 8: Details of the inclusion and exclusion criteria applied during first and second stage screening of studies for review.

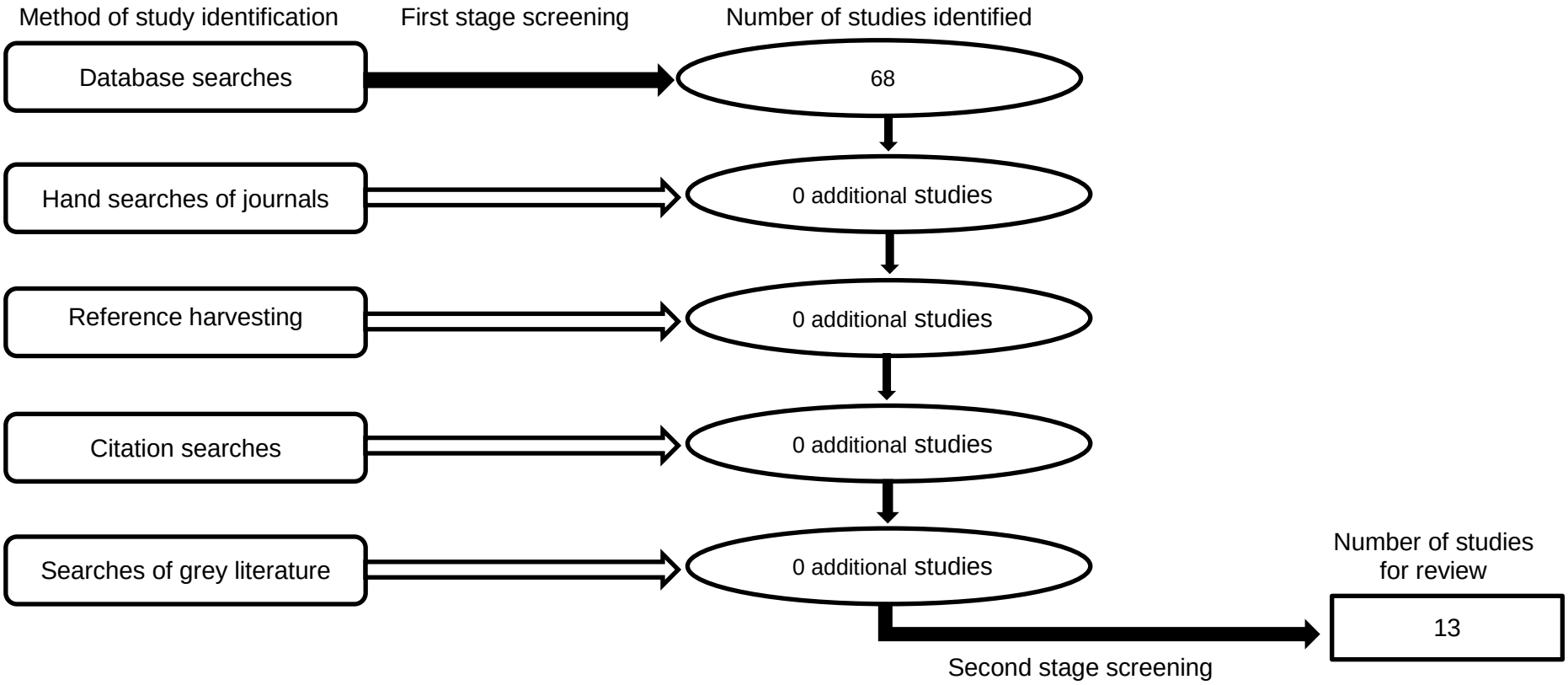
First stage screening	Second stage screening	
Criteria for inclusion in review	**Criteria for inclusion in review**	**Criteria for exclusion from review**
Research containing the words 'teacher', 'efficacy', and/or 'special' (in the context of special educational needs) in the title and/or abstract.	Research produced (not necessarily published) from 1998 onwards. As Tschannen-Moran et al. (1998) produced a review of teacher efficacy research deemed to be a quality summary by other TSE researchers (Klassen et al., 2011), research conducted from 1998 onwards was included within this review.	Systematic reviews of the literature already conducted.
Any form of research documentation, published or unpublished, peer-reviewed or otherwise.	The initial intention was to sample research based within the English education system. However, few relevant studies were retrieved. Therefore the scope of the search was broadened to include research conducted in countries with similar education systems to that of England (i.e. the rest of the UK, USA, Canada, Australia, and New Zealand).	Research developing a measure of teacher self-efficacy as opposed to employing one.
Research relating to special educational needs and/or disabilities.	Research relating to special educational needs (not necessarily including this term but referring to an issue encompassed within the SEN Code of Practice: Department for Education and Skills, 2001).	Research related to the management of pupil medical conditions only.
	Relating to teacher self-efficacy and inclusive practice.	Research relating to teacher efficacy as opposed to self-efficacy.
	Research which primarily sampled teachers.	Research using teacher self-efficacy as an outcome measure.
	Research concerned with pupils at early years, primary, or secondary equivalent stages in their education.	Research testing a specific methodology wherein teacher self-efficacy is not a primary measure or focus.
		Research on samples with potentially confounding variables, e.g. teachers of pupils with SEN-type difficulties in addition to having English as an additional language.
		Research primarily focused upon teacher predictions of long term future outcomes for their pupils.
		Research at school district level.
		Research primarily focused upon teacher burnout, resilience, and job satisfaction (i.e. teacher level) with little information regarding inclusion.

After the application of the second stage screening process to the 68 identified studies, 13 were deemed eligible for review.

1.3.4.7 Sampling summary

A variety of sampling methods for obtaining studies for review have been detailed. See Figure 2 for a summary of the sampling process.

Figure 2: A summary overview of the study sampling process.



1.3.5 Methods of data analysis

The 13 studies selected for review were analysed in three stages (see Table 9).

Table 9: Stages of study analysis.

Analysis stage	Description of stage
1	The studies were read and details of each recorded on an initial analysis table (see Appendix A). Details recorded at this stage included; sample, methodology, data collection methods and measures, potential funding biases, data analysis methods, ethical issues, emergent themes, and the main conclusions they reached in relation to teacher self-efficacy.
2	The studies were analysed in terms of their ability to answer their own questions and their ability to answer this review's questions by 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 section N 'Quality of the study - Weight of evidence' (see Appendix B) (The Evidence for Policy and Practice Information and Co-ordinating Centre, 2007). This allowed a judgement to be made about the overall quality of each reviewed study.
3	The findings of the studies which related to teacher self-efficacy and inclusive practice were thematically analysed and coded by emergent themes (see Table 13, p.40).

At each stage of analysis, consideration was given to the conclusions of studies and if they were warranted given their data collection, analysis, and results. Only data relating to TSE and inclusive practice were retrieved from the studies as this data addressed the review questions. Thematic analysis was utilised to draw themes from this data (see section 1.4.3, pp.38-54). Eight themes were identified:

- Teaching experience;
- Special versus mainstream education teachers;
- Classroom practice;
- Special education teacher quality;
- Sources of teacher self-efficacy;
- Teacher beliefs about, attitudes towards, and emotional reactions to inclusion;
- Teacher attributions for pupil learning difficulties; and
- Referral of pupils to special education services/placements.

These will be discussed further in the findings and discussion section.

1.3.6 Ethical issues

This review utilised the findings of previous studies, which should have undergone ethical scrutiny before being conducted and whose data was already anonymised. Resultantly, the ethical issues surrounding this review were minimal. However, any ethical issues within reviewed studies were considered during analysis.

1.3.7 Methodology summary

The methodological perspective, methods employed, sample obtained, data analysis techniques utilised, and ethical issues considered by this review have been discussed. The purpose of this review is to inform future empirical research into TSE and inclusive practice. This review will be made available for the use of other practitioners and researchers with an interest in this area. The findings of this review are discussed next.

1.4 Findings and Discussion

This section discusses the quality of the reviewed studies, provides further details regarding those sampled, and synthesises their findings into themes encompassing the different aspects of the relationship/s between TSE and inclusive practice they explored. The findings of this review are discussed as they are identified.

1.4.1 Summary of the reviewed studies

This section provides details of the reviewed studies. Many studies focused upon issues/topics other than TSE in relation to inclusive practice. However, as they included measures of TSE in relation to inclusive practice they were eligible for review. It is their data regarding TSE and inclusive practice only which was extracted for analysis and discussion.

1.4.1.1 Sample

Table 10 summarises the details of the 13 reviewed studies. They were conducted within the USA (N = 10), UK (N = 2), and Canada (N = 1). Two studies gathered data as part of larger studies (Buell, Hallam, Gamel-Mccormick, & Scheer, 1999; Ruble, Usher, & McGrew, 2011), while one (Carlson, Lee, & Schroll, 2004) utilised secondary data from a larger study. Sample sizes varied from 33 to 1,475 teachers (median = 167).

Studies were conducted with mainstream education teachers (referred to as ‘general’ education teachers in many studies) (N = 6), special education teachers (i.e. those working in specialist settings) (N = 3), or both mainstream and special education teachers (N = 3), with one study (Chung, Marvin, & Churchill, 2005) not specifying. Studies obtained data from early years (N = 1), early years and primary (N = 1), early years, primary, and secondary (N = 2), primary (N = 5), and primary and secondary (N = 3) equivalent teachers, with one study (Frey, 2002) not specifying.

Some studies employed stage sampling (i.e. their sample was obtained via different sampling stages: Cohen, Manion, & Morrison, 2011) (N = 7). Cluster sampling, particularly by geographical location, was employed by most studies (N = 12). Random sampling (N = 2), random stratified sampling (N = 2), systematic sampling (N = 1), and snowball sampling (N = 1) were also employed (Cohen et al., 2011). All studies utilised a self-selecting sample as participants volunteered to respond to questionnaires (Coolican, 2009). Volunteers may inherently differ from non-responders but it is not possible to speculate as to how.

Table 10: Summary details of the reviewed studies.

Article	Number of participants (teachers)	Sampling of participants	Location	Type of provision	UK education equivalent	Methods (TSE only)	Measure of teacher self-efficacy utilised	Relationship between TSE and inclusive practice identified
Brady and Woolfson (2008)	118	Recruited staff from 3 school districts. 19 schools and 1 support service (cluster sampling).	UK	Mainstream & Specialist	Primary	Cross sectional self-report survey	Teachers' Sense of Efficacy Scale – Short Form (Tschannen-Moran & Woolfolk Hoy, 2001). 12 items, 9 point scale.	Yes. See Table 19 (p.51).
Buell et al. (1999)	273	Random stratified distribution of questionnaires across geographical area (cluster sampling) (stage sampling).	USA	Mainstream & Specialist	Early Years, Primary, & Secondary	Cross sectional self-report survey	Teacher self-efficacy information derived from own measure (see Table 11 for further details).	Yes. See Tables 15 (pp.42-44) and 16 (pp.45-46).
Carlson et al. (2004)	1, 475	Nationally representative sample. Data acquired on relevant personnel – a random stratified sample received questionnaires (stage sampling).	USA	Specialist	Early Years, Primary, & Secondary	Cross sectional self-report survey	Teacher Efficacy Scale (Gibson & Dembo, 1984). Version not specified.	Yes. See section 1.4.3.4 (pp.46-47).
Chung et al. (2005)	152	Directors of childcare centres in one state (cluster sampling) approached, they chose to distribute/not questionnaires to head teachers, they then used systematic sampling to select pupils to base responses upon (stage sampling).	USA	Unspecified	Early Years	Cross sectional self-report survey	Teacher Belief Scale - 32 item, 4 point scale adaptation of Soodak and Podell's (1996) 36 item modified version of Gibson and Dembo's (1984) Teacher Efficacy Scale. (Three factors of PTE, GTE, and Outcome Efficacy)	Yes (but no details of statistical significance given). See Table 14 (p.41).
Egyed and Short (2006)	106	Teachers from three school districts invited to participate (cluster sampling).	USA	Mainstream	Primary	Cross sectional self-report survey	Teacher Efficacy Scale (Gibson & Dembo, 1984). 16 item version.	Yes. See Tables 18 (pp.49-50) and 20 (p.53).
Frey (2002)	269	Participants randomly selected (random sampling) from 10 school districts (cluster sampling) (stage sampling).	USA	Specialist	Unspecified	Cross sectional self-report survey	Emmer & Hickman's (1991) expanded version of 16 item Teacher Efficacy Scale (Gibson & Dembo, 1984). (This included a third concept in addition to PTE and GTE of classroom management/discipline)	Yes. See Table 20 (p.53).

Article	Number of participants (teachers)	Sampling of participants	Location	Type of provision	UK education equivalent	Methods (TSE only)	Measure of teacher self-efficacy utilised	Relationship between TSE and inclusive practice identified
Hill, Baldo, and D'Amato (1999)	84	Participants recruited from three school districts (cluster sampling).	USA	Mainstream	Primary	Cross sectional self-report survey	Teacher Efficacy Scale (Gibson & Dembo, 1984). 30 item version, 6 point scale.	No. See Table 20 (p.53).
Ruble et al. (2011)	35	Participants recruited from two states (cluster sampling) as part of larger randomised study (random sampling) (stage sampling).	USA	Specialist	Early Years & Primary	Cross sectional self-report survey	Teacher Interpersonal Self-Efficacy Scale (Brouwers & Tomic, 2001). 24 items, 6 point scale.	Yes. See Tables 14 (p.41), 17 (pp.47-48), and 18 (pp.49-50).
Shippen et al. (2011)	774	Questionnaires distributed to teachers in large school district (cluster sampling).	USA	Mainstream & Specialist	Primary & Secondary	Cross sectional self-report survey	Teacher Efficacy Scale (Gibson & Dembo, 1984). Modified version to relate to pupils with disabilities.	Yes. See Tables 15 (pp.42-44) and 16 (pp.45-46).
Soodak, Podell, and Lehman (1998)	188	Recruited teachers enrolled in graduate classes at three universities, they then distributed packs to colleagues (snowball sampling). Surveys also distributed by investigators (cluster sampling) (stage sampling).	USA	Mainstream	Primary & Secondary	Cross sectional self-report survey	Teacher Efficacy Scale (Gibson & Dembo, 1984). Modified version (18 items).	Yes. See Tables 16 (pp.45-46) and 18 (pp.49-50)
Stanovich and Jordan (1998)	33	Teachers from large geographical area invited to participate (cluster sampling).	Canada	Mainstream	Primary & Secondary	Cross sectional self-report survey	Johnston's 1991 unpublished manuscript version of the Teacher Efficacy Scale (Gibson & Dembo, 1984). 6 point scale. The 19 PTE items analysed within this study were treated as synonymous to self-efficacy information.	Yes. See Tables 16 (pp.45-46) and 18 (pp.49-50)
Tejeda-Delgado (2009)	167	Teachers in an urban school district sampled (cluster sampling).	USA	Mainstream	Primary	Cross sectional self-report survey	Teacher Efficacy Scale (Gibson & Dembo, 1984). Modified version with 8 items, 5 point scale.	No. See Table 20 (p.53).
Woolfson and Brady (2009)	199	All schools in two districts invited to participate (cluster sampling). Agreeing schools distributed surveys to staff (stage sampling).	UK	Mainstream	Primary	Cross sectional self-report survey	Teachers' Sense of Efficacy Scale – Short Form (Tschannen-Moran & Woolfolk Hoy, 2001). Modified to relate to pupil with 'SEN' type difficulties. 12 items, 9 point scale.	Yes. See Tables 14 (p.41) and 19 (p.51).

1.4.1.2 Design of the reviewed studies

All studies employed a survey methodology, utilising cross-sectional self-report questionnaires for their measures of TSE. Several TSE measures were used to obtain data, see Table 11 for further details.

Only three studies (Buell et al., 1999; Chung et al., 2005; Shippen et al., 2011) did not discuss internal consistency or validity checking of their TSE measure and/or the suitability of the statistical analyses applied to their data. As Chung et al. (2005) and Shippen et al. (2011) were based upon variations of Gibson and Dembo's (1984) Teacher Efficacy Scale, some degree of internal consistency could be assumed according to that identified within previous research. However, Buell et al.'s (1999) TSE measure was self-created with an indeterminate theoretical basis, thus the validity and reliability of its results are more questionable. Issues such as this were taken into account when establishing the 'weight of evidence' each study provides.

Table 11: Overview of the teacher self-efficacy measures utilised by reviewed studies.

Teacher self-efficacy measure	Number of studies utilising measure	Theoretical basis	Subscales/Factors	Critique
Teacher Efficacy Scale (Gibson & Dembo, 1984) – or variants of this.	9	Based upon the Rand/Rotter teacher efficacy measures and contains the factors of GTE and PTE. Yet it draws upon the theoretical underpinnings of Bandura's self-efficacy, perhaps hoping to bridge the conceptual gap between these theoretical standpoints.	• Personal Teaching Efficacy (PTE). • General Teaching Efficacy (GTE). Variations include: • Chung et al. (2005) utilised the Teachers Beliefs Scale adaptation of Soodak & Podell's (1996) variation of the Teacher Efficacy Scale which also included the factor 'Outcome Efficacy'.	• Conceptually challenged as based upon Bandura's theoretical standpoint but drawn from measures developed from Rotter's theoretical standpoint (Tschannen-Moran & Woolfolk Hoy, 2001). • Lack of clarity surrounding the factors GTE and PTE. Also their factor structure has been found to be unstable across several studies (Tschannen-Moran & Woolfolk Hoy, 2001). • Additionally, as TSE is context-dependent, measures need to be specific to a particular context (Bandura, 1997), but the Teacher Efficacy Scale has been critiqued as accessing teacher beliefs about their functioning in general rather than their ability to undertake specific activities (Brouwers & Tomic, 2001). However, Pajares (1996) comments that specificity reduces external validity and practical relevance. There is a danger of making measures so specific that they lose predicative power for anything beyond what they measure (Tschannen-Moran & Woolfolk Hoy, 2001). • Despite its challenges, this is a commonly utilised tool for obtaining TSE measures and underlies a lot of previous TSE research and knowledge.
'Self-developed measure' (Buell et al., 1999)	1	No explicit links to a theoretical standpoint.	• Understanding inclusion. • Ability to get through to difficult students. • Success in educating a child with a disability. • The belief that motivation depends on environment.	• Not a 'tested' measure of TSE and not closely associated with any previously utilised measures of TSE. • Closely associated with current teacher practice and not future-oriented beliefs of ability which Bandura (1997) states TSE measures should be. • An 'approximate' measure of TSE from questions included within their questionnaire related to teacher confidence regarding student success in inclusive settings. • Questions aimed to assess teacher confidence in working with students with disabilities and focused upon their abilities to assist students whom they perceived as difficult or unmotivated, their ability to meet the needs of disabled students within inclusive settings, and also their understanding of inclusion. • Although developed in consultation with staff from the states Exceptional Students Team of the Department of Education, no explicit links were made within this study as to the theoretical standpoint of TE/TSE research this 'measure' originates from. As such, reservations are held about the conceptual appropriateness of this 'scale' and therefore its findings.

Teacher self-efficacy measure	Number of studies utilising measure	Theoretical basis	Subscales/Factors	Critique
Teachers' Sense of Efficacy Scale – Short Form (Tschannen-Moran & Woolfolk Hoy, 2001) – or variants of this.	2	Based upon Bandura's Teacher Self-Efficacy Scale (undated; cited in Tschannen-Moran & Woolfolk Hoy, 2001) but incorporates a wider range of teacher tasks.	• Efficacy for instructional strategies. • Efficacy for classroom management. • Efficacy for student engagement. Variations include: • Woolfson and Brady (2009) modified questions to relate them to pupils with SEN.	• Also known as the Ohio State Teacher Efficacy Scale. • It goes beyond the Rand and Gibson and Dembo focus upon teachers 'coping' with student difficulties and overcoming an unsupportive environment to include elements of supporting student thinking and skill development and also effectiveness in dealing with capable students. • It was co-created by the authors and a group of researchers and graduate students all with teaching experience who chose Bandura's Teacher Self-Efficacy scale as the basis and modified it to exclude items they believed were not representative of frequent activities teachers undertake. They added items they believed were significant parts of teachers' roles but which Bandura had not represented (trying to increase ecological validity). • The scale was tested and consequently modified three times in order to refine it as a measure of TSE. It was finally assessed as having a unified and stable factor structure (Tschannen-Moran & Woolfolk Hoy, 2001). • The short-form of this scale only contains four questions for each factor and during the development of this scale the factor of 'classroom management' was found to be statistically weak. Yet Tschannen-Moran and Woolfolk Hoy believed it was important to the teachers they consulted during the development of this scale so kept it as a factor and added further questions developed from Emmer's Teacher Efficacy for Classroom Management Scale in an attempt to further access it (1990; cited in Tschannen-Moran & Woolfolk Hoy, 2001).
Teacher Interpersonal Self Efficacy Scale (Brouwers & Tomic, 2001).	1	Based upon Bandura's conceptualisation of self-efficacy.	• Perceived self-efficacy in classroom management scale. • Perceived self-efficacy in eliciting support from colleagues. • Perceived self-efficacy in eliciting support from principals.	• Emmer and Hickman's (1991) 'perceived self-efficacy in classroom management scale' (part of their expanded version of Gibson and Dembo's Teacher Efficacy Scale) was used to measure teachers' perceived self-efficacy in managing student behaviours. • 'Perceived self-efficacy in eliciting support from colleagues' and 'perceived self-efficacy in eliciting support from principals' were the two other subscales. However, both of these were measured by only 5 items each in comparison to the 14 items accessing 'perceived self-efficacy in classroom management'. As such, this measure is heavily weighted in favour of the more 'traditional' classroom management and difficult student conceptualisation of TE stemming from the original Rand research (Tschannen-Moran & Woolfolk Hoy, 2001).

1.4.1.3 Weight of evidence

The overall quality of the reviewed studies and their 'weight' of evidence were judged utilising the EPPI-Centre 'weight of evidence' tool (see Table 12 and Appendix B) (The Evidence for Policy and Practice Information and Co-ordinating Centre, 2007). Five studies were judged to provide medium/high overall weight of evidence. These studies had a greater focus upon TSE within their research in comparison to others. Although some were based upon TSE measures which present as conceptually/theoretically 'confused' (i.e. Gibson and Dembo's 1984 Teacher Efficacy Scale, see Table 11 for details) they tended to be consistent in their approach to the research within their own theoretical standpoint and were able to answer their own questions, thus were deemed of higher quality than studies approaching TSE from a more 'theoretically-sound' standpoint but with poorer internal consistency. These studies also tended to be the most transparent in their research design and procedures, thus allowing greater analysis of their quality.

Six studies provided medium weighted evidence. These tended to be good quality studies approaching the topic from a similar theoretical standpoint to this review, however the information they provided relating to TSE and inclusive practice was limited.

Two studies provided low/medium weighted evidence. These studies were questionable in their ability to answer their own questions due to inconsistency between their espoused theoretical perspectives and TSE measures employed. Also, they provided comparatively less detail regarding their research process, making it difficult to judge study quality; for example, Hill et al. (1999) report their study in three pages. Study findings in relation to the review questions are now considered.

Table 12: Weight of evidence.

