University of Southampton

Faculty of Social, Human and Mathematical Sciences

School of Psychology

Does Attachment Security Priming Enhance Resilience in Early Career Teachers?

by

Lauren Dobson

Thesis for the degree of Educational Psychology

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<u>Abstract</u>

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The first chapter in this paper introduces the researcher's background and theoretical orientation. The second chapter of this paper outlines a systematic review which synthesized and integrated the research that investigates the links between the quality of Early Career Teachers' (ECTs') personal and professional relationships and feelings of resilience in the workplace. Within the UK attrition rates for ECTs are high, 33% of ECTs leave within the first five years of teaching (DFE, 2018), therefore further understanding of resilience factors is required to support retention in the profession. Within this review, resilience is defined as "a dynamic process encompassing positive adaptation within the context of significant adversity" (Luthar et al., 2000, p. 543). Based on the literature, I define the current context of teaching for ECTs as 'adverse' and their ability to overcome the daily challenges as a resilience outcome (Gu & Day, 2013). A systematic review of the literature revealed a total of 18 studies which originated from Europe, the United States and Australasia. Studies were critically appraised using the Joanna Briggs Institute (JBI) and Critical Appraisal Skills Programme (CASP) checklists. To support synthesis of results, the research was categorised to answer three questions: Which relationships have capacity to build resilience? How do these relationships build resilience? What impacts the development of ECTs' relationships? Eighteen studies reported a positive impact of either personal or professional relationships in sustaining ECTs' resilience. Relationships were found to support resilience via the process of enhancing: wellbeing, teaching commitment, and teacher identity. Furthermore, a range of individual (adaptive functioning and help-seeking behaviours) and contextual factors (school leadership and school culture) were found to impact teachers' capacity to build and use these relationships in a manner that sustains resilience.

The third chapter in this paper reports on experimental research examining the impact of attachment security priming on early career teacher (ECT) resilience. The study also measured the relationship between resilience and attachment orientation whilst aiming to understand if colleagues or mentors were fulfilling attachment functions for ECTs. Participants completed two online questionnaires three days apart. ECTs (n=116) were allocated to either the intervention (n = 58) or control condition (n = 58). A mixed model ANOVA was used to understand the difference between the intervention and control conditions for total resilience and social resilience scores at times 1(pre-prime) and 2 (post-prime). Differences in total resilience scores were found to be marginally significant at time 2 ($p = .077$) and significant for social resilience scores at time 2 ($p = .017$). Regression analysis found that those with higher attachment avoidance scores

reported higher resilience scores prior to the manipulation. It is thought that this finding could be attributed to the isolated nature of COVID-related working practices. Regression analysis also found that those who scored higher (versus lower) on attachment anxiety were more likely to include a colleague or mentor within their attachment network. Finally, t-test analysis found that those who included a colleague or mentor within their attachment network had significantly higher resilience scores (p = .003) at time one compared to those who did not. The extent to which colleagues and mentors fulfilled different attachment functions for ECTs is explored and implications for key stakeholders are considered.

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Research Thesis: Declaration of Authorship

Print name:

Title of thesis: Does Attachment Security Priming Enhance Resilience in Early Career Teachers?

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. None of this work has been published before submission

Signature: Date:

Acknowledgements

Definitions and Abbreviations

ANOVA................................ Analysis of Variance

ANQ.................................... Attachment Network Questionnaire

ASP .... Attachment Security Priming

DV...................................... Dependent Variable

ECT .... Early Career Teacher

DFE .... Department For Education

OSF .... Open Science Framework

PGCE .... Post Graduate Certificate in Education.

PRISMA .... Preferred Reporting Items for Systematic Reviews and Meta-Analyses

SENCO................................ Special Educational Needs Co-Ordinator

SDT .... Self Determination Theory

TEP..................................... Trainee Educational Psychologist

TRS..................................... Teacher Resilience Scale

Chapter 1   Introduction

1.1   Researcher's Background and Rationale for Engagement

Prior to starting my Educational Psychology doctorate, my professional development began when I completed an undergraduate degree in Psychology and Education at the University of Southampton. This course provided the foundational knowledges and skills required to engage with key issues in the field. Most prominently, I expressed a particularly strong interest in attachment theory and decided to make this the focus of my dissertation. This was driven by my character traits (Via-Character, 2022) which align highly with love and social intelligence. I was supervised by Kathy Carnelley who allocated me to a Trainee Educational Psychologist (TEP) project looking into mapping attachment network hierarchies from childhood to adolescence. During this time, I worked closely with two TEPs to collect the data at various schools and became motivated to pursue this career path later in life.