Study	A – Trustworthy in answering own question	B – Appropriate design and analysis for this review	C – Relevance of focus to this review	D - Overall weight of evidence
Brady and Woolfson (2008)	Medium/High	High	Medium/High	Medium
Buell et al. (1999)	Medium	Low	Medium/High	Medium
Carlson et al. (2004)	Medium	Low/Medium	Low/Medium	Low/Medium
Chung et al. (2005)	Medium/High	Medium	Medium	Medium
Egyed and Short (2006)	Medium/High	Medium	Medium	Medium/High
Frey (2002)	Medium/High	Medium	Medium/High	Medium/High
Hill et al. (1999)	Low	Low/Medium	Medium	Low/Medium
Ruble et al. (2011)	High	Medium	Medium	Medium/High
Shippen et al. (2011)	Medium	Low/Medium	Medium	Medium
Soodak et al. (1998)	High	Medium	Medium/High	Medium/High
Stanovich and Jordan (1998)	Medium/High	Medium	Low/Medium	Medium
Tejeda-Delgado (2009)	Medium	Medium	Medium/High	Medium
Woolfson and Brady (2009)	Medium/High	Medium/High	Medium/High	Medium/High

1.4.2 Review Question 1: Is there a relationship between teacher self-efficacy and inclusive practice?

The reviewed studies employed a variety of data analysis methods and produced results in numerous forms (e.g. correlations and factor analyses) which were not easily or appropriately comparable or combinable. However, the majority of the reviewed studies (N = 11) identified a relationship between TSE and factors related to inclusive practice (see Table 10, pp.32-33). This suggests that there is a relationship between the two. The two studies which did not identify a relationship between TSE and factors related to inclusive practice (Hill et al., 1999; Tejeda-Delgado, 2009) provided low to medium weighted evidence, produced limited information regarding TSE from their data, and were associated with TSE and referral to special education. This may have influenced their findings. Further details of the findings of each study in relation to TSE and inclusive practice are provided next.

1.4.3 Review Question 2: What factors moderate the relationship between teacher self-efficacy and inclusive practice?

This section discusses factors related to inclusive practice and TSE explored by the reviewed studies. The findings of each study were thematically analysed. Thematic analysis, also known as prior-research-driven code development when applied in a review of existing literature (Boyatzis, 1998), involves the researcher inferring themes within the dataset. The data regarding TSE and inclusive practice extracted from the reviewed studies was analysed in order to identify themes within and across their findings which could represent potential moderating factors (i.e. influencing variables: Baron & Kenny, 1986) in the relationship between TSE and inclusive practice. Discussion of these 'moderators' offers exploration of the relationships between TSE and inclusive practice considered in the reviewed studies. Inductive analysis produced semantic themes based upon prevalence and 'keyness' (i.e. capturing something 'important' which may not be prevalent) (Boyatzis, 1998; Braun & Clarke, 2006, 2013). See Table 13.

Table 13: Thematic analysis of the extracted teacher self-efficacy data in relation to inclusive practice findings of the reviewed studies.

Study	Themes							
	Teaching experience	Special versus mainstream education teachers	Classroom practice	Special education teacher quality	Sources of teacher self-efficacy	Teacher beliefs about, attitudes towards, and emotional reactions to inclusion	Teacher attributions for pupil learning difficulties	Referral of pupils to special education services / placements
Brady and Woolfson (2008)							x	
Buell et al. (1999)		x	x					
Carlson et al. (2004)				x				
Chung et al. (2005)	x							
Egyed and Short (2006)						x		x
Frey (2002)								x
Hill et al. (1999)								x
Ruble et al. (2011)	x				x	x		
Shippen et al. (2011)		x	x					
Soodak et al. (1998)			x			x		
Stanovich and Jordan (1998)			x			x		
Tejeda-Delgado (2009)								x
Woolfson and Brady (2009)	x						x	

1.4.3.1 Teaching experience

This section discusses findings from the reviewed studies regarding TSE and teaching experience. Study findings are presented and discussed in Table 14.

Table 14: Findings of the reviewed studies regarding a relationship between teacher self-efficacy and teaching experience and discussion of these findings.

Study	Findings regarding teacher self-efficacy and teaching experience	Discussion
Ruble et al. (2011)	Sampled teachers of pupils with autism and found that the number of years they had taught was not significantly correlated with any of the three Teacher Interpersonal Self Efficacy Scale subscales: • r = -0.14 (p >.05) for SE for classroom management; • r = -0.07 (p >.05) for SE for obtaining colleague support; and • r = 0.26 (p >.05) for SE for obtaining principal's support.	This finding suggests that there is not a relationship between teaching experience and TSE. However, Ruble et al. obtained number of years teaching in general from participants but framed their findings regarding TSE in terms of teaching pupils with autism; they did not differentiate between years teaching in general and years teaching pupils with autism. This distinction may have produced a different pattern of results. Conceivably it is not teaching experience in general but experience teaching pupils with a SEN/disability which contributes to TSE for teaching pupils with that difficulty. Perhaps the type of difficulty/SEN is a necessary part of the context specificity for TSE measures when related to inclusion.
Woolfson and Brady (2009)	State that neither teaching experience nor additional training impact upon TSE for teaching pupils with learning difficulties.	Like Ruble et al., Woolfson and Brady also considered TSE in relation to years of teaching experience. However, although they support the finding of Ruble et al. with their claim that neither teaching experience nor additional training impact upon TSE for teaching pupils with learning difficulties, they did not provide numerical data to support this conclusion therefore it must be interpreted with caution. It cannot be established if their conclusions are warranted given the data they collected and the analysis they conducted upon it as that information is not provided.
Chung et al. (2005)	Found the mean TSE score for the teachers who randomly selected pupils to report upon in this study for whom they have concerns for developmentally (i.e. they perceive to have SEN) (M = 87.8) was below the mean TSE score of the overall group (M = 92; SD's not provided).	Unlike Ruble et al., Chung et al. attempted to ground their exploration of TSE and teaching experience within a 'type' of SEN (i.e. they focused upon developmental concerns). Although these developmental concerns were not necessarily 'verified', the teachers' perceptions of them are likely to have impacted upon their responses to the survey irrespective of children having been ascribed an 'official' label relating to developmental difficulties. They found that teachers of pupils whom they believed may have developmental difficulties had lower TSE levels than teachers who did not report on pupils with this difficulty. This suggests that experience of teaching pupils with SEN is associated with teachers having decreased levels of TSE. However, Chung et al. did not provide the standard deviations for the means they reported and did not statistically analyse the variance between these means to then comment upon the significance of this difference. As such, their results should be interpreted with caution.

Overall, the findings discussed in Table 14 suggest that increased teaching experience does not contribute to higher TSE levels. When experience of teaching pupils with SEN in particular was considered, this was associated with lower TSE. This could be due to teachers perceiving their ability to meet the needs of pupils with SEN as being poorer than their ability to meet the needs of other pupils. However, as discussed, there are limitations to the studies these findings were extracted from thus these results should be interpreted with caution. When considering teaching experience, perhaps type of teaching experience could impact upon TSE levels in relation to inclusion; teacher-type is now considered.

1.4.3.2 Special versus mainstream education teachers

This section discusses findings from the reviewed studies regarding TSE and teacher-type (i.e. special versus mainstream education teachers). Study findings are presented and discussed in Table 15.

Table 15: Findings of the reviewed studies regarding a relationship between teacher self-efficacy and special versus mainstream education teachers and discussion of these findings.

Study	Findings in relation to teacher self-efficacy and special versus mainstream education teachers	Discussion
Shippen et al. (2011)	• Found no statistically significant difference between special or general (mainstream) education teachers in either TSE for teaching pupils with disabilities or the structure of their classroom (Wilks' lambda Λ = .97, F (7, 466) = 1.96, p = .06). • However, whether teachers taught at elementary or secondary level did have a significant impact upon TSE and classroom structure (Wilks' lambda Λ = .97, F (7, 466) = 2.29, p < .05) and a significant interaction was found for TSE and classroom structure between teacher type (special versus general) and level (elementary versus secondary) (Wilks' lambda Λ = .97, F (7, 466) = 2.30, p < .05.).	This suggests that the type of teacher (i.e. special or mainstream) in conjunction with the level they are teaching at (elementary or secondary) have a significant impact upon their TSE beliefs and practises (assessed via their classroom structure). However, further information regarding the different combinations of these variables explored by Shippen et al. and discussion of which level and teacher-type combinations present as associated with high/low TSE is not possible as they chose not to elaborate upon or discuss these results further within their study.
	Identified a significant difference (p <.01) between individualised instruction offered by special versus general educators, with special education teachers individuating instruction for students with disabilities more than general education teachers.	Although this is not related to TSE explicitly, this finding suggests that there is a difference between special and mainstream education teachers in their instructional practises when working with pupils with disabilities. This is of interest, particularly when considered in relation to the findings of Buell et al. as they too explored inclusive instructional practises (see below).

Study	Findings in relation to teacher self-efficacy and special versus mainstream education teachers	Discussion
Buell et al. (1999)	Special education teachers expressed more confidence (an element of Buell et al.'s self-developed TSE measure) than general education teachers in all of the aspects of inclusive classrooms which they assessed: • adapting materials; • adapting curriculum; • managing behaviour; • giving individual assistance; • writing behavioural objectives; • working with parents; • interpreting results; • participating in IEP conferences; • writing IEPs; • collaborating with team members; • setting expectations for pupils; and • using assistive technology. [$F(12, 248) = 10.50$, $p < .0001$].	Similar to the finding of Shippen et al. that there is a significant difference between the individualised instruction offered by special versus mainstream education teachers, this finding suggests that special education teachers are more confident in their ability to undertake inclusive practises than mainstream education teachers. It could be this higher confidence in undertaking these activities which produces the difference in the individualised instruction identified by Shippen et al. As TSE can be conceptualised as a context-dependent form of self-confidence (Block et al., 2010), perhaps Buell et al. breaking inclusive practice down into more specific tasks (e.g. adapting materials) enabled them to access TSE in a more precise and context-dependent form than the overarching TSE measure utilised by Shippen et al., thus identifying a difference between special and mainstream education teachers' TSE when Shippen et al. did not.
	Within their self-developed TSE measure are four 'factors' (although not statistically validated): understanding inclusion; ability to get through to difficult students; success in educating a child with a disability; and the belief that motivation depends upon environment. • They found a significant difference between the means of the special and general educator groups for the variables of understanding inclusion ($M = 4.43$, $SD = 0.87$ versus $M = 4.03$, $SD = 0.94$ respectively) and ability to get through to difficult pupils ($M = 3.72$, $SD = 1.05$ versus $M = 3.17$, $SD = 1.09$ respectively), with special educators scoring higher for TSE in these areas. • A strong positive correlation between teachers' understanding of inclusion and beliefs that they can 'get through' to pupils for both special ($r = .31$, $p < .01$) and general ($r = .24$, $p < .01$) education teachers was also found.	The identified difference between special and mainstream education teachers with regards to their understanding of inclusion and ability to 'get through' to difficult pupils suggests that special education teachers believe they have a better understanding of inclusion and are more likely to be able to get through to 'difficult' pupils in comparison to mainstream education teachers beliefs in their ability to do so. However, the strong positive correlation between teacher understanding of inclusion and beliefs that they can get through to difficult pupils for both special and mainstream education teachers suggests a relationship whereby the more teachers, irrespective of teacher type, believe they understand about inclusion the more they believe they can 'get through' to difficult pupils (or vice versa), but this association was greater for special as opposed to mainstream education teachers.
	However, there was no significant difference between general or special educators' self-reports of success in educating a child with a disability or belief that motivation is dependent upon the environment (the other two elements of the TSE measure utilised).	This suggests that both mainstream and special education teachers see themselves as equally efficacious in their ability to teach pupils with disabilities and both hold similar beliefs about their power to overcome environmental factors in relation to pupil learning.

Study	Findings in relation to teacher self-efficacy and special versus mainstream education teachers	Discussion
Buell et al. (1999) continued	Interestingly, a significant negative relationship was found between both special and general educators beliefs that they can get through to pupils and their belief that motivation depends upon environment, (r = -.47, p < .0001 and r = -.23, p < .01 respectively).	Perhaps this is due to an 'overlap' between these two concepts as beliefs about teacher ability to 'get through' to pupils will likely be linked to teacher beliefs about the importance of the environment (which includes teachers) on pupil motivation.
	Teacher beliefs about their success in educating a child with a disability was not significantly correlated with understanding inclusion for either special or general education teachers (r = -.12 and r = -.05, p > .05 respectively).	This finding suggests that neither special nor mainstream education teachers perceive their understanding of inclusion as related to their ability to teach pupils with disabilities. It might be expected that a greater understanding of inclusion could lead to teachers having increased ability and/or belief in their ability to teach pupils with disabilities effectively as they may gain knowledge of effective/appropriate inclusive practises from their understanding of inclusion. However, this was not identified.

Overall, the findings discussed in Table 15 suggest some significant differences in TSE between special and mainstream education teachers. They differed in confidence in their inclusive practice, their beliefs about their understanding of inclusion, and their beliefs about their ability to get through to 'difficult' pupils. However, they did not differ in their beliefs about their success in educating children with disabilities or belief that motivation is dependent upon the environment. Both believed understanding of inclusion is associated with their ability to get through to pupils, but not necessarily their success in teaching pupils with disabilities, perhaps suggesting that they perceive different information/skills, not just an understanding of inclusion, as necessary to successfully teach pupils with disabilities. TSE also appears to be influenced by an interaction between teacher type (special versus mainstream) and level (elementary versus secondary), but further elaboration of this interaction is not possible due to the limited evidence presented. However, the majority of these findings originate from the Buell et al. (1999) study. They utilised a self-developed TSE measure of questionable theoretical basis, reliability, and validity. As such, their results and the findings of this section should be interpreted with caution.

Within this section, special and mainstream education teachers were also found to differ in their instructional practises. Classroom practice is now discussed further.

1.4.3.3 Classroom practice

This section discusses findings from the reviewed studies regarding TSE and classroom practice. Study findings are presented and discussed in Table 16.

Table 16: Findings of the reviewed studies regarding a relationship between teacher self-efficacy and inclusive classroom practice and discussion of these findings.

Study	Findings with regards to a relationship between teacher self-efficacy and inclusive classroom practice	Discussion
Shippen et al. (2011)	Identified a significant difference ($p < .01$) between individualised instruction offered by special versus general educators, with special educators individuating instruction for students with disabilities more than general educators.	Although not related to TSE explicitly, this finding suggests that there is a difference between special and mainstream education teachers in terms of the instructional practises they employ when working with pupils with disabilities. This is of interest, particularly when considered in relation to the findings of Buell et al. as they too explored inclusive instructional practises. (Previously discussed in section 1.4.3.2, pp.42-44; special versus mainstream education teachers).
Buell et al. (1999)	Special education teachers expressed more confidence (an element of Buell et al.'s self-created TSE measure) than general education teachers in all of the aspects of inclusive classrooms which they assessed: • adapting materials; • adapting curriculum; • managing behaviour; • giving individual assistance; • writing behavioural objectives; • working with parents; • interpreting results; • participating in IEP conferences; • writing IEPs; • collaborating with team members; • setting expectations for pupils; and • using assistive technology. [$F(12, 248) = 10.50$, $p < .0001$].	This finding suggests that special education teachers are more confident in their ability to undertake inclusive practises than mainstream education teachers. It could be this higher confidence in undertaking these activities which produces the difference in the individualised instruction identified by Shippen et al. (Previously discussed in section 1.4.3.2, pp.42-44; special versus mainstream education teachers).
Soodak et al. (1998)	Identified and interaction whereby when General Teaching Efficacy (GTE) is high, teachers using differentiated instruction/teaching methods ($M = -.47$, $SD = 1.03$) are significantly less hostile towards the inclusion of pupils with a disability than teachers who do not use differentiated teaching ($M = .00$, $SD = .82$).	This finding suggests that when teachers have high levels of belief in the efficacy of teachers in general and utilise differentiated instruction they are more accepting of the inclusion of pupils with a disability (whom are included under the Special Educational Needs Code of Practice: Department for Education and Skills, 2001) than teachers not utilising differentiated instruction. This could perhaps be attributable to those utilising differentiated instruction being/feeling 'better prepared' to differentiate for pupils with a disability/SEN than those utilising a 'one size fits all' approach to teaching and their higher GTE levels leading them to believe more in the power of teachers than those with lower GTE. (Also discussed in section 1.4.3.6, pp.48-51; teacher beliefs about, attitudes towards, and emotional reactions to inclusion).

Study	Findings with regards to a relationship between teacher self-efficacy and inclusive classroom practice	Discussion
Soodak et al. (1998) continued	In comparison to the above finding, when GTE is low there is no difference between those who do (*M* = .25, *SD* = 1.03) and do not (*M* = .25, *SD* = .93) use differentiated instruction in their hostility towards inclusion.	When considering the point discussed above, this finding suggests that it is teacher beliefs (i.e. their GTE) as opposed to their instructional practises which underlies the difference in their hostility towards the inclusion of pupils with a disability (and/or SEN). (Also discussed in section 1.4.3.6, pp.48-51; teacher beliefs about, attitudes towards, and emotional reactions to inclusion).
Stanovich and Jordan (1998)	Observations of teacher practice found TSE was not significantly correlated with what they deemed 'effective' teaching behaviours (*r* = -.12, *p* > .05).	Unlike the findings of Shippen et al., Buell et al., and Soodak et al., who all identified relationships between classroom practises, inclusion, and/or TSE, Stanovich and Jordan did not identify a relationship between TSE and 'effective' teaching behaviours/inclusive practises observed within the classroom.

The findings discussed in Table 16 suggest special education teachers are more confident in utilising inclusive classroom and/or instructional practises than mainstream education teachers and that higher TSE may interact with instructional practices to contribute to less 'hostility' towards inclusion. However, not all studies identified a significant relationship between TSE and classroom practice. This suggests that perhaps confidence in utilising strategies to support inclusion is not synonymous with proficiency utilising these strategies and highlights the importance of remembering that TSE represents context-dependent self-belief not actual teacher ability/'quality' (Block et al., 2010). Teacher quality will now be considered further.

1.4.3.4 Special education teacher quality

One study, Carlson et al. (2004), considered TSE in relation to establishing a measure of special education teacher quality. They utilised a three-part measure of TSE including a scale of special education teachers' perceptions of their skills in completing tasks related to inclusion (e.g. adapting instruction), self-assessment of their current job performance (although self-efficacy is a future-oriented belief), and items measuring teacher beliefs (e.g. relating to 'getting through' to pupils). Second order factor analysis found TSE (factor loading = 0.874) to be the second most important variable in their special education teacher quality measure, after professional activities (i.e. membership of professional bodies, frequency of peers seeking support from them, and reading of professional journals) (factor loading = 0.924).

This model/measure suggests TSE is an important aspect of teacher ability to effectively teach pupils with SEN. However, this study had several limitations and provided low/medium weighted evidence; conclusions drawn from its findings are tenuous. The next section will discuss possible sources of TSE which teachers could draw upon to potentially aid the 'quality' of their inclusive practice.

1.4.3.5 Sources of teacher self-efficacy

Bandura (1997) hypothesised four sources of self-efficacy: mastery experiences; social persuasion; vicarious experiences; and physiological/affective states. Ruble et al. (2011) investigated sources of TSE (see Table 17).

Table 17: Ruble, Usher and McGrew's (2011) findings regarding teacher self-efficacy and sources of self-efficacy.

Source of self-efficacy	Description of self-efficacy source (Bandura, 1997)	Findings of Ruble et al. (2011) in relation to sources of teacher self-efficacy	Relationship between self-efficacy source and teacher self-efficacy in relation to inclusive practice
Mastery experiences	By successfully completing a task you become more confident in your ability to do so again.	Sampled teachers of pupils with autism and found that the number of years they had taught was not significantly correlated with any of the three Teacher Interpersonal Self Efficacy Scale subscales: • r = -0.14 (p > .05) for SE for classroom management; • r = -0.07 (p > .05) for SE for obtaining colleague support; and • r = 0.26 (p > .05) for SE for obtaining principal's support.	There is no evidence to suggest that mastery experiences are associated with TSE levels in relation to inclusive practice. However, as discussed in section 1.4.3.1 (pp.41-42), teacher experience in general was gathered as opposed to context-specific experience of teaching pupils with autism; this may have impacted upon the results. Yet this does support the finding of Chung et al. (2005) that experience of teaching pupils with (suspected) SEN does not increase TSE (it was associated with lower TSE levels).
Social persuasion	Others verbally persuade you of your ability and thus increase your confidence in that ability.	Teacher report of principal leadership and support, as measured on the Multifactor Leadership Questionnaire (MLQ), was not significantly correlated with any of the three Teacher Interpersonal Self Efficacy Scale subscales: • r = 0.28 (p > .05) for SE for classroom management; • r = 0.11 (p > .05) for SE for obtaining colleagues support; and • r = 0.08 (p > .05) for SE for obtaining principal's support.	There is no evidence to suggest that social persuasion is associated with TSE. However, Ruble et al. utilised the MLQ, a measure of leadership, as their measure of social persuasion; this may not have been appropriate. The MLQ measured teacher's perceptions of support they receive from school leaders, this should not be viewed as synonymous with social persuasion. Therefore their finding that the MLQ did not correlate with TSE may be due to the measure utilised as opposed to any potential relationship which may exist between social persuasion and TSE.

Source of self-efficacy	Description of self-efficacy source (Bandura, 1997)	Findings of Ruble et al. (2011) in relation to sources of teacher self-efficacy	Relationship between self-efficacy source and teacher self-efficacy in relation to inclusive practice
Vicarious experiences	By observing the success of those similar to you, you can infer your likelihood of being successful when undertaking the same tasks.	Not measured.	Cannot be discussed as Ruble et al. did not obtain a measure of this source of SE.
Physiological / affective states	You judge your capability at a task via the physiological or affective state this produces within you, i.e. if you become stressed from undertaking a task you interpret your ability to undertake this task as poorer than your ability to undertake tasks which do not result in a stress reaction.	Significant correlations were identified between TSE for classroom management (i.e. the pupil-facing element of the TSE measure utilised within this study) and all three elements of the Maslach Burnout Inventory utilised as a measure of teacher burnout: • r = -0.44 (p < .01) for emotional exhaustion; • r = 0.43 (p < .01) for personal accomplishments; and • r = -0.38 (p < .05) for depersonalisation.	TSE for classroom management was associated with burnout measures. This suggests that higher TSE in classroom management is associated with decreased emotional exhaustion and depersonalisation of pupils and increased perceptions of personal accomplishments on the teacher's behalf. Thus suggesting that teacher physiological/affective states are associated with TSE in relation to inclusive practice. However, despite the emphasis of Ruble et al. on identifying sources of TSE in relation to inclusive practice, these results are correlational and a causal relationship should not be assumed as insufficient evidence has been presented to support such claims.

Of the three sources of self-efficacy investigated, evidence was found to suggest only physiological/affective states were associated with TSE in relation to inclusive practice. However, as discussed in Table 17, the relationship identified was correlational; a causal relationship whereby physiological/affective states are viewed as sources of TSE in relation to inclusive practice cannot be assumed. Also, as only one study investigated TSE sources their results cannot be compared to that of others to support/refute additional findings. Although Bandura's four sources of self-efficacy include consideration of teachers' emotional/affective responses, further consideration of teacher beliefs and attitudes in addition to their emotional states in relation to TSE and inclusive practice is also warranted and undertaken in the next section.

1.4.3.6 Teacher beliefs about, attitudes towards, and emotional reactions to inclusion

This section discusses findings from the reviewed studies regarding TSE and teacher beliefs about, attitudes towards, and emotional reactions to inclusion. Study findings are presented and discussed in Table 18.

Table 18: Findings of the reviewed studies regarding a relationship between teacher self-efficacy and teacher beliefs about, attitudes towards, and emotional reactions to inclusion and discussion of these findings.

Study	Findings in relation to teacher self-efficacy and teacher beliefs about, attitudes towards, and emotional reactions to inclusion	Discussion
Soodak et al. (1998)	Identified an interaction whereby when General Teaching Efficacy (GTE) is high, teachers using differentiated instruction/teaching methods (*M* = -.47, *SD* = 1.03) are significantly less hostile towards the inclusion of pupils with a disability than teachers who do not use differentiated teaching (*M* = .00, *SD* = .82).	This finding suggests that when teachers have high levels of belief in the efficacy of teachers in general and utilise differentiated instruction they are more accepting of the inclusion of pupils with a disability than teachers who do not utilise differentiated instruction. This could be attributable to those utilising differentiated instruction being/feeling 'better prepared' to differentiate for pupils with a disability/SEN than those utilising a more 'one size fits all' approach to teaching and their high levels of GTE leading them to believe more in the power of teachers in general than those with lower GTE. (Previously discussed in section 1.4.3.3, pp.44-46; classroom practice).
	In comparison to the finding above, when GTE is low there is no difference between those who do (*M* = .25, *SD* = 1.03) and do not (*M* = .25, *SD* = .93) use differentiated instruction in their hostility towards inclusion.	When considering the point discussed above, this finding suggests that it is teacher beliefs (i.e. their GTE) as opposed to their instructional practises which underlies the difference in the hostility and/or emotional receptivity of teachers towards the inclusion of pupils with a disability/SEN. (Previously discussed in section 1.4.3.3, pp.44-46; classroom practice).
	• Teachers with low sense of Personal Teaching Efficacy (PTE) who perceive limited opportunities for collaboration with their colleagues (*M* = .43, *SD* = 1.33) are more hostile towards inclusion than teachers who perceive many opportunities to collaborate, regardless of their PTE. • Teachers with high PTE who perceive limited opportunities to collaborate with colleagues (*M* = -.02, *SD* = 1.00) do not differ significantly from other groups.	These findings suggest that low PTE (i.e. a teacher's belief in their own abilities as an individual) may leave teachers vulnerable to feeling increasing hostility towards inclusion when they feel isolated from their peers/colleagues as they perceive limited opportunities for collaboration. High PTE appears to 'protect' teachers from this effect as perceiving limited opportunities for collaboration when PTE is high does not result in increased hostility towards inclusion. Perhaps teachers less confident in their skills at supporting inclusion need to perceive that a 'support network' of colleagues with whom they can work collaboratively is available to them should they need support with their own inclusive practice.
	Negative correlation between teacher PTE and anxiety about including pupils with a disability (*r* = -.22, *p* not provided).	Teachers with low PTE appear to have higher anxiety about including disabled pupils within their classroom. This may be associated with the above finding regarding low PTE and the 'need' for teachers to have opportunities to collaborate, perhaps in an attempt to counteract anxiety related to utilising inclusive practises independently. However, the level of significance this correlation reached was not provided and as such it must be interpreted with caution.

Study	Findings in relation to teacher self-efficacy and teacher beliefs about, attitudes towards, and emotional reactions to inclusion	Discussion
Egyed and Short (2006)	Teachers with more training in behaviour management had higher levels of PTE [F (3,98) = 3.802, p = 0.013] and lower levels of 'burnout' [F (3,98) = 3.540, p = 0.017] (i.e. inability to cope with occupational stress, a condition characterised by low mood, poor productivity, and high rates of absence and job turnover: Education.com, 2013).	Similar to the finding of Soodak et al. that low PTE is associated with increased anxiety regarding inclusion therefore higher PTE is associated with reduced anxiety regarding inclusion, this finding suggests that a higher level of training or increased knowledge about a type of 'SEN', in this case behavioural difficulties, is associated with higher PTE and reduced emotional impact of dealing with pupil difficulties upon teachers. This suggests that increasing teacher knowledge can increase their PTE, thereby reducing the levels of potentially negative emotions (e.g. anxiety and other emotions leading to burnout) which the 'task' of inclusion may elicit within them as individuals. This may be associated with the finding of Buell et al. (1999) that teacher understanding of inclusion is not correlated with their beliefs about their ability to teach pupils with disabilities and supports the previous suggestion that understanding inclusion is not 'enough' to support teachers in their inclusive practice but more knowledge/training specific to the 'difficulty' (i.e. SEN or disability) a pupil faces is more 'useful' to teachers. (See section 1.4.3.2, pp.42-44; special versus mainstream education teachers).
Ruble et al. (2011)	Significant correlations between TSE for classroom management (i.e. the pupil-facing element of the TSE measure utilised within this study) and all three elements of the Maslach Burnout Inventory utilised as a measure of teacher burnout: ○ r = -0.44 (p < .01) for emotional exhaustion; ○ r = 0.43 (p < .01) for personal accomplishments; and ○ r = -0.38 (p < .05) for depersonalisation.	Like Egyed and Short, Ruble et al. also investigated teacher burnout in relation to TSE. Similar to the findings of Soodak et al. and Egyed and Short in relation to teacher emotional reactions to inclusion, Ruble et al.'s findings suggest that higher TSE in classroom management (one factor within the three factor model of TSE they utilised) is associated with decreased emotional exhaustion and depersonalisation of pupils and increased personal accomplishments on the teacher's behalf; the more teachers believe they are in control of their classroom, the more positive their perceptions are of their experiences within the classroom, their pupils, and their personal accomplishments.
Stanovich and Jordan (1998)	• TSE significantly correlated with Attitude Towards Mainstreaming Scale scores (r = .43, p < .01). • TSE significantly correlated with Regular Education Initiative Teacher Survey scores (r = .36, p < .05).	This finding, similar to the finding of Soodak et al. that higher GTE is associated with lower hostility towards inclusion, suggests that higher TSE is associated with more positive attitudes towards inclusive education and a more positive attitude towards providing special education services within mainstream education classrooms (i.e. inclusive practice).

Overall, the findings discussed in Table 18 suggest that teacher beliefs about, attitudes towards, and emotional reactions to inclusion are significantly associated with TSE. Those with higher TSE levels were more open to inclusion and working independently,

experienced less negative emotion in relation to inclusion, and held more positive attitudes towards inclusion than those with lower TSE. An interaction whereby teachers with more training in SEN-type difficulties had higher TSE levels and experienced less negative emotion towards the inclusion of pupils with that type of difficulty was also identified. As relationships have been identified between teachers' beliefs, attitudes, and emotional reactions in relation to inclusion, teacher attributions for pupil learning difficulties should also be considered.

1.4.3.7 Teacher attributions for pupil learning difficulties

This section discusses findings from the reviewed studies regarding TSE and teacher attributions for pupil learning difficulties. Study findings are presented and discussed in Table 19.

Table 19: Findings of the reviewed studies regarding a relationship between teacher self-efficacy and teacher attributions for pupil learning difficulties and discussion of these findings.

Study	Findings in relation to teacher self-efficacy and teacher attributions for pupil learning difficulties	Discussion
Brady and Woolfson (2008)	Teachers' attributions for pupil learning difficulties (including learning, language, and/or behavioural, emotional, and social difficulties) significantly related to TSE. Teachers with higher TSE levels attributed pupil difficulties with learning to more external factors (β = 0.19, *t* = 2.08, *p* = .040).	This finding suggests that what teachers believe the causes of pupil learning difficulties to be is associated with their TSE levels. Those with high TSE levels tended to attribute pupil difficulties to external factors, i.e. they viewed pupil difficulties as situated within the environment as opposed to within the pupil. As such, teachers with higher TSE are therefore more likely to accept some responsibility for the difficulties pupils face when learning within their classrooms. Higher TSE (i.e. greater teacher belief in their ability to teach pupils with learning difficulties, in this instance) may result in these teachers being more likely to expend additional effort in trying to 'overcome' pupil difficulties via their teaching practice; i.e. attempting to practise more inclusively.
Woolfson and Brady (2009)	• Teachers' attributions for pupil learning difficulties significantly related to TSE. Teachers with higher TSE levels attributed pupil difficulties with learning to more external factors (β = .23, *t* = 2.73, *p* = .007) • TSE found to be a positive predictor of the stability of teachers attributions for learning difficulties (β = .25, *t* = 3.03, *p* = .003) and, to a lesser extent, teachers attributions of pupil control over their difficulties (β = .17, *t* = 1.9, *p* = .059).	In line with Brady and Woolfson's findings, Woolfson and Brady also found teachers with higher TSE to attribute pupil learning difficulties to more external factors. However, these studies were similar in structure, utilised similar data collection methods, and were conducted by the same researchers, therefore the likelihood that they would achieve similar results is high. In addition to the finding that TSE and external attributions for learning difficulties were associated, Woolfson and Brady found TSE to be positively associated with the stability of the attributions teachers make for pupil learning difficulties and also the extent to which teachers believe pupils have control over their difficulties. When TSE is higher, teachers perceive the causes of pupil learning difficulties as more amenable to change (i.e. they can be 'overcome') and perceive pupils to have more control over their difficulties than teachers with lower TSE levels.

Overall, the findings discussed in Table 19 suggest that teachers with higher TSE perceive pupil learning difficulties to be external to the pupil therefore surmountable by environmental influences such as teaching practices. Similarly, teachers with higher TSE perceive the causes of pupil learning difficulties as more amenable to change and perceive pupils to have more control over their difficulties than teachers with lower TSE. As such, teachers with higher TSE may be more willing to expend additional effort in supporting pupils with learning difficulties (as suggested by Bandura's self-efficacy theory: Bandura, 1997) as they may view their actions/teaching as able to contribute to pupil progress and counteract external influences imposing learning difficulties upon the pupil. However, the findings of these studies were produced by the same researchers utilising similar methods; additional research into teacher attributions by different researchers and using different methods may add more weight to these findings and the conclusions drawn from them.

Teacher beliefs about, attitudes towards, and emotional reactions to inclusion and also the attributions they make for pupil learning difficulties have been discussed. Consideration is given next to teacher decisions regarding pupil inclusion, specifically their referral of pupils to special education services or placements, which may be influenced by the above mentioned factors.

1.4.3.8 Referral of pupils to special education services/placements

This section discusses findings from the reviewed studies regarding TSE and teacher referral of pupils to special education services/placements. Study findings are presented and discussed in Table 20.

Table 20: Findings of the reviewed studies regarding a relationship between teacher self-efficacy and teacher decision to refer pupils to special education services/placements and discussion of these findings.

Study	Findings in relation to teacher self-efficacy and referral of pupils to special education services/placements	Discussion
Frey (2002)	• Teachers scoring high on the classroom management/discipline factor of the three factor TSE measure (also including GTE and PTE) utilised recommend less restrictive placements (e.g. keeping pupils in mainstream classes) for pupils with behavioural difficulties than colleagues scoring lower in confidence about their abilities to manage a classroom and discipline (x^2 (2, N = 241) = 7.061, p < .05). • Teachers with high external efficacy recommend more restrictive placements than those with low external efficacy (x^2 (2, N = 241) = 36.896, p < .05).	These findings suggest that teachers with higher TSE regarding their ability to manage their classroom and discipline within it are less likely to refer pupils with behaviour difficulties for specialist placements. Although this is not necessarily surprising, Frey's finding that teachers with higher external efficacy (i.e. those who believe teachers can influence pupil outcomes despite factors beyond their control) recommend more restrictive placements is surprising as it suggests higher TSE in this realm leads to suggestions of more restrictive placements and therefore less inclusive practice. However, Frey suggests that as this is in relation to pupil placement, perhaps teachers with low TSE perceive pupils to be 'beyond help' therefore changing placement would not achieve anything thus no placement changes are suggested by teachers with lower TSE in comparison to those with higher.
Tejeda-Delgado (2009)	The relationship between TSE and number of referrals was not statistically significant, [F = (2, 161) = 1.98, p >.05]; TSE did not differ with the number of pupil referrals teachers made to special education.	This is in contrast to Frey's findings as it suggests there is no relationship between TSE and teacher referrals of pupils to special education.
Egyed and Short (2006)	No significant influence of TSE on decision to refer 'disruptive' pupils to special education services.	This finding supports Tejedo-Delgado's finding that there is no relationship between TSE and referral to special education. However, Egyed and Short provide no numerical data to support this claim and chose only to further discuss factors that were significantly associated with teacher referral decisions within their study.
Hill et al. (1999)	TSE not related to referral decisions.	This finding supports both Tejeda-Delgado and Egyed and Short's findings that no relationship was identified between TSE and referral decisions. However, Hill et al., like Egyed and Short, provide no numerical data to support their claim. Also, due to the short length of their article (their study is summarised in three pages) no further information can be gathered.

Overall, the findings discussed in Table 20 should be interpreted with caution due to the limited information provided by the reviewed studies. Although three of the four studies identified no relationship between TSE and referral decisions, two omitted numerical data to support their claims. Additionally, the study which did identify relationships between the TSE and referrals (Frey, 2002), found evidence to both support and refute the expectations which may be held as those with higher TSE for classroom management/discipline referred fewer pupils yet those with higher external TSE (i.e. whom believe teachers can influence pupil outcomes) made more referrals. As such, any conclusions drawn from the findings of these studies with regards to TSE and referrals to special education services/placements should be considered tenuous. The overall findings of this review will now be summarised in conclusion.

1.5 Conclusion

1.5.1 Summary of findings

Thirteen studies were systematically reviewed and their data regarding TSE and inclusive practice extracted for synthesis and discussion. Eleven studies identified a relationship between TSE and self-reported inclusive practice; the majority of these relationships were positive. Several factors/moderators associated with the relationship/s between TSE and inclusive practice were also identified and discussed.

Conclusions regarding these moderators include that increased teaching experience in general did not contribute to higher TSE in relation to inclusive practice and that experience of teaching pupils with SEN may actually be associated with lower TSE (Chung et al., 2005). Special education teachers appear more confident than mainstream education teachers in undertaking inclusive practices. However, their beliefs about their success in educating pupils with disabilities did not differ; they viewed themselves as equally efficacious. Yet neither believed their understanding of inclusion helps them to successfully teach pupils with disabilities/SEN, suggesting that understanding of inclusion alone is insufficient and other/additional information or skills are needed to support inclusive practice. Corroborating this suggestion was the identification of an interaction whereby teachers with more training in specific SEN-type difficulties had higher TSE and experienced fewer negative emotions regarding the inclusion of pupils with those difficulties. This also suggests teachers' emotional reactions to inclusion are associated with TSE levels. Additionally, teacher beliefs about the origins of pupil learning difficulties and their attitudes towards inclusion were associated with TSE; higher TSE was associated with being receptive to, experiencing less

negative emotion in relation to, and holding more positive attitudes towards inclusion than those with lower TSE. Teachers with higher TSE also tended to attribute the causes of pupil learning difficulties to factors external to the pupil. Findings regarding TSE and pupil referrals to special education services/placements were less clear; the majority of studies suggested no relationship between the two. Furthermore, TSE was identified as an important aspect of special education teacher quality, although mainstream education teacher quality was not considered.

The findings of this review suggest that TSE levels are associated with, thus may impact upon, inclusive practice and therefore potentially influence the quality of inclusive education for pupils with SEN. Overall, higher TSE levels appear to be associated with more positive perceptions of, reactions towards, and practises in relation to inclusion. Consequently, the findings of this review suggest that investigating and supporting the development of higher TSE levels amongst teachers might further support an inclusive education system and work towards the Department for Education's (2011) goal of reducing the impact of SEN and improving pupil outcomes. However, there are limitations to this review. These are now discussed.

1.5.2 Limitations

There are numerous limitations to this review. Those of primary importance include that the synthesis of the reviewed studies' findings and subsequent interpretations and conclusions were made by this researcher only. The identification of moderators/themes in the reviewed studies' explorations of the relationship/s between TSE and inclusive practice via thematic analysis is particularly vulnerable to the subjective interpretations of the researcher. As some discussed 'moderators' were elicited from one study only, their findings cannot be compared to those of others studies to obtain a more representative foundation to base conclusions upon. Also, the majority of the reviewed studies tended not to focus primarily upon TSE and inclusive practice but obtained data regarding this as part of their wider remit. This limited the information available to this review and potentially compromised the integrity of the reviewed studies' approach to TSE research as this was not the main focus of their data collection. The data utilised by this review was self-reported, thus potentially limiting the validity of its conclusions. Additionally, this review sought to compare the findings of research relevant to the review questions, which transpired to be limited. As such, studies employing a variety of approaches, conceptualisations, and methods of data collection in relation to TSE were utilised. This may undermine the validity of some of the conclusions drawn where the findings of different TSE 'approaches' were compared and

combined in order to reach conclusions. This should be considered when utilising this review as the basis for further empirical research.

1.5.3 Further research

This review identified a research 'gap' as the reviewed studies tended not to focus primarily/exclusively upon TSE in relation to inclusive practice. Additionally, they utilised quantitative self-report measures of both TSE and inclusive practice; employing more qualitative or observational methods may further develop the research area (Henson, 2002). Also, many of the reviewed studies utilised conceptually 'confused' TSE measures based upon efficacy as opposed to self-efficacy theory. Developing and utilising TSE measures with a consistent theoretical basis and increasing their domain specificity, for example by developing TSE measures referring explicitly to SEN/inclusive practice, may be a way to improve future research (Tschannen-Moran et al., 1998). Consideration should also be given to the wider classroom context, for example the presence of support staff and their deployment to facilitate inclusion, so that future research is increasingly relevant to the classroom contexts teachers are working within.

Chapter 2: Bridging Document

Teacher self-efficacy and inclusive practice: Identifying and developing an empirical research focus to further explore the research area.

2.1 Abstract

This chapter 'bridges' the gap between the findings of the systematic literature review and how they led to the development of the empirical research phase. It outlines the overall findings of the systematic literature review, the research gap subsequently identified for empirical study, and initial considerations regarding the empirical research phase.

The systematic literature review identified a relationship between teacher self-efficacy (TSE) and inclusive practice. However, further and more explicit consideration of this relationship is warranted, particularly in relation to the increased presence of support staff within the mainstream classroom. Consequently, an emerging focus upon teacher and support assistant (SA) self-efficacy in relation to inclusive practice alongside the deployment of SAs within the classroom is discussed.

Initial epistemological and methodological considerations which were vital in guiding the development of the empirical research phase are discussed. In contrast to previous research, consideration is given to a critical realist epistemology and employing structured observations as a tool for data collection alongside self-report questionnaires. Critique of these methods and their application/administration is provided as part of this researcher's consideration of their suitability for use.

The research questions developed for empirical exploration are provided. The available sample and implications of this upon considerations for the empirical research phase and consideration of the label of special educational needs (SEN) as a 'tool' to use in the conceptualisation and access of 'inclusive practice' are discussed. What the potential findings of the empirical research may contribute to understanding TSE and SA deployment research is also considered.

Overall, this document describes the researcher's initial considerations regarding how to combine the two areas of TSE and SA deployment research to empirically explore and further understanding of educator self-efficacy in relation to inclusive practice.

2.2 Introduction

This document will discuss the findings of the systematic literature review and the research gap subsequently identified for empirical study. Epistemological and methodological considerations regarding the empirical study are discussed, as is what the findings of this research may contribute the research area. The systematic literature review findings are addressed first.

2.3 Findings of the Systematic Literature Review

Of the thirteen studies systematically reviewed, eleven identified a relationship between teacher self-efficacy (TSE) and inclusive practice (see Table 10, pp.32-33). Several factors/moderators associated with the relationship/s between TSE and inclusive practice were identified, for example the beliefs teachers hold about the origins of pupil learning difficulties and the use of differentiated instruction (Brady & Woolfson, 2008; Soodak & Podell, 1996) (see section 1.4.3, pp.38-54). These findings suggest that TSE levels may be associated with various elements of inclusive practice and therefore potentially influence the quality of inclusive education for pupils with special educational needs (SEN). Pupils with SEN have disproportionately poor life chances in comparison to their peers (Department for Education, 2011). Investigating a factor associated with inclusive practice, such as TSE, could offer some exploration of the education pupils with SEN receive. Such exploration may enable further consideration of the potential impact of factors such as TSE upon outcomes for pupils with SEN. It is the exploration of TSE and inclusive practice which is of interest within this research. As some investigation of TSE and inclusive practice has previously been undertaken, a gap in the existing literature was identified for empirical study in order to further understanding of the relationship between TSE and inclusive practice.

2.3.1 The identified research gap for empirical study

The reviewed studies, along with others within the wider literature not systematically reviewed, tended not to focus upon TSE in relation to inclusive practice explicitly. They utilised general TSE measures and explored a variety of education related factors; any focus upon a relationship between TSE and inclusive practice was a subset of the research. Also, these studies did not address the wider classroom context with regards to the increased presence of support staff in recent years (Russell et al., 2013). Additionally, when considering their data collection methods, cross-sectional self-report surveys were the only data collection tool utilised to gain TSE data.

As such, the focus of the empirical research phase became the explicit exploration of TSE regarding inclusive practice alongside exploration of TSE in relation to the deployment of support assistants (SAs) and incorporating a more 'objective' measure of inclusive practice. The origin of the deployment of SAs becoming an additional focus of this research is discussed next.

2.4 Teacher self-efficacy and the deployment of support assistants

The increased presence of support staff within the mainstream classroom has not been explored in relation to TSE and inclusive practice in previous research. Although some studies regarding TSE and inclusive practice have sampled support staff in addition to teachers (e.g. Hastings & Brown, 2002), they have not focused upon mainstream educational settings, collaborative practice between staff in relation to TSE and the inclusion of pupils with SEN, nor focused exclusively upon TSE. These elements will be at the heart of the empirical phase of this research.

When considering the mainstream classroom, SAs are increasingly used to support teaching and learning, particularly that of pupils who are low attaining or registered as having SEN (Russell et al., 2013). Research suggests that SAs may plan and deliver alternative curricula and interventions and differentiate class work for pupils with SEN as opposed to teachers (Institute of Education, 2013a). The deployment of SAs (i.e. with which pupils they work, what activities they undertake, and the planning of these) is of interest as research surrounding SA effectiveness suggests that they may actually have a negative impact upon the achievement of pupils (Blatchford, Russell, & Webster, 2012). Pupils receiving the most 'help' from SAs consistently make less progress than similar pupils receiving less SA support (Institute of Education, 2013a; Webster & Blatchford, 2013). Perhaps this is because they are becoming increasingly separated from their teachers and the class curriculum by their support and the least qualified staff appear to be the primary educators of the most 'needy' pupils (Russell et al., 2013; Webster & Blatchford, 2013). This may be contributing to the finding that pupils with SEN have disproportionately poor life chances in comparison to other pupils (Department for Education, 2011).

The empirical phase of this research seeks to explore if TSE levels in relation to inclusive practice may be associated with SA deployment. As TSE levels have been found to be associated with inclusive practice, perhaps teachers decisions as to whether they or SAs support pupils with SEN and the level of collaboration they engage in with regards to the

planning of alternative curricula and differentiation of tasks for pupils with SEN may also be an element of inclusive practice associated with TSE levels. Perhaps teachers distance themselves from pupils they feel under-trained to teach or whom they believe cannot be taught within mainstream classrooms (i.e. they hold a pathognomonic perspective of pupil difficulty being within-child: Stanovich & Jordan, 1998). Research suggests such teachers show an inability/unwillingness to accommodate for the needs of SEN-type pupils and are less likely to interact with them (Jordan & Stanovich, 2003; Stanovich & Jordan, 1998). Or perhaps teachers yield to what they may believe to be the 'expert' knowledge SAs hold of the individual/SEN (Webster & Blatchford, 2013). When considering this and the gaps identified within the existing research, explicit exploration of TSE in relation to inclusive practice and the deployment of SAs is warranted in order to further understanding of any potential relationship/s between these factors.

Additionally, the systematic literature review found TSE levels to be related to inclusive practice. As SAs are increasingly being used to support pupils with SEN, investigating their self-efficacy in relation to inclusive practice may also be beneficial. If higher self-efficacy is associated with increasingly inclusive practice for teachers this may also be true of SAs. Within the empirical phase of this research the concept of TSE is therefore broadened to include SA self-efficacy, thus becoming 'educator self-efficacy' (ESE). In addition to this, obtaining the self-efficacy levels of both teachers and SAs regarding inclusive practice may offer some comparison of who believes they are best placed to support pupils with SEN and allow conjecture as to how this, when considering self-efficacy theory, may impact upon practises and pupil outcomes.

Overall, the two strands of TSE and SA deployment research are combined to further understanding of ESE in relation to inclusive practice when considering increasing SA presence within mainstream classrooms. The research questions driving the empirical phase of this research are addressed next.

2.5 The empirical research questions

Three research questions outline the primary areas of investigation:

- Is there a relationship between the espoused self-efficacy beliefs of teachers and support assistants regarding inclusive practice and the activities undertaken by them within the mainstream classroom?