Upon completing my degree, I then undertook a Post-Graduate Certificate in Education (PGCE) and taught in a mainstream primary school for four years. During my first-year teaching, I became frustrated with the emotional and physical strains inherent within the profession. In my second year, however, I moved to a new year group and started working with another Early Career Teacher (ECT). We quickly connected on a personal and professional level. Therefore, we prioritised time daily to debrief with one another, not only about the curriculum, our lesson plans, and the children's needs, but also regarding our personal lives such as our personal relationships or living circumstances. Building such a strong professional and personal connection with my colleague allowed my emotional needs to be met within school; I felt valued, and with this came a state of 'resilience'. This meant I felt more able to manage the demands of frustrated parents or challenging classroom behaviours.

Therefore, upon starting the doctorate, I was already strongly motivated to understand ECT resilience and the social factors which contribute to this state. I was also striving to work with

my previous supervisor again given that they had been a great support throughout my undergraduate degree. My supervisor has worked extensively in the area of attachment security priming and through discussions together we considered the application of this intervention to further understand the social dimension of ECT resilience (Mansfield et al., 2012).

My personal experience of challenges within teaching practice were also mirrored in the national attrition statistics, with 33% of UK ECTs leaving during the first five years of their career (Department for Education, 2018). Following the 'positive psychology' movement more broadly, I did not want to focus on understanding the (negative) factors which contribute to burnout or attrition, but instead to consider the protective factors which allow ECTs to 'thrive not just survive' in the profession (Beltman et al., 2011). This was born out of a desire for my research to provide practical implications for ECTs and be effective in supporting them to withstand the challenges of the profession. Research demonstrates a strong social role in resilience (Beltman et al., 2011; Subosa, 2021), and I wanted to further explore the utility of relationships as a protective factor (Mansfield et al., 2012). Furthermore, if relationships were found to empirically contribute to resilience, I wanted to understand how we could intervene using attachment security priming to enhance feelings of resilience.

1.2   The Research

By studying the existing literature in my systematic review (Chapter 2), I wanted to answer the question, '*To what extent are the quality of Early Career Teachers' personal and professional relationships associated with feelings of resilience in the workplace*?'. For my empirical study (Chapter 3), I chose to conduct quantitative research which would enable me to answer the question, '*Does attachment security priming enhance ECT resilience?*'. Taken together, the results from these studies not only allowed me to reflect on my own teaching experience, but also to evaluate strategies that could enhance systemic practice to support teachers' resilience in my role as an educational psychologist.

The findings from both papers enhance understanding regarding how personal and professional relationships can impact ECT resilience and whether attachment security priming is an effective intervention to increase feelings of resilience. The findings therefore contribute to a more informed understanding about how ECTs can be supported to navigate the challenges associated with establishing a career in the profession. The results have implications for ECTs, school leaders, educational psychologists, and teacher training providers.

1.3   Research Paradigm

The term 'paradigm' is broadly used to describe the beliefs and actions which contribute to a researcher's view of the world (Kaushik & Walsh, 2019). This term can be used to consider the shared values of specialists within a given field (Kuhn, 1970). Two common paradigms in social psychology research are post-positivism and constructivism (Creswell, 2013). Post-positivism typically uses a quantitative methodology and works from the assumption that findings are accepted for now if not falsified (Popper, 1959). There is a strong focus upon generalizability, reliability, and precision. Whereas constructivism typically uses qualitative methods due to a belief that knowledge is contextual, and participants generate independent meanings (Honebein,1996). Elements of this study do align with a post-positivist paradigm, given that I sought to test theory and quantitatively measured attachment and resilience constructs. However, the theoretical origins from which my understanding of ECT resilience are built from, align more closely with constructivism.

Betzner (2008) postulated that post-positivism and constructivism can be described as two different ends of the paradigm continuum; and where pragmatism can be seen as a bridge between these contrasting postures (Creswell, 2013; Goles & Hirschheim, 2000). Pragmatism asserts that inquiry in the search of action is of most importance when conducting research (Creswell, 2013). This paradigm therefore aligns with solving real-world problems and has subsequently become a common stance for practical researchers who are working in a given field, such as Educational Psychologists.

A key component of pragmatism is that the researcher's own views, beliefs and experiences can impact the decisions made within the project (Morgan, 2007). It is apparent that my own personal experiences professionally as an ECT have shaped the research question for the literature review and my academic experience as an undergraduate researcher have influenced the research questions for my empirical project.