- Is there a relationship between espoused self-efficacy beliefs regarding inclusive practice and teacher planning and collaboration with support assistants?
- Is there a difference between the espoused self-efficacy beliefs of teachers and support assistants regarding inclusive practice?

These questions seek to explore ESE regarding inclusive practice in relation to what staff do within the classroom and which pupils they work with, if ESE levels are associated with collaborative practice, and whether teachers or SAs report themselves as having the highest ESE levels for inclusive practice. Consideration is now given to the epistemological and methodological basis of the empirical phase of this research.

2.6 Epistemological considerations

Previous TSE research approached the area from a primarily positivist stance. Cross-sectional self-report questionnaires consisting of TSE measures were developed with participants responding to questions utilising Likert scales to grade responses. Qualitative or mixed-methods measures, for example semi-structured interviews or open-ended questions within questionnaires, were not utilised. Additionally, this researcher identified little or no explicit consideration within studies of the potential impact of issues such as how measures were developed by researchers, responded to by participants, or how data was interpreted. The data gathered and conclusions drawn have been treated as fact.

This study seeks to be comparable to previous research in order to add to current data and understandings held within the area. However, this researcher holds that the positivist 'objective' measures and interpretation of the data does not acknowledge the variation in how individuals respond to questions and how the researcher interprets the data. Consequently, the research tools developed for use within this study are rooted within the historically positivist research within the TSE area, but will be expanded upon to also allow more qualitative responses from participants regarding their self-efficacy beliefs and the deployment of SAs within the mainstream classroom. In addition to this, any conclusions reached will be treated with an element of caution as they will arise via the interpretations of one individual researcher. Data will be treated as 'fict' not fact; they will contribute to a representation of reality which may not be 'true'/'accurate' but can be a useful device in the construction of warranted arguments which may potentially further understanding of the research area (Scott, 2007). A critical realist epistemological stance is held.

2.7 Methodology and Methods

A survey methodology employing cross-sectional self-report questionnaires will be utilised in line with previous research (see Table 10, pp.32-33). This may allow some comparison of the findings of this research to those of previous studies in order to contribute to the overall understandings held within the research area. A second form of survey, systematic observations, will also be conducted. The questionnaires are considered first.

2.7.1 Self-report questionnaires

Self-report questionnaires enable large-scale data collection from a wide range of participants simultaneously (Cohen et al., 2011). All participants are 'asked' the same questions whereas other methods, such as semi-structured interviews, may see the questions and subsequent responses vary depending upon the researcher's choices and phrasing within the interview (Bryman, 2008). Closed questions may enable statistical analysis of the dataset and identification of patterns within responses (Cohen et al., 2011). Comparatively, open-ended questions offer the opportunity to explore more of participants' individual perspectives (Cohen et al., 2011).

Self-report questionnaires will be employed within the empirical phase of this research. This research will also extend upon most previous research by adapting a TSE measure to relate to inclusive practice explicitly. Tchannen-Moran and Woolfolk Hoy's (2001) self-report Likert scale based TSE measure has been selected for use and will be modified to relate to 'pupils with SEN' (see Table 24, p.76). Three underlying factors labelled 'student engagement', 'instructional strategies', and 'classroom management' have consistently been identified within this measure (Tschannen-Moran & Woolfolk Hoy, 2001; Woolfson & Brady, 2009).

Additionally, this study will include open-ended questions within the questionnaires regarding ESE and both open and closed questions regarding the deployment of SAs within the classroom. Open-ended questions allow participants to decide upon their own response as they are not restricted by set response categories (e.g. multiple-choice or scale formats) (Cohen et al., 2011). Furthermore, two questionnaires will be developed, one for teachers and one for SAs, to gain the perspectives of both groups and to allow comparison of teacher and SA self-efficacy beliefs.

However, there are limitations to this method. For example, amalgamating participant responses to undertake statistical analysis may negate smaller patterns within subsets of the

data; these could be meaningful patterns or the consequence of random error variance in responses. Also, maintaining set questions does not allow individuals to raise points important to them unless prompted by a question (Cohen et al., 2011). Furthermore, as the questionnaires within this research will be simultaneously disseminated to participants, they may not complete them independently; they may choose to confer with one another regarding their responses, potentially influencing the findings of this research. Yet it would not be practical or ethical to sit with every participant whilst they completed the questionnaire.

Additionally, all data, in particular qualitative data, will require interpretation by the researcher in order to reach conclusions regarding the research findings. This researcher's previous experience of supporting pupils with SEN within the mainstream classroom and anecdotal knowledge gained from working alongside teachers and SAs regarding their perceived responsibilities surrounding their roles may influence these interpretations. These factors may also influence which questions and areas of consideration will be taken from previous research regarding TSE and SA deployment for use within this research. This researcher's own experiences and understandings cannot be eliminated from the construction, administration, and interpretation of this research and its findings, but this potential influence is acknowledged.

When considering individual interpretations, this may also apply to participants. Although each participant is presented with identical questions, they could interpret and respond to these in a variety of ways. As such, although participant responses will be amalgamated to allow statistical analysis and themes to be drawn from the data, this researcher acknowledges that there may be a variety of interpretations and subsequent responses to each question. For example, even with the prompting of labels at alternate points along the 9-point Likert scale, individuals make their own interpretation of these labels and the 'difference' between each point on the scale when responding. The individual interpretations participants make of questions cannot be counteracted.

Although several limitations of self-report questionnaires are discussed, no method is free from limitations. Self-report questionnaires are an appropriate data collection tool for use within the empirical phase of this research, although their limitations are acknowledged. Consideration is now given to structured observations.

2.7.2 Structured observations

Structured observations will be utilised in an attempt to gain a more 'objective' measure of the activities staff undertake within the classroom to compare to practises self-reported within the questionnaires. An observation schedule devised by Russell et al. (2013) in their audit of SA deployment will be adapted for purpose (see Table 25, p.78). It will be extended to incorporate observations of teachers in addition to SAs, to distinguish between pupils with and without SEN, and to code teacher and SA behaviours in line with the three factors underlying the ESE measure being utilised.

Using an observation schedule can allow consistency across observations as there is a 'framework' upon which to consider and record what is being observed (Coolican, 2009). As only one researcher will undertake observations this also reduces potential inconsistency in the application of the observation schedule across different observations. However, this leaves the observations vulnerable to the individual interpretations of that one researcher.

With regards to undertaking the observations, both the teacher and SA within a classroom need to be willing to participate as data will be gathered on the practice of both. This may limit the number of viable observation combinations. If few people volunteer to be observed then this will significantly limit the conclusions which can be drawn from the observation phase of the empirical research and the comparisons between the observed and reported practice of individuals which can be made. Additionally, the observations will be time-sampled with data collected at one minute intervals. Although this offers a way to quantify the observed practises of teachers and SAs, the activities being undertaken before and after the recording points will not contribute to the dataset. Also, for those who are willing to be observed, they may be vulnerable to a reactivity effect whereby researcher presence impacts upon their behaviour/practice during the observation (Coolican, 2009).

As with the questionnaires, there are several limitations to structured observations. However, they are a worthwhile data collection tool for use within this research, although their limitations are acknowledged. Consideration is now given to the use of the label 'SEN' as a way to 'access' inclusive practice.

2.7.3 The label of 'SEN'

Within this research inclusive practice is accessed by looking at the practice of teachers and SAs when working with pupils with 'SEN'. However, the label 'SEN' can be applied to pupils displaying a variety of characteristics and has been suggested to be inconsistently applied across various school settings and geographical locations, with some

socio-economic and ethnic groups being disproportionately represented (Department for Children, Schools and Families, 2010; Office for Standards in Education, Children's Services and Skills, 2010). As such, using the category of SEN as the basis for conceptualising inclusive practice is limited. However, as inclusion is a broad concept often associated with SEN then this conceptualisation of inclusive practice offers a way to access the broad realm of 'inclusion' and overlaps with common thinking surrounding the link between inclusion and SEN. It is a tool which can be used to access the target research area, although it is not without limitations.

Consideration has been given to the methods chosen for use within the empirical phase of this research. The sample to be accessed will now be considered.

2.7.4 Sample

As viable observation combinations will need to be identified amongst willing participants and observations negotiated and arranged with staff, this researcher will utilise their access to six mainstream schools within a North East Local Authority in order to obtain a sample. A high level of collaboration with a key member of staff to coordinate observations and the dissemination and collection of consent forms and questionnaires will be needed and the pre-existing relationships this researcher has with these schools may enable this. If additional schools were to be approached to participate then this requirement of a high level of input from a member of school staff in organising elements of the research within their setting may not be fulfilled. However, as only six schools will be approached this limits the possible sample size upon which the empirical study will be based and may limit the research findings.

Teachers and SAs working within Key Stages 1 to 4 will be invited to participate, i.e. those working across year groups consisting entirely of pupils of compulsory school age (Department for Education, 2013a). As observations of staff will require monitoring if they are working with pupils on the SEN register or not, the pupils within a class registered as having SEN need to be identifiable. An anonymised seating plan highlighting where in the class pupils with SEN sit may achieve this. As some people may be reluctant to be observed, potential participants can choose to participate in either the questionnaire and observation phases or just the questionnaire phase.

Of the six schools to be approached for participation within this research, five are primary phase schools and one a secondary phase school. Teachers across both phases will be treated as one group and SAs across both phases will be treated as a second group.

There are likely to be a variety of job titles (e.g. learning support assistant, teaching assistant, etc.) and training/qualifications within the SA group which may impact to some extent upon their role and/or practice. It is not within the remit of this research to distinguish between each sub-category of SA or to distinguish between teachers and SAs from primary versus secondary settings. This could offer an extension of this research where a larger sample is possible.

Initial discussion of the potential sample has been provided; considerations surrounding a pilot study are outlined next.

2.7.5 Pilot study

Considerations surrounding undertaking a pilot study include that the data collection tools will be adaptations and/or extensions of tools which have been successfully utilised previously. Additionally, constraints are placed upon the possible sample this researcher has access to. A small sample is likely and as such it may not be possible to draw upon a subset of this to pilot the data collection tools as the final sample may be left too small for any subsequent data analysis. When considering these factors, a pilot study will not be undertaken.

Methodological issues have been discussed. Consideration is now given to what the findings of this research may contribute to the research area.

2.8 What the findings of this research may contribute to the research area

This research will explore a potential relationship between ESE regarding inclusive practice and the collaborative and inclusive practices of teachers and SAs within mainstream classrooms. It may offer information to add to conjecture surrounding inclusive practice within the mainstream classroom and the outcomes of pupils with SEN. For example, if it identifies that increasing ESE is associated with increasingly inclusive and collaborative practice then this may highlight an area for the professional development of teachers and SAs which may be beneficial in potentially improving outcomes for pupils with SEN.

This research may also indicate which group, teachers or SAs, appears to hold higher ESE in relation to inclusive practice. Self-efficacy theory suggests that those holding higher self-efficacy levels within a domain may expend more effort upon endeavours, persist longer when presented with obstacles, be more resilient in dealing with setbacks, and

experience lower levels of stress/depression when dealing with demanding situations (Bandura, 1997). This suggests that the group with the highest ESE may be best placed to support pupils with SEN.

The conclusions reached within the empirical phase of this research may contribute to the understanding of both the TSE/ESE and SA deployment research areas; it aims to unite these two strands in order to further the understanding of both.

Chapter 3: Empirical Research Report

Is there a relationship between teacher self-efficacy regarding inclusive practice and teacher deployment of support assistants within the mainstream classroom?

3.1 Abstract

Teacher self-efficacy (TSE) levels are theorised to underlie teacher effort, persistence, and resilience in their practice (Bandura, 1997). TSE has also been associated with inclusive practice, conceptualised here as the inclusion of pupils categorised as having 'special educational needs' (SEN), and pupil achievement (Ashton & Webb, 1986; Gibson & Dembo, 1984; Parker, Hannah, & Topping, 2006). However, previous research has primarily focused upon teachers in isolation and has not explicitly considered the increasing presence of support assistants (SAs) within mainstream classrooms and the possible relationship/s between their presence, TSE, and inclusive practice.

This study, therefore, aimed to explore the espoused self-efficacy beliefs of both mainstream teachers and SAs regarding their inclusive practice and teacher deployment of SAs. Consideration was given to the activities, planning, and collaboration undertaken by staff and any association between these and educator self-efficacy (ESE) levels, alongside any difference in the self-efficacy levels of teachers and SAs.

A mixed methods survey methodology was employed utilising cross-sectional self-report questionnaires and structured observations. All participants worked within mainstream schools across Key Stages 1 – 4. 25 teachers and 24 SAs completed questionnaires. 3 teachers and 3 SAs participated in observations of their classroom practice. Quantitative data was analysed using SPSS and qualitative data via thematic analysis.

No association was identified between ESE regarding inclusive practice and activities staff reported undertaking within the classroom or the pupils they reported working with. However, inconsistencies between the quantitative and qualitative data raise questions regarding socially desirable responses influencing this finding. ESE was associated with some aspects of planning and collaboration, such as staff communication prior to lessons, and teacher ESE was found to be higher than SA ESE.

Overall, ESE regarding inclusive practice was not significantly associated with practitioner activities within the classroom but was associated with staff planning and collaboration. Additionally, teachers held higher ESE and may therefore be more resilient,

persistent, and better able to support pupils with SEN than SAs, especially when also considering their often greater subject and pedagogical knowledge.

3.2 Introduction

This section discusses the relationship between teacher self-efficacy, inclusive practice, special educational needs (SEN), and the role of support assistants. The rationale, aims, and objectives of this study are provided below.

3.2.1 Teacher self-efficacy

Perceived self-efficacy is an individual's context-dependent belief in their ability to coordinate and undertake the actions required to produce desired effects/attainments (Bandura, 1997; Block et al., 2010). Those with higher self-efficacy beliefs expend more effort upon endeavours, persist longer when presented with obstacles, are more resilient in dealing with setbacks, and experience lower levels of stress/depression when dealing with demanding situations (Bandura, 1997). When considered in relation to teachers, teacher self-efficacy (TSE) refers to their belief in their ability to accomplish endeavours within their teaching practice. Research suggests TSE levels are associated with a variety of factors, including pupil achievement and inclusive practice (Ashton & Webb, 1986) (see section 1.5.1, pp.54-55). TSE and inclusive practice are of interest within this study.

3.2.2 Inclusive practice

Inclusive practice refers to practice promoting inclusion. Inclusion is a broad concept; within education it goes beyond pupils being educated within mainstream settings and includes equality for all pupils in accessing a relevant education (Frederickson, Miller, & Cline, 2008; Gatt et al., 2011). Inclusive practice can be conceptualised as teachers recognising and accommodating to meet the needs of all pupils (The Open University, 2006). Inclusive practice is a term often associated with special educational needs (SEN).

3.2.3 Special educational needs

The Special Educational Needs Code of Practice defines a child/young person as having SEN if they have difficulty learning which requires additional differentiation of school work and/or environment in order to accommodate for this (Department for Education and Skills, 2001). Many pupils with SEN were historically excluded from mainstream education and placed within special education, i.e. schools/programmes established especially for those with 'SEN' (Thomas & Loxley, 2007). Now pupils with SEN are increasingly educated within mainstream settings (Russell et al., 2013). However, the legacy of widespread special

education may lead mainstream educators to believe 'specialist knowledge' is required to teach pupils with SEN, hindering their belief in their ability to work with all pupils (Thomas & Loxley, 2007). This study explores mainstream educators' beliefs about their ability to teach pupils with the label of 'SEN', i.e. their self-efficacy regarding inclusive practice. The label of SEN is explored next.

3.2.3.1 The label of 'SEN'

Approximately nineteen percent of pupils are registered as having 'SEN' (Department for Education, 2013b). This label could be viewed as a social object; an imperceptible 'entity' identified via its perceived effects (i.e. pupils experiencing difficulties within the school environment) (Archer, Bhaskar, Collier, Lawson, & Norrie, 1998). Difficulties within school may exist and underlie the label, but its suitability for application to pupils with a variety of difficulties/needs is questionable. Labels categorise people to quickly convey information about their 'group' and how to 'appropriately' interact with them (Smith & Mackie, 2000). However, this assumes that labels encapsulate the variety of characteristics individuals within a label-group hold (Smith & Mackie, 2000). Also, using labels to gain information and build perceptions may exaggerate the perceived differences between groups, for example, between those with/without the label of 'SEN'. This could lead to labelling bias; a difference between an individual's expectations or perceptions of someone with a label versus without (Stinnett, Crawford, Gillespie, Cruce, & Langford, 2001). A self-fulfilling prophecy may arise from this whereby potentially spurious expectations are fulfilled as a consequence of having been held (Merton, 1948; Rosenthal & Jacobson, 1968, 1992). The label of SEN may influence the beliefs held by educators and their practice when supporting pupils, therefore potentially impacting upon pupil outcomes.

3.2.4 Supporting pupils with SEN within the mainstream classroom

The teaching and learning of pupils with 'SEN', along with low attaining pupils, is increasingly supported by support assistants (Russell et al., 2013). 'Support assistant' refers to additional classroom-based staff who may have a variety of job titles (e.g. teaching assistant, learning support assistant, etc.).

Support assistants (SAs) comprise approximately 25% of the mainstream school workforce (Department for Education, 2011). However, research surrounding their effectiveness suggests they may have a negative impact upon pupil achievement (Blatchford et al., 2012). Pupils receiving the most SA 'help', often those with SEN, consistently make less progress than similar pupils receiving less SA support (Institute of Education, 2013a; Webster & Blatchford, 2013). Pupils may be 'left to' SAs due to their SEN label, with SAs

planning and delivering alternative curricula and interventions and differentiating teacher tasks with little or no guidance from teachers (Institute of Education, 2013a). These pupils are separated from their teachers and class curriculum as SAs are increasingly used to replace teacher support; the least qualified staff are the primary educators of the most 'needy' pupils (Russell et al., 2013; Webster & Blatchford, 2013). This raises questions about why SAs as opposed to teachers are the primary source of teaching and differentiation for pupils with SEN. Is it easier for teachers to leave the support of 'needy' pupils to SAs? This may reduce teacher stress levels and make teachers more 'productive' by deploying SAs to take this role away from them (Institute of Education, 2013b). Alternatively, do teachers feel unprepared/unqualified to teach pupils with SEN and hold little belief in their ability to do so (i.e. have low TSE regarding inclusive practice), perhaps due to a pathognomonic (within-child/'pathological') perspective regarding SEN (Jordan & Stanovich, 2003), thus relinquish responsibility to SAs? When considering such questions, TSE regarding inclusive practice is worthy of investigation. Further rationale for undertaking this research is provided next.

3.2.5 This research; a rationale

TSE has been linked with a variety of factors associated with inclusive practice, including teacher attributions for learning difficulties and attitudes towards inclusion (Brady & Woolfson, 2008; Soodak et al., 1998). However, TSE has not been explored alongside SA deployment and SA self-efficacy. As TSE has been associated with teachers' inclusive practice, perhaps this relationship between self-efficacy beliefs and practice may be expected amongst SAs too. Also, perhaps TSE for inclusive practice (i.e. teacher belief in their ability to teach pupils with 'SEN') is associated with teacher deployment/use of SAs. Research suggests SA deployment impacts upon pupil achievement and may contribute to issues such as social isolation and learned helplessness (Institute of Education, 2013a; Saddler, 2013; Webster & Blatchford, 2013). This could leave pupils vulnerable to achieving poorer life outcomes (Feinstein, Budge, Vorhaus, & Duckworth, 2008). If TSE influences SA deployment, which may in-turn influence these factors, could this be a mechanism via which TSE for inclusive practice is contributing to poorer life chances for pupils with SEN (Department for Education, 2011)? It has been suggested that there is a need to reduce the impact of SEN 'status' upon pupil outcomes (Department for Education, 2011). Investigating how teachers work with SAs to support pupils with SEN and exploring associations between teacher and SA self-efficacy and inclusive practice may contribute to further understanding pupil outcomes and how to potentially improve these in future.

3.2.6 Aim

The aim of this study is to explore the self-efficacy beliefs of mainstream teachers and SAs regarding their inclusive practice and teacher deployment of SAs within the mainstream classroom.

3.2.7 Objectives

Three research questions are explored:

- Is there a relationship between the espoused self-efficacy beliefs of teachers and support assistants regarding inclusive practice and the activities undertaken by them within the mainstream classroom?
- Is there a relationship between espoused self-efficacy beliefs regarding inclusive practice and teacher planning and collaboration with support assistants?
- Is there a difference between the espoused self-efficacy beliefs of teachers and support assistants regarding inclusive practice?

3.3 Methodology

This section details the epistemological stance, methodology, methods, and design of this research. Discussion of the sampling process, ethical issues, and administration process is also undertaken.

3.3.1 Epistemological stance

This study views TSE as an 'object' which can be 'measured' via the 'tool' of a TSE scale. However, the construction of such 'tools', their completion by individual participants, and subsequent researcher interpretation of the data introduces subjectivity; an objective view of the world is held but how the world is 'known' is subjective. As such, this research is approached from a critical realist stance. Critical Realism holds that objects (including social 'objects'/phenomena) exist independent of observer knowledge of them; any observer knowledge of objects is a fallible interpretation and measures of objects will never fully represent them (Sayer, 1992; Scott, 2007). This researcher acknowledges that the data gathered will contribute to a representation of reality which may not be 'true'/'accurate', but can be a useful device in the construction of warranted arguments which may further understanding of the research area (Scott, 2007).

3.3.2 Methodological approach

A mixed-methods survey methodology was employed (Plowright, 2011). Two forms of survey were utilised (Fink, 2002):

- self-report questionnaires to obtain quantitative and qualitative information from participants; and
- a structured/systematic observation schedule to gain 'objective' information about participant classroom practice.

3.3.3 Design

This study employed a seven stage research design (see Table 21).

Table 21: Research design process.

Design stage	Description of stage
1	Examination of the research area (including systematic review of the relevant literature). (See Chapter 1, pp.14-56).
2	Identification of a 'gap' in the research literature warranting further exploration (i.e. the presence and use of support assistants within the mainstream classroom) and the subsequent development of research questions (see Chapter 2, pp.57-67).
3	Selection and development of methodology and methods, including questionnaire and observation schedule development.
4	Identification of sample.
5	Data collection.
6	Data analysis.
7	Writing of final report.

3.3.4 Sampling

A variety of sampling techniques were utilised (see Table 22). Data was collected in June 2013.

Table 22: The sampling process utilised within this study.

Sampling process stage	Type of sampling	Description
-	Stage	The overall process of sampling within this study. The sample was obtained in several stages.
1	Cluster	All teachers and SAs sampled were from schools within one North East of England Local Authority. Cluster sampling can build bias into a sample (Cohen et al., 2011); this sample may not be representative of other geographical and socio-economic locations.
2	Opportunity	The senior management of one secondary, one infant, one junior, and three primary schools to which this researcher had access as their allocated Educational Psychologist were approached to seek their approval to invite staff to participate in this research. This was a non-random sample accessed in terms of available opportunity. Access to possible and practical samples is a key issue in research (Cohen et al., 2011). A key member of staff was designated within each school for this researcher to liaise with in order to disseminate and collect consent forms and questionnaires and to assist in identifying viable observation opportunities.
3	Purposive	Those invited to participate were selected for their suitability given the purpose of the study (i.e. a purposive sample: Cohen et al., 2011). All were teachers and SAs working within mainstream schools in Key Stages 1 through to 4. They worked directly with classes which contained some pupils with SEN and only teachers who worked with SAs were eligible to participate.
4	Self-selecting	All participants volunteered to participate. Volunteers may inherently differ from those who chose not to participate, but it is not possible to speculate as to how (Coolican, 2009). Volunteers indicated if they wanted to participate in the questionnaire phase only or both the questionnaire and observation phases.
5	Opportunity	Observations of approximately one hour long were sought in order to maximise the time available to observe various parts of the lesson/s. However, each observation was negotiated with the staff members being observed in light of their circumstances. Observed lessons required a combination of both a consenting teacher and SA; this reduced the number of viable observation combinations. Also, each member of staff was observed only once in order to avoid any potential stress from being observed several times and reduce the chances of 'contaminating' the dataset with the patterns of one person's practice. This again reduced the number of viable observations.

3.3.4.1 Sample

37 teachers and 27 SAs were invited to participate. 25 teachers and 24 SAs returned completed questionnaires (see Table 23). Although several participants volunteered to be observed, only three viable observation combinations were identified. Teacher mean experience was 12.98 years (SD = 9.40, range 1 – 40) and SAs 9.46 years (SD = 5.37, range 0.5 - 20). Teachers worked with a mean of 1.61 SAs per week (SD = .84, range = 1 - 4). SAs worked with a mean of 2.58 teachers per week (SD = 2.03, range = 1 - 10). The

mean percentage of the week teachers received support from a SA was 67.25% (SD = 34.24%, range = 10% – 100%).

Table 23: Distribution of participants within this study across both research and education phases.

	Participants in questionnaire phase		Participants in observation phase *	
	Teacher	**Support assistant**	**Teacher**	**Support assistant**
Primary phase	19	22	3	3
Secondary phase	6	2	-	-
Total	25	24	3	3

N.B. Participants are represented by primary or secondary phase as they may work within more than one year group and/or National Curriculum Key Stage within their setting. All schools were within the same urban secondary school cluster and were similar in socioeconomic features.
**Those volunteering to participate in observations also volunteered to participate in the questionnaire phase and therefore are also included within the questionnaire columns.*

Teachers held a variety of degree-level qualifications and postgraduate qualifications in teaching, with one educated to master's level. There was a greater range in qualifications amongst SAs. Many held vocational qualifications, one a foundation degree, eight bachelor's degrees, two qualified teacher status, and one a master's degree (see Appendix C). Both teacher and SA SEN-specific qualifications/training ranged from internal continuing professional development (CPD) courses to certified SEN qualifications such as the National SENCo (Special Educational Needs Coordinator) Award (see Appendix D).

3.3.5 Methods

Cross-sectional self-report questionnaires and structured observations were utilised.

3.3.5.1 Questionnaires

Two self-report questionnaires were developed; one for teachers (see Appendix E) and one for SAs (see Appendix F). These contained a self-efficacy measure and questions regarding teacher and SA practice. Most questions were adaptations of those used in previous research regarding TSE and inclusive practice (Tschannen-Moran & Woolfolk Hoy, 2001; Woolfson & Brady, 2009) and the deployment of support staff (Russell et al., 2013). As such, these measures were not piloted (see section 2.7.5, p.66).

3.3.5.1.1 Self-efficacy measure

The self-efficacy measure was based upon the short form of the Teachers' Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001). The selection of this as the basis

for this study's self-efficacy measure and details regarding its adaptation are provided in Table 24. As the self-efficacy of both teachers and SAs is of interest, the term 'educator self-efficacy' (ESE) is utilised hereafter.

Table 24: The development of the educator self-efficacy (ESE) measure.

Development stage	Description of stage
1	**Selection of an appropriate self-efficacy measure for further development.** Tschannen-Moran & Woolfolk Hoy's (2001) Teachers' Sense of Efficacy Scale was selected as • it has a theoretical basis consistent with both the questions it asks and also the theoretical basis of this study: it is based upon Bandura's self-efficacy and conceptualisations of TSE derived from this; • of the TSE measures critiqued in Chapter 1, this had a robust developmental process (see Table 11, pp.35-36, for further details); • it is assessed as having a unified and stable factor structure with a high level of reliability (α = .9) (Tschannen-Moran & Woolfolk Hoy, 2001); and • it has previously been used by other researchers in their investigations of TSE and inclusive practice. The short form of the scale was selected for use. It contains 12 items ('questions') scored on a 9-point Likert scale in comparison to the 24 items of the full form. Both have been found to have similar levels of reliability (Tschannen-Moran & Woolfolk Hoy, 2001). It addresses factors both internal and external to the teacher that may help/hinder their accomplishment of teaching tasks (Brady & Woolfson, 2008). The short form contains four questions on each of the three underlying factors of • efficacy for student engagement (Q's 2, 3, 4, & 11); • efficacy for instructional strategies (Q's 5, 9, 10 & 12); and • efficacy for classroom management (Q's 1, 6, 7 & 8). Responses to all 12 items are totalled. Higher scores indicate higher TSE levels.
2	**Identification of an example of this scale's modification to be applicable to groups similar to those with SEN.** Woolfson and Brady (2009) modified the items on the short form of the Teachers' Sense of Efficacy Scale to refer to pupils with 'learning support needs'. An example of their modifications include the question 'How much can you do to motivate students who show low interest in school work?' being replaced with 'How much can you do to motivate students *with learning support needs* who show low interest in school work?'. Their measure maintained excellent reliability (α = .93).
3	**Modification of the Teachers' Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001) in light of the adaptations made by Woolfson and Brady (2009) to refer to special educational needs.** Modifications were made to produce a self-efficacy measure referring to pupils with SEN and which could be administered to both teachers and SAs (i.e. an educator self-efficacy measure). Modifications included: • adaptation of the wording of the introduction to the scale to be relevant to both teachers and SAs; • the terms 'students' and 'children' were replaced with 'pupils'. This questionnaire was to be administered in both primary and secondary settings; 'pupils' may refer both to older 'students' and younger 'children'; • where Woolfson and Brady (2009) included 'with learning support needs' in their questions, the term 'with special educational needs' was utilised; • the term 'your' within questions 4, 5, and 12 was removed in an attempt to reduce 'ownership' over pupils and/or the classroom thus trying to prevent the questionnaire from presenting as aimed towards teachers as opposed to both teachers and SAs; and • question 8 was differentiated to refer to 'establishing' a classroom management system for teachers and 'maintaining' a classroom management system for SAs.

3.3.5.1.2 Support staff deployment

SA deployment was also of interest. Consequently, both questionnaires explore teacher and SA reports of working together, the activities they undertake, and pupils they work with. These questions were primarily drawn from an audit of SA deployment developed by Russell et al. (2013). The audit is evidence-based and drawn from extensive trialling in schools. Closed and open-ended questions were drawn from Russell et al.'s (2013) audit and suggestions of areas to explore. These questions required greater differentiation for teachers and SAs. Although many questions were directly comparable across questionnaires, some were not. For example, teachers were asked 'Do you feel able to manage support assistants and their deployment within the classroom? Please explain'; SAs received no equivalent question.

3.3.5.2 Observation schedule

Self-report questionnaires gather information on individual beliefs; what people believe and/or report and their actual practice may differ (Bryman, 2008). Self-report questionnaires are therefore vulnerable to socially desirable responses and/or self-serving bias (Bryman, 2008; Fournier, 2014). Structured observations were utilised in an attempt to gain 'objective' information about teacher and SA practice. A structured observation schedule was developed to offer a framework for observations, including defined observable behaviour categories, in an attempt to reduce inference (University of California, 2007) (see Appendix G). Teacher and SA activities were recorded at one-minute intervals and the frequency of the activities they were undertaking and the behavioural categories they were engaged in were recorded. The observation schedule was an adaptation of a pre-existing tool utilised in exploring SA deployment. See Table 25 for further details.

Table 25: The development of the structured observation schedule.

Development stage	Description of stage
1	**Identification of an observation schedule utilised in the observation of SA deployment within the classroom.** Russell et al. (2013) utilised an observation schedule in their research regarding the deployment of teaching assistants. It was time sampled, with observations recorded at one minute intervals, and provided categories of teaching assistant activity (e.g. 'roving'). This was used successfully in their research. It was deemed a suitable starting point to begin to develop an observation schedule for this research.
2	**Modification of the schedule to include observation of teacher activities.** The Russell et al. (2013) observation schedule categories were duplicated to allow the tracking of the actions of both teachers and SAs during observations.
3	**Modification of the schedule to allow recording of frequency of staff working with pupils with SEN.** Observation categories for both teachers and SAs which related to them working directly with pupils (e.g. 'with pupil one-to-one') were duplicated to create 'SEN' categories. For example, (working with) 'pupil 1-1' category was maintained and a (working with) 'pupil 1-1 SEN' category created. In order to identify during observations which pupils within a class were on the SEN register, teachers provided an anonymised seating plan highlighting where pupils on school's SEN register sat. This was returned to staff at the end of the observation and no information regarding individual pupils was recorded. The purpose of this was to try to access which members of staff worked primarily with pupils with SEN.
4	**Development of behaviour codes/categories in-keeping with the three underlying ESE factors in an attempt to bridge reported with observed behaviours and ESE.** The questions associated with the three factors underlying the ESE measure (efficacy for student engagement, efficacy for instructional strategies, and efficacy for classroom management) were considered for behaviours which teachers and SAs may exhibit when engaging in one of these three areas. Additionally, any discussion of similar areas within Russell et al. (2013), for example they also held a focus upon instruction, was also considered when outlining behaviours associated with these factors. A set of behaviours identifiable during observation were established from the ESE measure and Russell et al. (2013). An observation code was created so that each minute of the timed observation could be coded regarding the activity being undertaken and the ESE factor being demonstrated. The behaviours coded for each of the three ESE factors were; *Student Engagement* ***(SE)*** • Encouraging pupil attention upon and engagement in the task. • Promoting confidence in pupils, e.g. via social persuasion, in order to promote attempting tasks. • Offering incentives, such as praise and rewards, to encourage engagement in tasks and promote motivation. *Instructional Strategies* ***(IS)*** • Employing questioning techniques to encourage thinking and learning. • Offering explicit guidance on tasks. • Scaffolding pupil undertaking of tasks to promote thinking and learning (e.g. by providing alternative explanations or examples or encouraging them to use strategies they already know). • Engaging in assessment of pupils. • Differentiation of tasks for individuals. *Classroom Management* ***(CM)*** • Behaviour management of the class, e.g. engaging in disciplining of pupils. • Upholding classroom rules and/or ground rules set out for activities. • Organising pupils within the classroom (e.g. into pairs/groups).

3.3.6 Ethical considerations

Preliminary ethical approval was gained from Newcastle University. Full ethical approval was not necessary as written and informed consent was obtained from adults not deemed to be a vulnerable group and to whom no distress/harm was likely to be induced. Although some information was gained regarding pupils within observed classes in order to identify those upon the SEN register, this was done via an anonymised seating plan which was returned to staff at the end of the observation. No pupil data was gathered.

Those invited to participate were given consent forms outlining the research to ensure informed consent. Volunteers opted to participate in the questionnaire phase only or both questionnaire and observation phases (see Appendix H). Throughout the research participants were reminded that they could withdraw their consent to participate at any time. All questionnaires were completed anonymously and individual responses kept confidential; participants returned completed questionnaires in sealed envelopes. All observation data was also anonymous. No individual participants' data could be identified. Participants received a written debrief containing details of how to contact the researcher should they have questions or want further information (see Appendix I).

Anonymised research findings have been made available to those who participated upon request and to practitioners and researchers interested in this area.

3.3.7 Administration

Observations were undertaken prior to questionnaire distribution to prevent the questionnaires 'priming' participants and altering behaviours during observation. A 'script' was utilised to reduce potential bias/difference in individual participants' introduction to the observation (see Appendix J). Questionnaires and observation schedules were numbered to match participant data after completion as all data was anonymous. Staff were handed questionnaires at the end of observations to ensure they received the correctly numbered questionnaire. Once all observations were conducted, the other participants were provided with questionnaires.

3.4 Results

This section reports the results of analyses conducted on the data gathered. Results are presented in relation to each research question, with initial consideration of the ESE measure.

3.4.1 ESE measure

The small sample size prohibited factor analysis to verify the underlying factor structure of participant responses on the ESE measure. However, this measure was closely based upon Tschannen-Moran & Woolfolk Hoy's (2001) TSE scale, which has been found to have a reliable factor structure and high internal consistency (.90 to .93) (Tschannen-Moran & Woolfolk Hoy, 2001; Woolfson & Brady, 2009). As such, consideration was still given to the three factors presumed to underlie this ESE scale.

Table 26: Mean, standard deviation, and Chronbach's alpha coefficient scores for teacher and support assistant responses to questions underlying the three previously identified factors within the ESE measure.

ESE factor*	Teacher sample			Support assistant sample		
	Mean	Standard deviation	α	Mean	Standard deviation	α
Student engagement	27.64	4.72	.80	25.54	3.90	.61
Instructional strategies	29.08	3.08	.67	26.25	4.12	.84
Classroom management	29.32	4.09	.58	26.71	3.84	.82

N.B. α v*alues of .75 or above suggest questions reliably measure the same construct (Coolican, 2009).*

** ESE factor level is calculated out of a possible 36 (i.e. the highest possible ESE level achievable when totalling the 1-9 Likert scale responses recorded across the 4 ESE questions within each factor).*

The internal consistency of the three factors was tested (see Table 26). All three had internal consistency, but not within both samples. 'Student engagement' was reliable within teacher responses and 'instructional strategies' and 'classroom management' within SA responses. This may have been attributable to the small sample size.

Teachers reported their highest ESE level for classroom management (mean = 29.32, SD = 4.09), followed by instructional strategies (mean = 29.08, SD = 3.08), and then student engagement (mean = 27.64, SD = 4.72). This pattern was repeated within SA responses (see Table 26). Mean SA responses on each of these factors were lower than mean teacher responses. One-way ANOVA identified that these differences were statistically significant for the factors of instructional strategies F (1, 45) = 7.45, p = .01) and classroom

management *F* (1, 45) = 5.30, p = .03); teachers had significantly higher self-efficacy regarding inclusive practice than SAs for both of these factors.

As various TSE measures have been utilised across previous research with varying underlying factor structures, for this research to be more comparable to wider TSE literature, and when considering the limitations to presuming an underlying factor structure, overall ESE levels are discussed hereafter. Details of this are given in section 3.4.4, (p.95). The alpha coefficient of the total ESE measure was .82 within the teacher sample and .90 within the SA sample. This suggests a unified construct was reliably measured within both samples; ESE for inclusive practice.

Consideration is now given to each research question in turn.

3.4.2 Research Question 1: Is there a relationship between the espoused self-efficacy beliefs of teachers and support assistants regarding inclusive practice and the activities undertaken by them within the mainstream classroom?

This section considers what teachers and SAs reported doing within the classroom and their perceptions of their roles.

3.4.2.1 Activities undertaken within the classroom

This section considers the activities teachers and SAs reported undertaking within the classroom.

Table 27: Mean, standard deviation, and median scores for teacher and support assistant responses to questions regarding the percentage of their average week they spend undertaking given activities.

Activity	Teacher responses						Support assistant responses		
	With support			Without support					
	Mean	SD	Median	Mean	SD	Median	Mean	SD	Median
Working one-to-one with pupils	7.62	8.46	5.00	7.39	13.56	0.00	9.90	13.52	5.00
Working with a small group (up to 5 pupils)	29.52	22.74	30.00	16.94	13.74	12.50	27.35	26.11	20.00
Working with a large group (6-10 pupils)	18.18	18.36	17.50	13.44	13.40	10.00	20.29	15.05	20.00
Roving the classroom	12.38	17.29	10.00	20.00	21.58	15.00	16.03	24.23	5.00
Leading class / lesson	35.53	23.62	25.00	36.39	23.63	40.00	13.24	17.23	10.00
Listening to teacher/s delivery	-	-	-	-	-	-	18.53	23.03	10.00
Working outside the classroom	-	-	-	-	-	-	14.50	16.25	12.00
Other	0.26	1.15	0.00	0.31	1.25	0.00	4.41	9.98	0.00

3.4.2.1.1 Is there a relationship between ESE and the activities teachers and support assistants reported undertaking within the classroom?

No statistically significant correlations were identified between ESE and the activities teachers (with and without support) and SAs reportedly undertake (see Appendix K). SAs reported primarily undertaking small group work whilst teachers reported primarily leading lessons (see Table 27).

3.4.2.1.2 Is there a difference in the activities teachers reported undertaking when supported versus unsupported within the classroom?

Wilcoxon signed-rank tests identified a significant difference in the time teachers spend working with small groups when supported (Mdn = 30.00, SD = 22.74) versus unsupported (Mdn = 12.50, SD = 13.74), Z = -3.19, p <.001 (see Table 27). Teachers reported spending more time working with small groups when supported. No statistically significant difference was identified between the time they spend with or without support undertaking other activities.

3.4.2.1.3 Is there a difference in the activities teachers (when supported) and support assistants reported undertaking within the classroom?

Mann-Whitney U analysis identified a significant difference in the time teachers (with support) (Mdn = 25.00, SD = 23.62) versus SAs (Mdn = 10.00, SD = 17.23) spend leading the class, $U = 55.50$, $z = -3.41$, $p < .001$ (see Table 27). Teachers spend more time leading the class than SAs. A significant difference in the time teachers (Mdn = .00, SD = 1.15) versus SAs (Mdn = .00, SD = 9.98) spend undertaking 'other' activities was also identified, $U = 120.50$, $z = -2.00$, $p < .05$. SAs undertake more 'other' activities than teachers. No statistically significant differences were identified between the other activities they undertake.

3.4.2.2 Pupil 'categories' teachers and support assistants work with

This section considers the pupil 'categories' teachers and SAs reported working with. No definitions of the different pupil 'categories' were given to participants; they made their own interpretations of the pupils with whom they work and which category would best describe them.

Table 28: Mean, standard deviation, and median scores for teacher and support assistant responses to questions regarding the percentage of their average week they spend working with different pupil 'categories'.

Pupil 'category'	Teacher responses						Support assistant responses		
	With support			Without support					
	Mean	SD	Median	Mean	SD	Median	Mean	SD	Median
Higher attaining pupils	15.00	13.99	10.00	7.20	7.35	5.00	7.05	8.12	7.50
Average attaining pupils	21.54	13.90	20.00	18.50	13.75	20.00	11.84	12.38	10.00
Lower attaining pupils	29.64	23.41	25.00	34.09	26.44	30.00	27.63	18.51	35.00
Pupils with SEN	35.71	28.68	25.00	40.00	29.75	30.00	37.50	27.02	30.00
Mixed ability groups	18.85	21.91	15.00	25.00	29.63	17.50	18.75	23.84	10.00

3.4.2.2.1 Is there a relationship between ESE and the pupil 'categories' teachers and support assistants reported working with within the classroom?

No statistically significant correlations were identified between ESE and pupil 'categories' teachers (with and without support) and SAs reportedly work with (see Appendix L). Both teachers and SAs reported primarily working with 'pupils with SEN' (see Table 28).

3.4.2.2.2 Is there a difference in the pupil 'categories' teachers reported working with when supported versus unsupported within the classroom?

Wilcoxon signed-rank tests identified a significant difference in the time teachers spend working with higher attaining pupils when supported (Mdn = 10.00, SD = 13.99) versus unsupported (Mdn = 5.00, SD = 7.35), Z = -2.25, p <.05 (see Table 28). Teachers reported spending more time working with higher attaining pupils when they have support. No statistically significant differences were identified between the times teachers spend working with other pupil 'categories' when they do versus do not have support.

3.4.2.2.3 Is there a difference in the pupil 'categories' teachers (when supported) and support assistants reported working with within the classroom?

No statistically significant differences were identified between the median times teachers (with support) or SAs spend working with different pupil 'categories' (see Table 28).

3.4.2.3 What perceptions are held regarding the role and responsibilities of teachers in meeting the needs of pupils with SEN?

Table 29 provides themes identified via thematic analysis from participant responses regarding the role and responsibilities of teachers in meeting the needs of pupils with SEN. Thematic analysis involves coding data and identifying themes across the dataset. After repeated readings of the data, the main themes within each response were coded and then themes collated across responses. Inductive analysis produced semantic themes based upon prevalence and 'keyness' (i.e. capturing something 'important' which may not be prevalent) (Boyatzis, 1998; Braun & Clarke, 2006, 2013) (see Appendix M for a worked example). At each stage, the themes identified were revisited and ongoing consideration given to their appropriateness and any groupings of them in light of the comments they originated from. The teacher and SA samples were themed in isolation; although some themes were exclusive to either teachers or SAs, several similar themes also spanned both samples. Themes common across both groups when considering the role and responsibilities of teachers in meeting the needs of pupils with SEN were differentiating work for individuals, planning, identifying pupils with SEN, teaching all pupils, monitoring pupil progress, and communication with SENCo, parents, and other professionals.

Table 29: Themes identified via thematic analysis from teacher and support assistant responses regarding what they perceive to be the role and responsibilities of teachers in meeting the needs of pupils with SEN and number of responses containing each theme.

Identified theme	Teacher responses	Support assistant responses	Total
Differentiating work for individuals	14	14	28
Planning (including lessons, activities, and/or interventions)	9	6	15
Monitoring pupil progress (assessing, reviewing, and target setting)	5	4	9
Teaching all pupils within the class (including offering all the same opportunities)	5	2	7
Identifying pupils with SEN	3	4	7
Communication with SENCo, parents, and other professionals	1	3	4
Nurturing	7	-	7
Deploying SAs as appropriate*	-	4	4
Creating/utilising IEPs	-	4	4
Passing information to other staff	-	2	2
Understanding individual capabilities	1	-	1
Understanding what motivates pupils	-	1	1
Small group work	-	1	1

N.B. Some answers spanned and were recorded within several themes.
** When teachers were asked if they could manage the deployment of SAs, 24 out of 25 teachers answered 'yes' they can manage SA deployment. One secondary teacher reported that "they (SA/s) just get on with it".*

3.4.2.4 What perceptions are held regarding the role and responsibilities of support assistants in meeting the needs of pupils with SEN?

Table 30 provides themes within participant responses regarding the role and responsibilities of SAs in meeting the needs of pupils with SEN. Common themes were nurturing pupils, collaborating/communicating with teachers, working one-to-one, working

with small groups, delivering differentiated curriculums/interventions, planning and preparing resources, utilising IEPs, behaviour management, and delivery of lessons to the whole class.

Table 30: Themes identified via thematic analysis from teacher and support assistant responses regarding what they perceive to be the role and responsibilities of support assistants in meeting the needs of pupils with SEN and number of responses containing each theme.

Identified theme	Teacher responses	Support assistant responses	Total
Nurturing pupils	9	6	15
Collaboration/communication with teachers	9	5	14
Working one-to-one with pupils	4	8	12
Working with small groups	4	7	11
Deliver differentiated curriculum (including interventions)	6	5	11
Planning, preparing, and creating resources	5	1	6
Utilising IEPs	3	2	5
Behaviour management	3	1	4
Delivery of lessons to whole class	2	2	4
Following instructions from and/or the expectations of teacher/s	-	3	3
Keeping pupils on task	2	-	2
Identifying SEN	-	2	2
Promoting pupil independence	-	2	2
Withdrawal of pupils from class	-	1	1

N.B. Some answers spanned and were recorded within several themes.

3.4.2.5 What are the perceived benefits of support assistant presence within class?

Table 31 provides themes identified within participant responses regarding the benefits of SA presence. Common themes were providing individualised support, small group support, supporting pupils with SEN, supporting low ability pupils, releasing teachers to work with higher ability pupils, behaviour management, nurturing pupils, and supporting pupils of all abilities.

Table 31: Themes identified via thematic analysis from teacher and support assistant responses regarding what they perceive to be the benefits of support assistant presence within class and number of responses containing each theme.

Identified theme	Teacher responses	Support assistant responses	Total
Individualised support for pupils (including working 1-1 and differentiation of work)	10	5	15
Support for pupils with SEN	4	9	13
Provide small group work	7	6	13
Support for low ability pupils (may include SEN)	7	5	12
Release teachers to work with higher ability pupils	4	3	7
Behaviour management	2	4	6
Pupil – support assistant relationship and/or nurturing	1	4	5
Support pupils of all abilities	1	1	2
Release teachers to rotate whom they work with (i.e. the full range of pupil ability)	5	-	5
Practical and moral support for teacher	-	5	5
Provide opportunities to discuss pupil progress	2	-	2
Teacher – support assistant relationship	1	-	1

N.B. Some answers spanned and were recorded within several themes.