Pragmatism enables researchers to carefully consider the problem and use the most relevant practice which will create change (Tashakkori & Teddlie, 1998). During my experiences as a teacher, I identified a key problem: that there are substantial emotional and physical demands associated with the profession and these difficulties are evidenced in the high attrition rates for UK ECTs within the first five years (DFE, 2018). Therefore, my methodological approach was carefully considered to ensure action for ECTs' resilience by testing a potential direct intervention. The relevant actions from this research are highlighted in the conclusion of my literature review and empirical paper. My belief is that the value of these findings will be in their ability to enhance ECT resilience whilst preventing attrition over time.

1.4 Dissemination plan

Through my role as an Educational Psychologist, I plan to use and share this research to ensure the findings can have practical implications to enhance ECT resilience and lower attrition rates. To do this, I plan to meet with the schools' improvement officer within my local authority to see if there is a role for me to support with the induction of ECTs within the borough. This way I can share the findings first hand with both ECTs and their mentors. In addition, I plan to attend a head teacher meeting within my local authority this term to disseminate the findings and relevant implications. Furthermore, to ensure the findings reach a wider audience, I am considering publishing both papers within the peer-review journal, 'Teaching and Teacher Education'. This journal is concerned with teaching processes, performance, and effectiveness at all levels of schooling. The journal is applicable for multiple disciplines and accepts varied approaches to empirical research, thereby making it an appropriate choice for both my literature review and

empirical project. In addition, this journal is open access and will therefore allow teachers, school leaders, and professionals involved in teacher training to easily access the research.

1.5 Reflective learning

My professional development throughout the process of the doctorate has also facilitated a valuable process of self-reflection. I know my own personal experience of resilience is embedded within my own social network; and that the experience of supportive relationships with colleagues, fellow TEPs, supervisors, tutors, family, and friends have been essential in my ability to positively adapt to the adverse circumstances I have experienced throughout this course. I will therefore continue to nurture these relationships; understanding, respecting, and engaging my social network is something I will take forward into my career as an Educational Psychologist. Furthermore, I will take this theoretical framework into my practice by seeking to work systemically with schools to support teacher resilience by activating social networks. This systemic and preventative approach is of increasing importance given the time pressures of working as an EP within a local authority and will hopefully make being an ECT a more positive experience.

Chapter 2   Systematic Literature Review: To what extent are the quality of early career teachers' personal and professional relationships associated with feelings of resilience in the workplace?

2.1   Abstract

This review aimed to synthesize and integrate the research that investigates the links between the quality of Early Career Teachers' (ECTs') personal and professional relationships and feelings of resilience in the workplace. Within the UK attrition rates for ECTs are high, 33% of ECTs leave within the first five years of teaching (DFE, 2018), therefore further understanding of resilience factors is required to support retention in the profession. Within this review, resilience is defined as "a dynamic process encompassing positive adaptation within the context of significant adversity" (Luthar et al., 2000, p. 543). Based on the literature, I define the current context of teaching for ECTs as 'adverse' and their ability to overcome the daily challenges as a resilience outcome (Gu & Day, 2013). A systematic review of the literature revealed a total of 18 studies which originated from Europe, the United States and Australasia. Studies were critically appraised using the Joanna Briggs Institute (JBI) and Critical Appraisal Skills Programme (CASP) checklists. To support synthesis of results, the research was categorised to answer three questions: Which relationships have capacity to build resilience? How do these relationships build resilience? What impacts the development of ECTs' relationships? Eighteen studies reported a positive impact of either personal or professional relationships in sustaining ECTs' resilience. Relationships were found to support resilience via the process of enhancing: wellbeing, teaching commitment, and teacher identity. Furthermore, a range of individual (adaptive functioning and help-seeking behaviours) and contextual factors (school leadership and school culture) were

found to impact teachers' capacity to build and use these relationships in a manner that sustains resilience.

Some key limitations within the literature should be acknowledged. Firstly, the variation of definitions for resilience adopted within the studies and the lack of variation in methodology adopted, 15 studies were qualitative in nature. Furthermore, only five of the studies were longitudinal. Further research should seek to collect quantitative data at multiple time points throughout the first five years of teachers' careers to understand the dynamic-context-related nature of teachers' relationships and resilience. This review identified three areas in which schools can support ECTs to develop and use resilience enhancing relationships. Schools should: plan for ECTs social induction, highlight the value of developing networks of support beyond the school community, and encourage ECTs to reflect on the value and utility of their relationships in sustaining their wellbeing. Further research is needed to better understand the impact of explicitly using relationships to enhance resilience in ECTs who are struggling with the demands of teaching.