3.4.2.6 What are the perceived limitations of support assistant presence within class?

Table 32 provides themes identified within participant responses regarding the limitations of SA presence. Common themes included no limitations to SA presence, SAs distancing teachers from pupils, and lack of SAs.

Table 32: Themes identified via thematic analysis from teacher and support assistant responses regarding what they perceive to be the limitations of support assistant presence within class and number of responses containing each theme.

Identified theme	Teacher responses	Support assistant responses	Total
No limitations	6	10	16
Distancing teacher from direct experience of pupil ability and progress	1	2	3
Lack of support assistants	1	1	2
Practice impacted by relationship with individual teacher/s	-	5	5
Limited subject knowledge	4	-	4
Use of instructional strategies (i.e. telling pupils answers)	2	-	2
Training and qualifications	2	-	2
Inconsistent presence	2	-	2
Pupil dependency upon support	2	-	2
Limited SEN knowledge/training	-	2	2
Time limits practice	-	2	2
Lack of authority/respect within the class	-	2	2
Presence distracts other pupils working nearby when supporting pupils with SEN	-	1	1

N.B. Some answers spanned and were recorded within several themes.

3.4.2.7 Observations of practice: Who was observed to spend most time working with pupils with SEN?

As outlined in section 3.3.5.2 (p.77), three observations of teacher and SA practice within the classroom were undertaken. Within these, a difference was evident in who worked primarily with pupils with SEN in different classes (see Table 33). During observation 2 the teacher spent more time working directly with pupils with SEN than the SA, contrary to patterns within observations 1 and 3 and some questionnaire responses. As this was a small sample, observation data was not amalgamated to provide means and standard deviations and no analysis of any relationship/s between observation and self-reported questionnaire data was possible.

Table 33: ESE for inclusive practice level and percentage of the observed lesson which teachers and support assistants spent working with pupils with SEN.

Observation number *(observation duration)*	**Year group**	**Staff member**	**ESE level***	**% lesson working with pupils with SEN**
1 *(60 minutes)*	4	Teacher	83	8.4%
		Support assistant	87	18.4%
2 *(60 minutes)*	6	Teacher	93	43.3%
		Support assistant	92	0%
3 *(40 minutes)*	2	Teacher	96	27.5%
		Support assistant	90	37.5%

N.B. The observed classes were from one primary school. They contained 28, 33, and 30 pupils, with 3, 5, and 7 pupils respectively on the SEN register. The classes predominantly consisted of white British pupils from lower socio-economic status backgrounds and differed very little from one another.
** ESE level is calculated out of a possible 108 (i.e. the highest possible ESE level achievable when totalling the 1-9 Likert scale responses recorded on across the 12 ESE questions).*

3.4.2.8 Summary of findings in relation to Research Question 1

Overall, no statistically significant relationship was identified between ESE and the activities teachers or SAs reportedly undertake or the pupils they work with.

3.4.3 Research Question 2: Is there a relationship between espoused self-efficacy beliefs regarding inclusive practice and teacher planning and collaboration with support assistants?

This section considers ESE and teacher and SA planning and collaboration. Reports of planning and collaboration are considered first.

3.4.3.1 Teacher and support assistant planning and collaboration

Table 34: Mean, standard deviation, and median scores for teacher and support assistant reported ratings of lesson preparation, communication and planning, support assistants gaining subject and instructional knowledge, support assistant feedback to teachers, planning and preparation of interventions, and which pupils receive these interventions.

Variable	Teacher			Support assistant		
	Mean	S.D.	Median	Mean	S.D.	Median
Lesson preparation *	3.40	1.12	4.00	3.17	1.31	4.00
Communication and planning *	2.68	0.80	3.00	2.67	0.76	3.00
SA gaining subject knowledge **	3.48	1.30	4.00	2.86	1.64	3.50
SA gaining instructional knowledge **	3.32	1.38	4.00	3.13	1.46	4.00
SA feedback to teacher/s **	2.80	1.08	3.00	2.71	0.81	3.00
Planning and preparation of interventions **	3.13	1.26	3.00	2.26	1.14	2.00
Who receives interventions*	3.64	0.49	4.00	3.54	0.59	4.00

N.B. Participant responses were recorded as agreement with one of four (*) or five (**) statements; the range of response was therefore 1 - 4 or 1 - 5 with higher numbered statements primarily indicating increasing levels of planning/collaboration and/or formalised processes.

Mann-Whitney U analysis identified a significant difference between teacher (Mdn = 3.00, SD = 1.26) and SA (Mdn = 2.00, SD = 1.14) reports of planning and preparing interventions, $U = 168.50$, $z = -2.37$, $p < .05$ (see Table 34). Median teacher statement = 3 ("support assistants plan and prepare interventions with *detailed* guidance from you") with median SA statement = 2 ("you plan and prepare intervention with *some* guidance from teachers"). Both groups agree SAs plan and prepare interventions but differ in the support they report teachers offer. No statistically significant difference was identified between teacher and SA reports regarding the other aspects of planning and collaboration (see Table 35).

Table 35: Median statements for both teachers and support assistants regarding aspects of planning and collaboration other than planning and preparing interventions.

Planning and collaboration aspect	Median response from both teachers and SAs
Lesson preparation	Teachers provide a lesson plan and specific information about support assistant role, e.g. objectives.
Communication and planning	Support assistants come early/stay behind to meet with teacher.
Support assistants gaining subject knowledge	Support assistants gain subject knowledge from training/briefing from teacher/s.
Support assistants gaining instructional knowledge	Support assistants gain instructional knowledge from training/briefing from teacher/s.
Support assistants providing feedback	Support assistants come in early/stay late to meet with teachers for debriefing.
Who receives interventions	Interventions are primarily delivered to pupils with SEN.

3.4.3.2 Differentiation of classwork for individual pupils with SEN

Table 36: Mean, standard deviation, and median scores for teacher and support assistant reports of the differentiation of classwork for individual pupils with SEN done by teachers and the differentiation of classwork for individual pupils with SEN done by support assistants.

Variable*	Staff member	Mean	Standard deviation	Median
Differentiation done by teacher/s	Teacher	7.48	1.50	8.00
	Support assistant	7.14	1.39	7.00
Differentiation done by support assistant/s	Teacher	6.68	1.73	7.00
	Support assistant	5.88	1.94	6.00

***** *Responses were reported on a 9-point scale with 9 representing the highest value/amount of differentiation possible.*

No statistically significant difference was found between teacher and SA reports of the differentiation of classwork done by teachers (teacher Mdn = 8.00, SD = 1.50; SA Mdn = 7.00, SD = 1.39) or SAs (teacher Mdn = 7.00, SD = 1.73; SA Mdn = 6.00, SD = 1.94). Both groups were similar in their reports of the amount of differentiation teachers undertake and the amount of differentiation SAs undertake. See Table 36.

However, Wilcoxon signed-rank tests identified a significant difference in the amount of differentiation teachers reported undertaking (Mdn = 8.00, SD = 1.50) versus the amount of differentiation they reported SAs to undertake (Mdn = 7.00, SD = 1.73), Z = -1.94, p <.05. Within the SA sample, a significant difference was also identified between the amount of differentiation they reported teachers to undertake (Mdn = 7.00, SD = 1.39) versus the amount of differentiation they reported undertaking (Mdn = 6.00, SD = 1.94), Z = -2.81, p

<.05. Both groups reported teachers to undertake more differentiation of classwork for pupils with SEN than SAs. Overall, mean teacher differentiation = 7.32 (SD = 1.45) and mean SA differentiation = 6.29 (SD = 1.86).

A strong positive correlation was also identified between teacher reports of their differentiation and the percentage of the week they receive support (r = .58, n = 20, p <.05) (see Table 37, p.93); teachers with more support undertake more differentiation. For SAs, a strong positive correlation was identified between differentiation and experience (r = .57, n = 23, p <.01) (see Table 38, p.94); SAs with more experience undertake more differentiation.

3.4.3.3 Correlations between ESE and aspects of planning and collaboration

Strong positive correlations were identified between:

- ESE and communication and planning for lessons between staff for both teachers (r = .51, n = 24, p <.01) and SAs (r = .42, n = 24, p <.05). Higher ESE was associated with more communication and planning;
- ESE and SA feedback for both teachers (r = .44, n = 25, p <.05) and SAs (r = .47, n = 24, p <.05). Higher ESE was associated with more formalised SA feedback;
- SA ESE and SA differentiation (r = .74, n = 24, p <.01). Higher SA ESE was associated with them undertaking more differentiation of classwork for pupils with SEN; and
- Teacher ESE and SA acquisition of subject knowledge (r = .43, n = 25, p <.05). Teachers with higher ESE reported spending more time providing SAs with subject knowledge or that SAs held high levels of subject knowledge.

A strong negative correlation was identified between:

- SA ESE and intervention planning and preparation (r = - .56, n = 23, p <.01). SAs with higher ESE reported receiving less support from teachers in planning and preparing interventions.

See Table's 37 and 38. Additional statistically significant correlations identified but not directly relevant to the research questions are provided in Appendix N.

Table 37: Correlations identified within the teacher sample regarding collaboration and planning, beliefs, knowledge, experience, and amount of support.

	Lesson preparation	Communication & planning	SA subject knowledge	SA instructional knowledge	SA feedback	Planning & preparing interventions	Who receives interventions	Differentiation by teacher	Differentiation by SA	Level of SEN knowledge	ESE	Years' experience	% of week supported
Lesson preparation	-	.38	.09	.37	**.45***	.19	**- .41***	**.43***	**.54****	-.06	.15	-.24	.08
Communication & planning	-	-	**.64****	**.63****	**.89****	.17	-.31	.27	**.50***	.31	**.51****	-.03	.30
SA subject knowledge	-	-	-	**.47***	**.52****	.06	-.11	-.04	.24	.02	**.43***	.13	.10
SA instructional knowledge	-	-	-	-	**.61****	.26	-.38	.29	.34	.10	.36	-.21	.26
SA feedback	-	-	-	-	-	.27	-.30	.34	**.48***	**.45***	**.44***	-.18	.41
Planning and preparing interventions	-	-	-	-	-	-	-.20	.11	.22	.11	.05	-.08	-.17
Who receives interventions	-	-	-	-	-	-	-	-.15	-.19	-.17	-.39	-.15	-.27
Differentiation by teacher	-	-	-	-	-	-	-	-	.22	.06	.08	-.28	**.58****
Differentiation by SA	-	-	-	-	-	-	-	-	-	.20	.36	-.01	.17
Level of SEN knowledge	-	-	-	-	-	-	-	-	-	-	**.57****	.16	.13
ESE	-	-	-	-	-	-	-	-	-	-	-	.17	.27
Years' experience	-	-	-	-	-	-	-	-	-	-	-	-	-.09
Percentage of week supported	-	-	-	-	-	-	-	-	-	-	-	-	-

N.B. Duplicate entries within the table are omitted.
** Correlation significant at the 0.05 level (2-tailed).*
*** Correlation significant at the 0.01 level (2-tailed).*

Table 38: Correlations identified within the support assistant sample regarding collaboration and planning, beliefs, knowledge, and experience.

	Lesson preparation	Communication & planning	SA subject knowledge	SA instructional knowledge	SA feedback	Planning & preparing interventions	Who receives interventions	Differentiation by teacher	Differentiation by SA	Level of SEN knowledge	ESE	Years' experience
Lesson preparation	-	**.58****	.40	.25	**.58****	-.14	**-.46***	-.02	**.54****	.04	.27	.27
Communication & planning	-	-	.18	.36	**.61****	**-.43***	-.16	.08	**.44***	.37	**.42***	**.46***
SA subject knowledge	-	-	-	**.83****	.18	.04	-.21	.37	.18	.14	.20	.21
SA instructional knowledge	-	-	-	-	.26	-.28	-.14	**.56****	.23	.30	.25	.39
SA feedback	-	-	-	-	-	-.32	.07	.41	**.42***	**.49***	**.47***	.27
Planning and preparing interventions	-	-	-	-	-	-	-.16	-.33	**-.62****	-.29	**-.56****	**-.60****
Who receives interventions	-	-	-	-	-	-	-	.25	-.21	.14	.15	-.16
Differentiation by teacher	-	-	-	-	-	-	-	-	.19	**.46***	.20	.10
Differentiation by SA	-	-	-	-	-	-	-	-	-	.19	**.74****	**.57****
Level of SEN knowledge	-	-	-	-	-	-	-	-	-	-	**.43***	.34
ESE	-	-	-	-	-	-	-	-	-	-	-	**.65****
Years' experience	-	-	-	-	-	-	-	-	-	-	-	-

N.B. Duplicate entries within the table are omitted.
** Correlation significant at the 0.05 level (2-tailed).*
*** Correlation significant at the 0.01 level (2-tailed).*

3.4.3.4 Summary of findings in relation to Research Question 2

Overall, ESE was associated with some elements of planning and collaboration.

3.4.4 Research Question 3: Is there a difference between the espoused self-efficacy beliefs of teachers and support assistants regarding inclusive practice?

Table 39: Mean, standard deviation, and median scores for teacher and support assistant reports of ESE level and current level of SEN knowledge and how to support pupils with SEN.

Variable	Staff member	Mean	Standard deviation	Median
ESE level*	Teacher	86.08	9.68	86.00
	Support assistant	79.38	11.17	80.00
Current level of SEN knowledge**	Teacher	6.60	1.29	7.00
	Support assistant	6.92	1.14	7.00

** ESE level is calculated out of a possible 108 (i.e. the highest possible ESE level achievable when totalling the 1-9 Likert scale responses recorded across the 12 ESE questions).*
*** SEN knowledge was reported on a 9-point scale with 9 representing the highest value/amount of SEN knowledge possible.*

Mann-Whitney U analysis identified a significant difference in teacher (Mdn = 86.00, SD = 9.68) versus SA (Mdn = 80.00, SD = 11.17) reports of ESE, $U = 188.50$, $z = -2.32$, $p < .05$ (see Table 39). Teacher ESE for inclusive practice was higher than SA. However, no significant difference was identified between teacher and SA current level of knowledge regarding SEN and supporting pupils with SEN.

Additionally, there was a strong positive correlation between SA ESE and experience ($r = .65$, $n = 23$, $p < .01$); those with more experience had higher ESE (see Table 38). A strong positive correlation was also identified between ESE and SEN knowledge for both teachers ($r = .57$, $n = 25$, $p < .05$) and SAs ($r = .43$, $n = 24$, $p < .05$); those with higher ESE reported greater SEN knowledge.

3.4.4.1 Who is perceived to have the greatest understanding of SEN and supporting pupils?

Table 40 provides themes identified within participant responses regarding whom they believe has the greatest understanding of SEN and supporting pupils. Most reported this depended upon individual practitioners. However, those who chose between 'teacher' or 'SA' tended to choose SAs.

Table 40: Themes identified via thematic analysis from teacher and support assistant responses to the question “Do you believe that it is support assistants or teachers who have a greater understanding of SEN and supporting pupils with SEN?” and number of responses containing each theme.

Identified theme	Teacher responses	Support assistant responses	Total
It depends upon training / experience / qualifications of the individual practitioner	8	9	17
Both can have an equal understanding	8	5	13
Support assistants	5	8	13
Teachers	2	2	4
Depends upon individual pupil relationships with adults	1	-	1

N.B. Not all participants chose to answer this question.

3.4.4.2 What would increase practitioner belief in their ability to further support pupils with SEN?

Table 41 provides themes identified within participant responses regarding what would increase their belief in their ability to support pupils with SEN. Most believed further training would be beneficial, some the opportunity to work with others, and some gaining experience of a variety of SEN.

Table 41: Themes identified via thematic analysis from teacher and support assistant responses to the question “What would increase your belief in your ability to further support pupils with SEN?” and number of responses containing each theme.

Identified theme	Teacher responses	Support assistant responses	Total
Training	22	18	40
Opportunity to work with and/or observe others	2	2	4
Experience of a variety of SEN	2	1	3
Appropriate and adequate support	2	-	2
Knowledge of the capabilities of individual pupils	-	2	2
Time	-	1	1
Being able to do more within the remit of role	-	1	1
Observing success (“seeing children happy and adapting to environment”)	-	1	1
More accessible GCSE examinations	1	-	1

N.B. Some answers contained and were recorded within several themes.

3.4.4.3 Summary of findings in relation to Research Question 3

Overall, a significant difference was found between teacher and SA ESE. These results are discussed next.

3.5 Discussion

This section discusses the above results and relates them to previous research findings. Consideration is also given to the limitations of this study and implications for future research.

3.5.1 Research Question 1: Is there a relationship between the espoused self-efficacy beliefs of teachers and support assistants regarding inclusive practice and the activities undertaken by them within the mainstream classroom?

ESE for inclusive practice was not associated with the activities teachers (with or without support) and SAs reported undertaking nor the pupil categories worked with. As SAs are deployed by teachers (Russell et al., 2013), SA ESE may not influence what they do or whom they work with. However, the activities SAs undertake and pupils they work with would likely influence their ESE, potentially acting as mastery experiences or contributing to physiological/affective states which individuals interpret as representative of their capabilities (Bandura, 1997); correlations would still be expected. When considering teachers, they could deploy SAs to leave themselves with the activities and/or pupils they feel confident with, but this was not identified. This is contrary to expectations; previous research suggests ESE is associated with elements of inclusive practice (see section 1.5.1, pp.54-55).

Overall, SAs reported primarily undertaking small group work and working with pupils with SEN. Comparatively, teachers reported mostly leading the class but undertaking more small group work when supported. Teachers also reported spending most of their direct pupil time working with pupils with SEN. However, they also spent significantly more time with higher attaining pupils when supported. When considering this, alongside several participants' comments within the questionnaire regarding SAs "freeing" teachers to work with other pupils whilst SAs support pupils with SEN, this finding aligns with previous research regarding both SA deployment and that which suggests teachers with 'pathognomonic' perspectives view teaching pupils with SEN-type difficulties as the responsibility of others, i.e. SAs (Jordan & Stanovich, 2003; Russell et al., 2013). Additionally, qualitative responses regarding staff roles in meeting the needs of pupils with SEN highlight that both teachers and SAs perceive working directly with pupils to be the role of SAs and perceive the teacher's role to be differentiating classwork and identifying/monitoring SEN. When considering previous research and the seemingly contradictory qualitative and quantitative findings here, perhaps teacher estimates of the time they spend working directly with pupils with SEN were influenced by social desirability effects.

3.5.2 Research Question 2: Is there a relationship between espoused self-efficacy beliefs regarding inclusive practice and teacher planning and collaboration with support assistants?

Several associations were identified between ESE regarding inclusive practice and planning and collaboration. For both teachers and SAs, ESE was positively associated with

communication and planning prior to lessons; higher ESE was associated with a greater degree of communication and planning. Those with higher ESE may feel better able to communicate and collaborate with one another or opportunities to communicate/collaborate encourage higher ESE. ESE and SA feedback were also positively associated; higher ESE was associated with increasingly formalised SA feedback. Perhaps ESE is increased when SAs have more opportunity to feed back or higher ESE contributes to an environment/relationship in which feedback can be given.

Within the SA sample, ESE and differentiation of classwork for pupils with SEN were positively associated; higher SA ESE was associated with SAs undertaking more differentiation. Undertaking more differentiation may increase SA ESE or having higher ESE may contribute to undertaking more differentiation. Overall, both teachers and SAs reported that teachers undertake more differentiation than SAs. This contradicts the suggestions that SAs are primarily responsible for the differentiated classwork undertaken by pupils with SEN (Institute of Education, 2013a). However, a negative association was found between ESE and planning and preparing interventions; SAs with higher ESE reported receiving less support from teachers when planning and preparing interventions (primarily delivered to pupils with SEN). SAs with higher ESE may be better able to plan and prepare interventions thus require less support from teachers, or undertaking such tasks may increase ESE.

Within the teacher sample, ESE was positively associated with SA acquisition of subject knowledge; teachers with higher ESE reported spending time providing SAs with subject knowledge or that SAs already held high levels of subject knowledge. Teachers with greater belief in their inclusive practice may feel better able to collaborate with SAs to share subject knowledge and/or value this more than those with lower ESE. Alternatively, perhaps existing SA subject knowledge impacts upon teacher ESE as this may influence the learning which teachers believe can take place. Exploration of the directions of causality within these relationships may enable further discussion regarding any interactions between ESE levels and classroom practice.

Overall, teachers and SAs reported similar levels of collaboration with the exception of the amount of teacher input into planning and preparing interventions. Teachers reported offering detailed guidance to SAs who planned and prepared interventions but SAs reported receiving only some guidance; these reports are somewhat contradictory.

These associations between ESE regarding inclusive practice and collaborative practice suggest that staff beliefs about their inclusive practice may be influencing their

collaborative practice and/or vice versa. As TSE/ESE has previously been associated with inclusive practice and pupil achievement (Ashton & Webb, 1986; Frey, 2002), and as 'good practice' would be for staff to plan and collaborate (Russell et al., 2013), perhaps this relationship between collaborative practice and ESE may hold some influence over outcomes for pupils with SEN.

3.5.3 Research Question 3: Is there a difference between the espoused self-efficacy beliefs of teachers and support assistants regarding inclusive practice?

There was no significant difference in ESE between teachers and SAs for the factor of student engagement; both groups saw themselves as equally capable of engaging pupils with SEN in their work. However, ESE for the factors of instructional strategies and classroom management, and also overall ESE for inclusive practice, were higher amongst teachers than SAs. When considering self-efficacy theory, higher self-efficacy is associated with characteristics including expending more effort upon endeavours, increased persistence, and greater resilience (Bandura, 1997). This study's findings suggest that teachers are therefore more likely to demonstrate these characteristics in their inclusive practice than SAs. Also, previous research associates TSE with a variety of factors, including higher pupil achievement and more inclusive practices (Ashton & Webb, 1986; Frey, 2002); when staff believe they can support pupils experiencing difficulties to achieve, they do. This further suggests that pupils with SEN working more directly with staff with higher ESE for inclusive practice may achieve more and/or experience better outcomes. Yet some of the findings of this and other research suggests practitioners with lower ESE, fewer qualifications, and less pedagogical knowledge (SAs) are the primary educators of pupils with SEN (Russell et al., 2013; Webster & Blatchford, 2013), leaving pupils vulnerable to receiving lower quality education and outcomes. Perhaps encouraging teachers to work more directly with pupils with SEN may counteract this.

When asking participants whom they thought had the greatest understanding of SEN and supporting pupils, many reported that teachers and SAs are equally capable of this. However, of those who chose between the two roles, both teachers and SAs tended to report SAs to be the most knowledgeable about SEN. This is contrary to the findings of this research; teachers held higher ESE than SAs and both rated themselves approximately equivalent in SEN knowledge. Perhaps misconceptions such as this underlie practice whereby pupils with SEN work primarily/exclusively with SAs as opposed to teachers; practitioners think they are giving pupils the best support but may be mistaken.

When considering how to increase practitioner belief in their ability to support pupils with SEN, training was reported by both teachers and SAs as a way to do this. However,

although ESE and knowledge of SEN and how to support pupils with SEN were positively associated, with higher ESE reported alongside higher SEN knowledge, the significant difference found between teacher and SA reports of ESE was not found between their reports of SEN knowledge; both reported similar levels of SEN knowledge. This difference between ESE and SEN knowledge findings further highlights that SEN knowledge is not synonymous with ESE; how much a practitioner knows about SEN/inclusion does not equate to their belief in their ability to support pupils (Buell et al. 1999). As such, any 'training' regarding inclusion which aims to increase practitioner beliefs in their ability to support pupils with SEN should draw upon activities/techniques associated with the four sources of self-efficacy; mastery experiences, vicarious experiences, social persuasion, and physiological/affective states (Bandura, 1997). For example, providing vicarious experiences whereby professionals observe similar colleagues engaging in inclusive practice may promote their belief in their ability to engage in this themselves.

3.5.4 Limitations

There are several limitations to this research. For example, as these findings are based primarily upon self-reported practice, participants may have responded with socially desirable answers or hold inaccurate views of their practice. Had more participants been observed, patterns within observed and reported practice could have been compared. As only three observations were conducted little can be concluded from their data other than a range of practice was evident in who supported pupils with SEN. A larger sample size in general would have offered more cases from which to identify patterns in responses across variables and reduced the impact of any outlying responses on identified patterns.

Additionally, the questionnaires and observation schedule were compiled by this researcher only. Although based upon previous work, decisions regarding which elements to include, elaborate upon, and omit were made by one individual whose own previous experiences and expectations will have been influential. This is also relevant when considering the data analysis, particularly the thematic analysis of qualitative responses. Also, individual participants may have varied in their interpretations of questionnaire questions and how to complete them. Although objective measures were attempted, subjective interpretations of these cannot be disregarded.

3.5.5 Further research

There are several areas which it may be useful for future research to explore. Firstly, an extension of this research by looking at the data gathered and discussing it in more detail than the remit of this piece allows would be beneficial. Additionally, further qualitative

exploration of ESE regarding inclusive and collaborative practices may provide deeper insight into the experiences of individuals and offer information about possible directions of causality in the statistical relationships identified.

As discussed in the limitations section, obtaining a larger sample size would be beneficial in order to have a greater number of cases across which to identify patterns in the dataset and also to allow more thorough statistical analysis of the data, such as enabling factor analysis to be undertaken in order to confirm the underlying factor structure of the ESE measure. A larger sample would also offer the opportunity to pilot the data collection tools and refine them thereafter, something which was not possible within this research, and perhaps provide a greater number of viable observation combinations so that more detailed comparisons could be made between the self-reported and observed practice of teachers and SAs.

If a larger sample is obtained another area of interest may be to compare the data gathered from primary and secondary school settings. As these settings tend to differ in how they are organised, for example in primary school pupils tend to have one teacher whom they spend the day with but in secondary school they may see many teachers across the day, perhaps comparison of ESE and how SAs are deployed across these settings may allow some exploration regarding the organisation of a setting and its potential impact upon ESE and inclusive and collaborative practices.

When considering what else may have an impact upon ESE and inclusive practice, perhaps future research may benefit from exploring if there is a possible interactive effect between teacher and SA ESE and also if SA presence influences teacher ESE. Alongside this, perhaps consideration of teacher self-efficacy with regards to the deployment of SAs within the classroom would also offer further insight into the potential relationship/s between ESE and inclusive and collaborative practice.

3.6 Conclusion

In conclusion, ESE beliefs for inclusive practice were not related to self-reported practice for teachers or SAs. However, questions were raised about the reliability of participant self-reports of their practice as there was some disparity between quantitative and qualitative responses.

ESE beliefs for both teachers and SAs were associated with aspects of planning and collaboration. Although causal relationships cannot be inferred, this suggests that ESE beliefs may hold an important role in collaborative and inclusive practice between teachers and SAs.

Teachers held higher ESE beliefs for inclusive practice than SAs. Theory suggests that teachers may therefore be more resilient, persistent, and possibly better placed to effectively support pupils with SEN than SAs (Bandura, 1997), especially when also considering their often greater subject and pedagogical knowledge (Russell et al., 2013; Webster & Blatchford, 2013). Although no significant difference was identified in the time teachers and SAs reported working with pupils with SEN, inconsistencies between the qualitative and quantitative data call this finding into question: the qualitative data and findings of previous research suggest that SAs may spend more time working directly with pupils with SEN (Russell et al., 2013; Webster & Blatchford, 2013). From a theoretical and empirical perspective this may suggest that these pupils are at risk of poorer outcomes than those supported by staff with higher ESE levels and increased pedagogical knowledge (i.e. teachers).

Many participants reported that teachers and SAs are equally capable of having the "greatest understanding of SEN and how to support pupils". However, those who chose between 'teachers' or 'SAs' tended to identify SAs as the more knowledgeable group, suggesting a misconception is held as both groups reported similar levels of SEN knowledge.

Overall, despite this study's limitations, it adds to current understandings of TSE/ESE and inclusive practice and also the deployment of SAs within the mainstream classroom. It synthesises these two areas in order to explore a relationship between them and offers a focus for future consideration and research.

References

Archer, M., Bhaskar, R., Collier, A., Lawson, T., & Norrie, A. (Eds.). (1998). *Critical Realism: Essential readings*. London: Routledge.

Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teachers' sense of efficacy and student achievement*. White Plains, New York: Longman, Inc.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, New Jersey: Prentice-Hall.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman and Company.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173-1182.

Blatchford, P., Russell, A., & Webster, R. (2012). *Reassessing the impact of teaching assistants: How research challenges practice and policy*. Oxon: Routledge.

Block, M., Taliaferro, A., Harris, N., & Krause, J. (2010). Using self-efficacy theory to facilitate inclusion in general physical education. *Journal of Physical Education, Recreation and Dance, 81*(3), 43-46.

Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks, California: SAGE.

Brady, K., & Woolfson, L. (2008). What teacher factors influence their attributions for children's difficulties in learning? *British Journal of Educational Psychology, 78*(4), 527-544.

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

Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners*. London: SAGE.

Brouwers, A., & Tomic, W. (2001). The factorial validity of scores on the teacher interpersonal self-efficacy scale. *Educational and Psychological Measurement, 61*(3), 433-445.

Bryman, A. (2008). *Social research methods* (3rd ed.). United States: Oxford University Press.

Buell, M. J., Hallam, R., Gamel-Mccormick, M., & Scheer, S. (1999). A survey of general and special education teachers' perceptions and inservice needs concerning inclusion. *International Journal of Disability, Development and Education, 46*(2), 143-156.

Carlson, E., Lee, H., & Schroll, K. (2004). Identifying attributes of high quality special education teachers. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children, 27*(4), 350-359.

Chalmers, I., & Altman, D. G. (1995). *Systematic reviews*. London: BMJ Publishing Group.

Chung, L. C., Marvin, C. A., & Churchill, S. L. (2005). Teacher factors associated with preschool teacher-child relationships: Teaching efficacy and parent-teacher relationships. *Journal of Early Childhood Teacher Education, 25*(2), 131-142.

Cockell, M. (2012). Local Government Association: Red box day. Retrieved 14 April 2012, from http://www.local.gov.uk/web/guest/home/-/journal_content/56/10161/3524918/NEWS-TEMPLATE

Cohen, L., Manion, L., & Morrison, K. (2011). *Research methods in education* (7th ed.). New York, USA: Routledge.

Coolican, H. (2009). *Research methods and statistics in psychology* (5th ed.). London: Hodder Education.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. London: SAGE.

Department for Children, Schools and Families. (2010). Breaking the link between special educational needs and low attainment. Retrieved 20 September 2013, from http://webarchive.nationalarchives.gov.uk/20130401151715/https://www.education.gov.uk/publications/eOrderingDownload/00213-2010DOM-EN.pdf

Department for Education. (2011). Support and aspiration: A new approach to Special Educational Needs and Disability - A consultation. Retrieved 20 March 2012, from http://www.education.gov.uk/publications/standard/publicationDetail/Page1/CM%208027

Department for Education. (2013a). School attendance. Retrieved 20 September 2013, from http://www.education.gov.uk/schools/pupilsupport/behaviour/attendance/a00216341/advice-on-school-attendance

Department for Education. (2013b). Statistical first release: Special Educational Needs in England. Retrieved 20 September 2013, from https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/225699/SFR30-2013_Text.pdf

Department for Education and Skills. (2001). *Special Educational Needs Code of Practice*. Nottinghamshire: Department for Education and Skills.

Education.com. (2013). Teacher burnout. Retrieved 02 January 2013, from http://www.education.com/definition/teacher-burnout/)

Egyed, C. J., & Short, R. J. (2006). Teacher self-efficacy, burnout, experience and decision to refer a disruptive student. *School Psychology International, 27*(4), 462-474.

Emmer, E. T., & Hickman, J. (1991). Teacher efficacy in classroom management and discipline. *Educational and Psychological Measurement, 51*(3), 755-765.

Fazey, D. M. A., & Fazey, J. A. (2001). The potential for autonomy in learning: Perceptions of competence, motivation and locus of control in first-year undergraduate students. *Studies in Higher Education, 26*(1), 345-361.

Feinstein, L., Budge, D., Vorhaus, J., & Duckworth, K. (2008). The social and personal benefits of learning: A summary of key research findings. London: Institute of Education.

Fink, A. (2002). *The survey kit* (2nd ed.). Thousand Oaks, California: SAGE.

Fournier, G. (2014). Self-serving bias. Retrieved 14 February 2014, from http://psychcentral.com/encyclopedia/2009/self-serving-bias/

Frederickson, N., Miller, A., & Cline, T. (2008). *Educational psychology*. London: Oxford University Press.

Frey, A. (2002). Predictors of placement recommendations for children with behavioral or emotional disorders. *Behavioral Disorders, 27*(2), 126-136.

Gatt, S., Ojala, M., & Soler, M. (2011). Promoting social inclusion counting with everyone: Learning communities and INCLUD-ED. *International Studies in Sociology of Education, 21*(1), 33-47.

Gibson, S., & Dembo, M. H. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology, 76*(4), 569-582.

Hastings, R. P., & Brown, T. (2002). Behavioural knowledge, causal beliefs and self-efficacy as predictors of special educators' emotional reactions to challenging behaviours. *Journal of Intellectual Disability Research, 46*(2), 144-150.

Henson, R. K. (2002). From adolescent angst to adulthood: Substantive implications and measurement dilemmas in the development of teacher efficacy research. *Educational Psychologist, 37*(3), 137-150.

Hill, R. B., Baldo, A. J., & D'Amato, R. C. (1999). Teachers' personalities and students' behavior in referrals for special education. *Psychological Reports, 84*(2), 491-493.

Institute of Education. (2013a). Pupils with most serious special needs spend too much time apart from classmates and teachers. Retrieved 12 February 2013, from http://www.ioe.ac.uk/newsEvents/84639.html

Institute of Education. (2013b). Teaching assistants boost teachers' productivity but not pupils' progress. Retrieved 26 May 2013, from http://www.ioe.ac.uk/newsEvents/31191.html

Jordan, A., & Stanovich, P. J. (2003). Teachers' personal epistemological beliefs about students with disabilities as indicators of effective teaching practices. *Journal of Research in Special Educational Needs, 3*(1), 1-12.

Klassen, R., Tze, V., Betts, S., & Gordon, K. (2011). Teacher efficacy research 1998–2009: Signs of progress or unfulfilled promise? *Educational Psychology Review, 23*(1), 21-43.

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

Merton, R. K. (1948). The self-fulfilling prophecy. *The Antioch Review, 8*(2), 193-210.

Office for Standards in Education, Children's Services and Skills. (2010). The Special Educational Needs and Disability Review. Retrieved 20 September 2013, from http://www.ofsted.gov.uk/resources/special-educational-needs-and-disability-review

Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research, 66*(1), 533-578.

Parker, K., Hannah, E., & Topping, K. J. (2006). Collective teacher efficacy, pupil attainment and socio-economic status in primary school. *Improving Schools, 9*(2), 111-129.

Petticrew, M., & Roberts, H. (2006). *Systematic reviews in the social sciences: A practical guide.* Oxford: Blackwell Publishing.

Plowright, D. (2011). *Using mixed methods: Frameworks for an integrated methodology*. London: SAGE.

Robson, C. (2002). *Real world research: A resource for social scientists and practitioner-researchers* (2nd ed.). Oxford: Blackwell Publishing.

Rosenthal, R., & Jacobson, L. (1968). Pygmalion in the classroom. *The Urban Review, 3*(1), 16-20.

Rosenthal, R., & Jacobson, L. (1992). *Pygmalion in the Classroom: Teacher expectation and pupils' intellectual development* (2nd ed.). New York: Crown House Publishing Limited.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied, 80*(1), 1-28.

Ruble, L. A., Usher, E. L., & McGrew, J. H. (2011). Preliminary investigation of the sources of self-efficacy among teachers of students with autism. *Focus on Autism and Other Developmental Disabilities, 26*(2), 67-74.

Russell, A., Webster, R., & Blatchford, P. (2013). *Maximising the impact of teaching assistants: Guidance for school leaders and teachers*. Oxon: Routledge.

Saddler, H. (2013). Researching the influence of teaching assistants on the learning of pupils identified with special educational needs in mainstream primary schools: exploring social inclusion. *Journal of Research in Special Educational Needs,*(Early View Online Version). doi: 10.1111/1471-3802.12019

Sayer, A. (1992). *Method in social science: A realist approach* (2nd ed.). London: Routledge.

Scott, D. (2007). Resolving the quantitative–qualitative dilemma: A critical realist approach. *International Journal of Research & Method in Education, 30*(1), 3-17.

Sharma, U., Loreman, T., & Forlin, C. (2012). Measuring teacher efficacy to implement inclusive practices. *Journal of Research in Special Educational Needs, 12*(1), 12-21.

Shippen, M. E., Flores, M. M., Crites, S. A., Patterson, D., Ramsey, M. L., Houchins, D. E., & Jolivette, K. (2011). Classroom structure and teacher efficacy in serving students with disabilities: Differences in elementary and secondary teachers. *International Journal of Special Education, 26*(3), 36-44.

Smith, E. R., & Mackie, D. M. (2000). *Social psychology* (2nd ed.). Philadelphia: Psychology Press.

Soodak, L. C., & Podell, D. M. (1996). Teacher efficacy: Toward the understanding of a multi-faceted construct. *Teaching and Teacher Education, 12*(4), 401-411.

Soodak, L. C., Podell, D. M., & Lehman, L. R. (1998). Teacher, student, and school attributes as predictors of teachers' responses to inclusion. *The Journal of Special Education, 31*(4), 480-497.

Stanovich, P. J., & Jordan, A. (1998). Canadian teachers' and principals' beliefs about inclusive education as predictors of effective teaching in heterogeneous classrooms. *Elementary School Journal, 98*(3), 221-238.

Stinnett, T. A., Crawford, S. A., Gillespie, M. D., Cruce, M. K., & Langford, C. A. (2001). Factors affecting treatment acceptability for psychostimulant medication versus psychoeducational intervention. *Psychology in the Schools, 38*(6), 585-591.

Tejeda-Delgado, M. C. (2009). Teacher efficacy, tolerance, gender, and years of experience and special education referrals. *International Journal of Special Education, 24*(1), 112-119.

The Cochrane Collaboration. (2002). Publication bias. Retrieved 10 December 2012, from http://130.226.106.152/openlearning/html/mod15-2.htm

The Evidence for Policy and Practice Information and Co-ordinating Centre. (2007). EPPI-Centre Data Extraction and Coding Tool for Education Studies V2.0. Retrieved 3 September 2012, from www.civilservice.gov.uk/wp.../data_extraction_form_tcm6-7398.doc).

The Open University. (2006). Making your teaching inclusive. Retrieved 10 December 2012, from http://www.open.ac.uk/inclusiveteaching/pages/inclusive-teaching/index.php

Thomas, G., & Loxley, A. (2007). *Deconstructing special education and constructing inclusion*. Buckingham: Open University Press.

Torgerson, C. (2003). *Systematic reviews*. London: Continuum International Publishing Group.

Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*(7), 783-805.

Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*(2), 202-248.

University of California. (2007). Systematic observation. Retrieved 29 March 2013, from http://psychology.ucdavis.edu/sommerb/sommerdemo/observation/systematic.htm

Webster, R., & Blatchford, P. (2013). The Making a Statement Project - Final Report: A study of the teaching and support experienced by pupils with a statement of special educational needs in mainstream primary schools. London: Institute of Education.

Woolfson, L. M., & Brady, K. (2009). An investigation of factors impacting on mainstream teachers' beliefs about teaching students with learning difficulties. *Educational Psychology, 29*(2), 221-238.

Appendices

Appendix A: Initial article analysis table.

Article (& funding biases)	Sample (including location)	Methodology /Methods	TSE Measure	Data Analysis	Ethical issues / Issues	Emergent Themes	Main Conclusions

Appendix B: EPPI-Centre Data Extraction and Coding Tool for Education Studies V2.0: Section N: Quality of the study - Weight of evidence (The Evidence for Policy and Practice Information and Co-ordinating Centre, 2007).

N.1 Are there ethical concerns about the way the study was done? *Consider consent, funding, privacy, etc.*	N.1.1 Yes, some concerns (please specify) N.1.2 No (please specify)
N.2 Were students and/or parents appropriately involved in the design or conduct of the study? *Consider your answer to the appropriate question in module B.1*	N.2.1 Yes, a lot (please specify) N.2.2 Yes, a little (please specify) N.2.3 No (please specify)
N.3 Is there sufficient justification for why the study was done the way it was? *Consider answers to questions B1, B2, B3, B4*	N.3.1 Yes (please specify) N.3.2 No (please specify)
N.4 Was the choice of research design appropriate for addressing the research question(s) posed?	N.4.1 yes, completely (please specify) N.4.2 No (please specify)
N.5 Have sufficient attempts been made to establish the repeatability or reliability of data collection methods or tools? *Consider your answers to previous questions:* *Do the authors describe any ways they have addressed the reliability or repeatability of their data collection tools and methods (K7)*	N.5.1 Yes, good (please specify) N.5.2 Yes, some attempt (please specify) N.5.3 No, none (please specify)
N.6 Have sufficient attempts been made to establish the validity or trustworthiness of data collection tools and methods? *Consider your answers to previous questions:* *Do the authors describe any ways they have addressed the validity or trustworthiness of their data collection tools/ methods (K6)*	N.6.1 Yes, good (please specify) N.6.2 Yes, some attempt (please specify) N.6.3 No, none (please specify)
N.7 Have sufficient attempts been made to establish the repeatability or reliability of data analysis? *Consider your answer to the previous question:* *Do the authors describe any ways they have addressed the repeatability or reliability of data analysis? (L7)*	N.7.1 Yes (please specify) N.7.2 No (please specify)

N.8 Have sufficient attempts been made to establish the validity or trustworthiness of data analysis? *Consider your answer to the previous question:* *Do the authors describe any ways they have addressed the validity or trustworthiness of data analysis? (L8, L9, L10, L11)*	N.8.1 Yes, good (please specify) N.8.2 Yes, some attempt (please specify) N.8.3 No, none (please specify)
N.9 To what extent are the research design and methods employed able to rule out any other sources of error/bias which would lead to alternative explanations for the findings of the study? *e.g. (1) In an evaluation, was the process by which participants were allocated to, or otherwise received the factor being evaluated, concealed and not predictable in advance? If not, were sufficient substitute procedures employed with adequate rigour to rule out any alternative explanations of the findings which arise as a result?* *e.g. (2) Was the attrition rate low and, if applicable, similar between different groups?*	N.9.1 A lot (please specify) N.9.2 A little (please specify) N.9.3 Not at all (please specify)
N.10 How generalisable are the study results?	N.10.1 Details
N.11 In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? *Please state what any difference is.*	N.11.1 Not applicable (no difference in conclusions) N.11.2 Yes (please specify)
N.12 Have sufficient attempts been made to justify the conclusions drawn from the findings, so that the conclusions are trustworthy?	N.12.1 Not applicable (results and conclusions inseparable) N.12.2 High trustworthiness N.12.3 Medium trustworthiness N.12.4 Low trustworthiness
N.13 Weight of evidence A: Taking account of all quality assessment issues, can the study findings be trusted in answering the study question(s)? *In some studies it is difficult to distinguish between the findings of the study and the conclusions. In those cases, please code the trustworthiness of these combined results/conclusions.*	N.13.1 High trustworthiness N.13.2 Medium trustworthiness N.13.3 Low trustworthiness
N.14 Weight of evidence B: Appropriateness of research design and analysis for addressing the question, or sub-questions, of this specific systematic review.	N.14.1 High N.14.2 Medium N.14.3 Low

N.15 Weight of evidence C: Relevance of particular focus of the study (including conceptual focus, context, sample and measures) for addressing the question of this specific systematic review	N.15.1 High N.15.2 Medium N.15.3 Low
N.16 Weight of evidence D: Overall weight of evidence *Taking into account quality of execution, appropriateness of design and relevance of focus, what is the overall weight of evidence this study provides to answer the question of this specific systematic review?*	N.16.1 High N.16.2 Medium N.16.3 Low

Appendix C: Teacher and support assistant self-reported qualifications related to their current role.

Teacher self-reported qualifications related to their current role.

Reported qualification	Number of teachers
BEd (hons)	5
BA (hons) primary education with QTS	6
Primary PGCE	6
BA Music	1
BA English	2
BA English literature with education training	1
BSc (hons) (no further detail)	1
'degree' (no further detail)	1
Joint honours degree (no further detail)	1
TEFL	2
SCITT	1
Secondary PGCE	4
MEd	1

Support assistant self-reported qualifications related to their current role.

Qualification	Number of support assistants
NNEB award	1
BTEC National Diploma	4
NVQ Level 1 TA	1
NVQ Level 2 TA	2
NVQ Level 3 TA	6
HLTA Level 4	6
NVQ Level 5 TA	1
SAC diploma level 3	1
Foundation degree (no further details)	1
BPhil early childhood studies	2
BA (hons) education	3
BA (hons) sport studies	1
Degree (no further details)	2
Qualified Teacher Status	2
MSc Psychology	1

Appendix D: Teacher and support assistant self-reported SEN qualifications and training.

Qualification / training course	Number of teachers	Number of support assistants
SENCo training (including National SENCo Award)	2	0
Dyspraxia	1	0
Dyslexia	4	1
Makaton	1	1
Play therapy	1	0
SEN in the early years	1	0
Autism	5	4
Literacy	1	0
Numeracy	1	1
SEN module in another course	3	3
Hearing impairment	2	0
Behavioural, emotional & social difficulties	1	1
Attention Deficit Hyperactivity Disorder	2	1
Dyscalculia	1	1
English as an additional language	1	1
Moderate/sever learning difficlties	0	1
Attachment	0	1
Fine & gross motor skills	0	1
Precision teaching	0	1
Social skills	0	1
Emotional Literacy Support Assistant course	0	1
SENA Leaf Award course	0	2
'SEN course' (no further information)	0	4

Appendix E: Teacher questionnaire.

Please answer questions as fully as possible. Remember, all responses are anonymous and confidential.

Number of years teaching:…… Year group/s currently teaching:…….

Please state your qualifications relevant to your current role:…….
……
……
……

Please state any SEN specific training or qualifications you have received:…….....
……
……
……

This part of the questionnaire is designed to gain a better understanding of the things which create difficulties for teachers in their daily activities. Please circle the response you feel is most appropriate.

		Nothing		Very little		Some influence		Quite a bit		A great deal
1.	How much can you do to control disruptive behaviour of pupils with special educational needs in the classroom?	1	2	3	4	5	6	7	8	9
2.	How much can you do to motivate pupils with special educational needs who show low interest in school work?	1	2	3	4	5	6	7	8	9
3.	How much can you do to get pupils with special educational needs to believe they can do well in school work?	1	2	3	4	5	6	7	8	9
4.	How much can you do to help pupils with special educational needs value learning?	1	2	3	4	5	6	7	8	9
5.	To what extent can you craft good questions for pupils with special educational needs?	1	2	3	4	5	6	7	8	9
6.	How much can you do to get pupils with special educational needs to follow classroom rules?	1	2	3	4	5	6	7	8	9
7.	How much can you do to calm a pupil with special educational needs who is disruptive or noisy?	1	2	3	4	5	6	7	8	9

	Nothing		Very little		Some influence		Quite a bit		A great deal
8. How well can you establish a classroom management system with pupils with special educational needs?	1	2	3	4	5	6	7	8	9
9. How much can you use a variety of assessment strategies with pupils with special educational needs?	1	2	3	4	5	6	7	8	9
10. To what extent can you provide an alternative explanation or example when pupils with special educational needs are confused?	1	2	3	4	5	6	7	8	9
11. How much can you assist families of pupils with special educational needs in helping their children do well in school?	1	2	3	4	5	6	7	8	9
12. How well can you implement alternative strategies for pupils with special educational needs in your classroom?	1	2	3	4	5	6	7	8	9

13. How would you describe your role and responsibilities in meeting the needs of pupils with SEN?

……
……
……

14. What do you identify as the main responsibilities of support assistants in meeting the needs of pupils with SEN?

……
……
……

15. Please tick the statement that best matches your experience of lesson preparation with support assistants.

You do not provide them with a lesson plan	
You provide a lesson plan but no information about their role	
You provide a lesson plan and limited information about their role (e.g. pupil names)	
You provide a lesson plan and specific information about their role (e.g. objectives)	

16. Please tick the statement that best matches your experience of communication and planning with support assistants.

No opportunity to communicate or plan before lessons	
Communication before lessons is brief and ad hoc	
Support assistant comes in early/stays behind to meet with you	
You and the support assistant have scheduled time to meet	

17. Please tick the statement that best matches your experience of support assistants gaining subject knowledge.

They gain subject knowledge by listening to your teaching (along with the class)	
They gain subject knowledge from lesson plans and/or schemes of work	
They gain subject knowledge via ad hoc communication with you	
They gain subject knowledge via training/briefing you give them	
They have a significant level of subject knowledge via specific training (e.g. degree)	

18. Please tick the statement that best matches your experience of support assistants gaining instructional knowledge.

They gain instructional knowledge by listening to your teaching (along with the class)	
They gain instructional knowledge from lesson plans and/or schemes of work	
They gain instructional knowledge via ad hoc communication with you	
They gain instructional knowledge via training/briefing you give them	
They have a significant level of instructional knowledge via specific training (e.g. QTS)	

19. Please tick the statement that best matches your experience of support assistant feedback.

No opportunity/time to communicate after lessons	
Communication after lessons is brief and ad hoc	
They come in early/stay behind to meet with you for debriefing	
You and the support assistant have scheduled time to meet	
The support assistant prepares written feedback for you	

20. Please tick the statement that best matches your experience of interventions.

Support assistant plans and prepares interventions with very little/no input from you	
Support assistant plans and prepares the interventions with some guidance from you	
Support assistant plans and prepares interventions with detailed guidance from you	
You plan the interventions and the support assistant prepares and delivers them	
You plan and prepare the interventions and the support assistant delivers them	

21. Please tick the statement that best matches your experience of who receives interventions away from the classroom.

Interventions are primarily delivered to high-attaining pupils	
Interventions are primarily delivered to average-attaining pupils	
Interventions are primarily delivered to low-attaining pupils	
Interventions are primarily delivered to pupils with SEN	

22. How much of the differentiation of classwork for individual pupils with SEN do you do?

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Nothing		Very little		Some		Quite a lot		A great deal

23. How much of the differentiation of classwork for individual pupils with SEN do support assistants do (when in your lesson)?

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Nothing		Very little		Some		Quite a lot		A great deal

24. Please rate what you believe to be your current levels of knowledge about SEN and how to support pupils experiencing these with their learning.

1	2	3	4	5	6	7	8	9
Nothing		Very little		Some		Quite a lot		A great deal

25. What would increase your belief in your ability to further support pupils with SEN? Please explain.

……
……
……

26. Do you feel able to manage support assistants and their deployment within the classroom? Please explain.

……
……
……

27. Do you believe that it is teachers or support assistants who have a greater understanding of SEN and supporting pupils with SEN? Please explain.

……
……
……

28. During the average week, what percentage of time do you spend doing the following when you have support within the classroom and when you do not?

	WITH support	**WITHOUT** support
Working one to one with pupils	%	%
Working with a small group (up to 5 pupils)	%	%
Working with a larger group (e.g. 6-10 pupils)	%	%
Roving the class	%	%
Leading the class	%	%
Other (please specify)	%	%

29. During the average week, what percentage of time do you spend doing the following when you have support within the classroom and when you do not?

	WITH support	**WITHOUT** support
Supporting higher-attaining pupils	%	%
Supporting average-attaining pupils	%	%
Supporting lower-attaining pupils	%	%
Supporting pupils with SEN	%	%
Supporting mixed attainment groups	%	%

30. Approximately what percentage of the average week do you receive support from support assistants? ……%

31. Do you find it helpful to have the support of an assistant within class? Please explain.
……
……
……

32. Are there any limitations to receiving support from an assistant? Please explain.
……
……
……

33. Approximately how many support assistants do you receive support from across the average week? ……..

Thank you for your participation.

Appendix F: Support assistant questionnaire.

Please answer questions as fully as possible. Remember, responses are anonymous and confidential.

What is your job title? ……

Number of years supporting:…… Year group/s currently supporting:…….

Please state your qualifications relevant to your current role:…….
……
……
……

Please state any SEN specific training or qualifications you have received:…….....
……
……
……

This part of the questionnaire is designed to gain a better understanding of the things which create difficulties for school staff in their daily activities. Please circle the response you feel is most appropriate.

		Nothing		Very little		Some influence		Quite a bit		A great deal
1.	How much can you do to control disruptive behaviour of pupils with special educational needs in the classroom?	1	2	3	4	5	6	7	8	9
2.	How much can you do to motivate pupils with special educational needs who show low interest in school work?	1	2	3	4	5	6	7	8	9
3.	How much can you do to get pupils with special educational needs to believe they can do well in school work?	1	2	3	4	5	6	7	8	9
4.	How much can you do to help pupils with special educational needs value learning?	1	2	3	4	5	6	7	8	9
5.	To what extent can you craft good questions for pupils with special educational needs?	1	2	3	4	5	6	7	8	9
6.	How much can you do to get pupils with special educational needs to follow classroom rules?	1	2	3	4	5	6	7	8	9
7.	How much can you do to calm a pupil with special educational needs who is disruptive or noisy?	1	2	3	4	5	6	7	8	9

	Nothing		Very little		Some influence		Quite a bit		A great deal
8. How well can you maintain the classroom management system with pupils with special educational needs?	1	2	3	4	5	6	7	8	9
9. How much can you use a variety of assessment strategies with pupils with special educational needs?	1	2	3	4	5	6	7	8	9
10. To what extent can you provide an alternative explanation or example when pupils with special educational needs are confused?	1	2	3	4	5	6	7	8	9
11. How much can you assist families of pupils with special educational needs in helping their children do well in school?	1	2	3	4	5	6	7	8	9
12. How well can you implement alternative strategies for pupils with special educational needs in the classroom?	1	2	3	4	5	6	7	8	9

13. How would you describe your role and responsibilities in meeting the needs of pupils with SEN?

……
……
……

14. What do you identify as the main responsibilities of teachers in meeting the needs of pupils with SEN?

……
……
……

15. Please tick the statement that best matches your experience of lesson preparation.

You are not provided with a lesson plan	
You are given a lesson plan but no information about your role	
You are given a lesson plan and limited information about your role (e.g. pupil names)	
You are given a lesson plan and specific information about your role (e.g. objectives)	

16. Please tick the statement that best matches your experience of communication and planning.

No opportunity to communicate or plan before lessons	
Communication before lessons is brief and ad hoc	
You come in early/stay behind to meet with the teacher/s	
You and the teacher/s have scheduled time to meet	

17. Please tick the statement that best matches your experience of gaining subject knowledge.

You gain subject knowledge by listening to teacher delivery (along with the class)	
You gain subject knowledge from lesson plans and/or schemes of work	
You gain subject knowledge via ad hoc communication with the teacher/s	
You gain subject knowledge via training/briefing from the teacher/s	
You have a significant level of subject knowledge via specific training (e.g. degree)	

18. Please tick the statement that best matches your experience of gaining instructional knowledge.

You gain instructional knowledge by listening to teacher delivery (along with the class)	
You gain instructional knowledge from lesson plans and/or schemes of work	
You gain instructional knowledge via ad hoc communication with the teacher/s	
You gain instructional knowledge via training/briefing from the teacher/s	
You have a significant level of instructional knowledge via specific training (e.g. QTS)	

19. Please tick the statement that best matches your experience of feeding back to teachers.

No opportunity/time to communicate after lessons	
Communication after lessons is brief and ad hoc	
You come in early/stay behind to meet with the teacher/s for debriefing	
You and the teacher/s have scheduled time to meet	
You prepare written feedback for the teacher/s	

20. Please tick the statement that best matches your experience of delivering interventions.

You plan and prepare interventions with very little/no input from the teacher/s	
You plan and prepare the interventions with some guidance from the teacher/s	
You plan and prepare the interventions with detailed guidance from the teacher/s	
The teacher/s plan the interventions and you prepare the materials and deliver them	
The teacher/s plan and prepare the interventions and you deliver them	

21. Please tick the statement that best matches your experience of delivering interventions away from the classroom.

Interventions are primarily delivered to high-attaining pupils	
Interventions are primarily delivered to average-attaining pupils	
Interventions are primarily delivered to low-attaining pupils	
Interventions are primarily delivered to pupils with SEN	

22. How much of the differentiation of classwork for individual pupils with SEN do you do?

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Nothing		Very little		Some		Quite a lot		A great deal

23. How much of the differentiation of classwork for individual pupils with SEN do teachers tend to do?

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Nothing		Very little		Some		Quite a lot		A great deal

24. Please rate what you believe to be your current levels of knowledge about SEN and how to support pupils experiencing these with their learning.

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Nothing		Very little		Some		Quite a lot		A great deal

25. Do you believe that it is support assistants or teachers who have a greater understanding of SEN and supporting pupils with SEN? Please explain.

……
……
……

26. What would increase you belief in your ability to further support pupils with SEN? Please explain.

……
……
……

27. During the average week, what percentage of time do you spend doing the following?

Working one to one with pupils	%
Working with a small group (up to 5 pupils)	%
Working with a larger group (e.g. 6-10 pupils)	%
Roving the class	%
Leading the class	%
Listening to the teacher/s deliver	%
Working outside the classroom delivering interventions	%
Other (please specify)	%

28. During the average week, what percentage of time do you spend doing the following?

Supporting higher-attaining pupils	%
Supporting average-attaining pupils	%
Supporting lower-attaining pupils	%
Supporting pupils with SEN	%
Supporting mixed attainment groups	%

29. What do you think are the benefits of your presence within the class? Please explain.

……
……
……

30. Are there any limitations to your presence within the classroom? Please explain.

……
……
……

31. Approximately how many teachers do you support during the average week? ……..

Thank you for your participation.

Appendix G: Observation schedule. (Note this extended up to 60 minutes in practice)

Time (mins)	Lesson Part	Predominant activity of TEACHER							Predominant activity of SA							Code Key for Observation Completion
		Pupil 1-1 SEN	Pupil 1-1	Group - inc SEN	Group – non SEN	Roving	Teach'g class	Other	Pupil 1-1 SEN	Pupil 1-1	Group - inc SEN	Group – non SEN	Roving	Listen'g teacher	Other	
1																**Lesson Part:** **T** - T (main) input **A** = learning activity **P** = plenary **T/TA Activity:** **NO** – not observable **DT/DTA –** discussion between T and SA **OOC –** out of class **SE - Student Engagement** •Encouraging attention/engagement in task •Promoting confidence in pupils •Offering incentives **IS - Instructional Strategies** • Questioning • Explicit guidance • Scaffolding (e.g.'s & alternative explanations) • Assessment of pupils • Differentiation of tasks for individuals **CM – Classroom Management** • Behaviour management, e.g. engaging in disciplining • Upholding / reinforcing classroom rules / ground rules set out for activities • Organising pupils within the classroom (e.g. into pairs/groups) *Note: Codes may not be appropriate in all columns*
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Appendix H: Consent form for participation in this study.

Researching Special Educational Needs in the Mainstream Classroom

Dear staff member,

I am a Trainee Educational Psychologist looking to recruit teachers and teaching assistants/learning support assistants to participate in my research. My research focuses upon the beliefs of classroom staff about their ability to support the inclusion of pupils with Special Educational Needs (SEN) within the mainstream classroom and also their beliefs about working together to support this inclusion.

There are two phases to this research. I would like both teachers and support assistants to complete a questionnaire. The questionnaire focuses upon staff beliefs about their ability to teach and support pupils with SEN and how they currently work with teachers/support assistants. The questionnaire will take approximately 10 minutes to complete. I would also like to observe lessons in which there is both a teacher and a support assistant to gain further information about practice within the mainstream classroom. All questionnaire and observation data will be **anonymous** and **confidential** and participants can choose to opt out of this study at any time.

As there are two phases to this research, if you wish to participate you can state whether you are willing to complete the questionnaire only or to participate in both the questionnaire and observation phases. Please note that consenting to participate in the observation phase of this study does not automatically result in you being observed. Lesson observations will require both a consenting teacher and a consenting support assistant in order to take place, both of whom would be observed only once. A seating plan for the lesson to be observed highlighting which pupils in the class are on school's SEN register would also be required.

If you would like further information about this research then please feel free to contact me, Christina Grace, at c.grace@ncl.ac.uk.

Please complete the section below if you wish to participate in this research.

Thank you for your time.

Researching SEN in the mainstream classroom

Please return this consent form to ……..by……

I consent to participate in the; **Questionnaire phase** ☐
Questionnaire and Observation phases ☐

Name:……..

School:……

Job title:……...

Signature: …….. . Date:……...

Appendix I: Written debrief forms.

Researching Special Educational Needs in the mainstream classroom

Debrief for research participants (Questionnaire)

Thank you for completing the questionnaire. The aim of this research was to explore the beliefs of the staff supporting pupils with Special Educational Needs (SEN) in the mainstream classroom about their ability to support pupils effectively. This research also sought to explore which members of staff pupils with SEN are primarily supported by within the classroom.

Please remember that **all data is anonymous and confidential.** The data that you as an individual have contributed to this research cannot be identified within the dataset as it will be pooled with data from other participants.

If you have any questions or you wish to find out more about this research and its findings the please feel free to contact me, Christina Grace, at c.grace@ncl.ac.uk.

Thank you for your participation.

Researching Special Educational Needs in the mainstream classroom

Debrief for research participants (Questionnaire and Observation)

Thank you for allowing me to observe you during a lesson and also for completing the questionnaire. The aim of this research was to explore the beliefs of the staff supporting pupils with Special Educational Needs (SEN) in the mainstream classroom about their ability to support pupils effectively. This research also sought to explore which members of staff pupils with SEN are primarily supported by within the classroom.

Please remember that **all data is anonymous and confidential.** The data that you as an individual have contributed to this research cannot be identified within the dataset as it will be pooled with data from other participants.

If you have any questions or you wish to find out more about this research and its findings the please feel free to contact me, Christina Grace, at c.grace@ncl.ac.uk.

Thank you for your participation

Appendix J: Observation introduction script.

Note that these were main points to discuss with staff prior to observation; this was not a verbatim script.

Observation Introduction Script

- Thank you.
- Understand it may be uncomfortable being observed but want to have as little impact as possible on lesson - the research aims to gather information on the 'everyday classroom'.
- Observations are not about judging quality of lessons or individuals' practice – no information will be traced back to you once the observation is complete. Looking at frequency of activities and which pupils working with.
- Trying to obtain an idea of what is required of staff during a lesson, the demands upon you and what you spend your time doing to manage the classroom, pupils and learning.
- There won't be individual feedback as data will be untraceable but once the research is completed further information about the findings could be made available if interested.
- Both parties still happy to participate?

Appendix K: Correlations between ESE and the percentage of the average week teachers, both with and without support, and support assistants reported undertaking given activities.

Activity	ESE level		
	Teachers		Support assistants
	With support	Without support	
Working one-to-one with pupils	.21	-.25	.03
Working with a small group (up to 5 pupils)	.20	.09	.20
Working with a large group (6-10 pupils)	.12	.06	.03
Roving the classroom	.00	.01	-.33
Leading class/lesson	-.18	.07	-.07
Listening to teacher/s delivery	-	-	.19
Working outside the classroom	-	-	-.04
Other	.06	.08	-.44

N.B. None of these correlations were statistically significant at either the 0.05 or 0.01 level.

Appendix L: Correlations between ESE and the percentage of the average week teachers, both with and without support, and support assistants report working with different pupil 'categories'.

Pupil 'category'	ESE level		
	Teachers		Support assistants
	With support	Without support	
Higher attaining pupils	.17	.21	-.22
Average attaining pupils	.27	.54	-.14
Lower attaining pupils	.21	.41	.41
Pupils with SEN	.22	.09	.16
Mixed ability groups	.18	.38	-.32

N.B. None of these correlations were statistically significant at either the 0.05 or 0.01 level.

Appendix M: An example of the thematic analysis process undertaken to identify themes within the qualitative data.

The table below provides an example of how the individual comments/responses of participants were thematically analysed. This example illustrates how the comments of each participating teacher to the question "How would you describe your role and responsibilities in meeting the needs of pupils with SEN?" were interpreted and then coded.

After repeated readings of the data, the main themes within each response were coded and then themes were collated across responses. Inductive analysis produced semantic themes based upon prevalence and 'keyness' (i.e. capturing something 'important' which may not be prevalent) (Boyatzis, 1998; Braun & Clarke, 2006, 2013). Some 'themes' were derived from only one response as that theme was key to the response of the individual and was not encompassed within any other more prevalent theme. At each stage, the themes identified were revisited and ongoing consideration given to the appropriateness of the themes drawn from each comment and also any groupings of themes in light of the comments they originated from. Once themes were identified within the teacher sample, the support assistant sample was also analysed. Although themed in isolation, several similar themes spanned both the teacher and support assistant samples. However, not all themes were present in both samples; some were exclusive to either teachers or support assistants.

Teacher number	**Teacher responses to the question *"How would you describe your role and responsibilities in meeting the needs of pupils with SEN?"***	**'Themes' within the responses**	**'Themes' across the responses and their prevalence**
1	Planning interesting, appropriately differentiated lessons to ensure pupils feel confident and are able to learn at their own pace, using a range of strategies to assess individual needs, reflecting on my practice/their knowledge.	• Differentiation • Planning • Nurture • Assessment	• Differentiation = 14 • Planning = 9 • Nurture = 7 • Monitoring (assessing / setting targets / checking progress) = 5 • Teaching all pupils = 5 • Understanding individual capabilities =1 • Identifying pupils with SEN = 3 • Communication with SENCo & other professionals = 1
2	To ensure they are able to access a full curriculum as much as possible, suitable for their individual learning needs to ensure inclusion for all.	• Differentiation	
3	Planning and delivering lessons that take into account IEP targets and specific needs of all pupils.	• Planning • Differentiation • Targets	
4	Some SEN children withdrawn for num/lit into another classroom to work in small group with another T/TA.	• Differentiation	
5	Very important to design tasks to meet the needs of all children. Also to create a purposeful and caring environment.	• Differentiation • Planning • Teaching all pupils • Nurture	
6	Planning and teaching effectively to support all pupils. Provide inclusion for all, emotional support.	• Planning • Nurture • Teaching all pupils	
7	I aim to try to help each child reach their full potential academically and socially.	• Teaching all pupils	
8	Support/encourage, explaining things in different ways, making things look easy.	• Differentiation • Nurture	
9	A teachers role is to educate all young people. SEN children are an identified group with specific needs. We have many pupils with different needs.	• Teaching all pupils	
10	I have overall responsibility for coordinating support given to SEN pupils, tracking and monitoring progress and planning suitable interventions as appropriate.	• Monitoring progress • Planning interventions	
11	My role is to make materials and work accessible, create a supportive environment and use their strengths to succeed.	• Differentiation • Nurture	
12	Planning a curriculum that meets the need of the children in the class and delivering it in a way that is accessible.	• Planning • Differentiation	

13	Have a clear understanding of the capabilities of individuals to enable the provision of logical bitesize steps of progression.	• Understanding individual capabilities • Differentiation	
14	-	-	
15	To identify specific needs, put strategies/plans/support in place to facilitate individual learning requirements.	• Identifying pupils with SEN • Planning	
16	-	-	
17	Ensuring work is accessible, giving support/scaffolding, making sure pupil feels happy/comfortable in class.	• Nurture • Differentiation	
18	Role = to teach. Responsibility = to implement IEP strategies, differentiate work etc.	• Differentiation	
19	-	-	
20	I think I work very hard in planning, preparing and delivering well differentiated lessons & activities.	• Planning • Differentiation	
21	To present children with enjoyable and engaging activities which are accessible yet challenging for them with suitable support.	• Differentiation	
22	To provide a safe, nurturing and stable environment in which SEN pupils feel relaxed and confident and can reach their full potential.	• Nurture	
23	To teach pupils to the best of my ability regardless of their SEN. All pupils can achieve, I make them believe and realise that	• Teaching all pupils	
24	As classroom teacher I have to identify children with SEN. I have to assess their needs and prepare intervention groups. Luckily I have a full time TA which makes carrying out these groups a lot easier.	• Identifying pupils with SEN • Assessment • Planning	
25	Identifying SEN, creating an IEP to support them in their areas of difficulty, liaising with SENCo/other profs/TA to provide learning environment (i.e. resources, grouping, differentiation) / support appropriate to their individual needs.	• Identifying pupils with SEN • Communication with SENCo & other professionals • Target setting • Differentiation	

Appendix N: Identified correlations not directly relevant to the research questions.

Correlations identified within both teacher and support assistant samples	Correlations identified within the teacher sample only	Correlations identified within the support assistant sample only
Strong positive correlations were found between; • Communication and planning and SA feedback for both teachers (r = .89, n = 25, p <.01) and SAs (r = .61, n = 24, p <.01). • Communication and planning and differentiation by SAs for both teachers (r = .50, n = 25, p <.05) and SAs (r = .44, n = 24, p <.05). • Differentiation done by SAs and lesson preparation for both teachers (r = .54, n = 25, p <.01) and SAs (r = .54, n = 24, p <.01). • Differentiation done by SAs and feedback for both teachers (r = .48, n = 25, p <.05) and SAs (r = .42, n = 24, p <.05). • Level of SEN knowledge and SA feedback for both teachers (r = .45, n = 25, p <.01) and SAs (r = .49, n = 24, p <.05). • ESE and level of SEN knowledge for both teacher (r = .57, n = 25, p <.05) and SAs (r = .43, n = 24, p <.05). • Lesson preparation and SA feedback for both teachers (r = .45, n = 25, p <.05) and SAs (r = .58, n = 24, p <.01). Strong negative correlations were found between; • Lesson preparation and who receives intervention for both teachers (r = -.41, n = 25, p <.05) and SAs (r = -.46, n = 24, p <.05).	Strong positive correlations were identified within the teacher sample between; • Communication and planning and SA acquisition of subject knowledge (r = .64, n = 25, p <.01). • Communication and planning and SA acquisition of instructional knowledge (r = .63, n = 25, p <.01). • SA acquisition of subject and instructional knowledge (r = .47, n = 25, p <.05). • SA acquisition of subject knowledge and feedback (r = .52, n = 25, p <.01). • SA acquisition of instructional knowledge and feedback (r = .61, n = 25, p <.01). • Lesson preparation and differentiation done by teacher (r = 43, n = 25, p <.05). • Differentiation done by teacher and percentage of average week supported (r =.58, n = 20, p <.01).	Strong positive correlations were identified within the SA sample between; • Communication and planning and lesson preparation (r = .58, n = 24, p <.01). • Communication and planning and SA years' experience (r = .46, n = 22, p <.05). • SA acquisition of subject and instructional knowledge (r = .83, n = 22, p <.01). • SA acquisition of instructional knowledge and differentiation done by teachers (r = .56, n = 21, p <.01). • Current level of SEN knowledge and differentiation done by teachers (r = .46, n = 22, p <.05). • Differentiation done by SA and their experience (r = .57, n = 23, p <.01). Strong negative correlations were found between; • Communication and planning and intervention planning and preparation (r = - .43, n = 23, p <.05). • Planning and preparation of interventions and SA experience (r = - .60, n = 21, p <.01). • Planning and preparation of interventions and differentiation done by teachers (r = - .62, n = 23, p <.01).