2.2   Introduction

2.2.1   Context for Early Career Teachers (ECTs) within the United Kingdom (UK)

Retention of ECTs is an ongoing challenge within the UK (Burghes et al., 2009;School Workforce Census, 2019). Statistics from the Department for Education (DFE, 2018) found that around 20% of ECTs leave the profession during the first two years of their career. This figure increases to 33% of ECTs who leave within the first five years of teaching. The start of a teacher's career is a time of vulnerability where they must negotiate their integration into a school community and quickly learn the working practices (Fox & Wilson, 2009). Such high attrition rates for beginning teachers have been attributed to an interplay of individual factors, such as burnout, alongside contextual factors such as support and pay (Clandinin et al., 2015). Within the UK, it has been acknowledged that ECTs will need support to 'survive' this time of vulnerability and persist

through the challenges experienced at the start of their careers. The teacher recruitment and retention strategy (Department for Education, 2019) and Early Career Framework (Department for Education, 2022) were developed in response to these statistics regarding ECT attrition. This framework provides funding which allows for extended induction support of ECTs from one to a two-year package, which includes increased time for professional development and planning time out of class. It also highlights five key areas of support and development: pedagogy, behaviour management, assessment, curriculum, and professional behaviours (Department for Education, 2022). Thus, within the UK, supporting ECTs is of high priority and the development of the Early Career Framework aims to prioritise formal support through the increased funding available to schools.

2.2.2   COVID-19 Impact on working practices

Given the increasing demands placed on educators resulting from the ongoing global pandemic, considering the protective elements of teacher resilience is a priority for schools in order to retain the workforce (Duffield & O'Hare, 2020). The pressures on schools during the COVID-19 pandemic have significantly increased, due to national lockdowns and the close contact required within school settings. Many ECTs will have had valuable social interactions with colleagues and loved ones limited due to social distancing measures in place between 2020 and 2022 (La Velle et al., 2020). Within the UK, initiatives have been put in place to support school staff with the challenging work climate. The wellbeing education return project (Department for Education, 2021) has been developed to support school staff to recognise, understand, and respond to wellbeing difficulties associated with the impact of social distancing measures. A framework has also been proposed during this time to support school leaders in fostering teacher resilience throughout school closures (Duffield & O'Hare, 2020). It is important to recognise that even prior to the COVID-19 pandemic, ECTs' resilience was vulnerable, and a significant proportion left the profession within five years (Department for Education, 2018). The pandemic has now created uncertain working and living circumstances which could potentially increase

ECTs' risk factors and vulnerability to attrition. Therefore, it is important that research is consolidated to advise school staff around how to best support ECTs to sustain their resilience and remain within the teaching profession beyond the short-to-medium term challenges created by Covid-19.

2.2.3   Theoretical perspectives of teacher resilience

Teacher resilience research has rapidly increased over the past two decades with the intention of aiding retention and considering possible interventions which support teachers to thrive in the profession (Kangas-Dick & O'Shaughnessy, 2020; Mansfield et al., 2012; Mansfield et al., 2016; Subosa, 2021). Initial research into ECT attrition sought to analyse the risk factors associated with 'stress' and 'burnout' (Brown & Nagel, 2004). However, a shift in thinking due to the positive psychology movement (Simonton & Baumeister, 2005), has now led researchers to consider the protective factors (Beltman et al., 2012).

The construct of resilience is commonly defined as "a dynamic process encompassing positive adaptation within the context of significant adversity" (Luther et al., 2000, p. 543). Within this review, the current working circumstances for ECTs will be considered as 'adverse' circumstances given that there are currently multiple challenges teachers must negotiate to 'survive' a typical school day (Gu, 2014). Social, motivational, emotional, and professional factors are considered as contributing to a teacher's ability to positively adapt to the demands of the profession (Mansfield et al., 2012).

Teacher resilience has a vast range of definitions according to the theoretical orientation of a researcher. Gu and Day (2007) highlighted that teacher resilience tends to be defined in two categories within research. It can be conceptualised as an individual construct (Bowles & Arnup, 2016), or as a context-related process (Ainsworth & Oldfield, 2019) that is impacted by the eco-systems within which an individual lives (Bronfenbrenner, 1992). Within this review, resilience is defined as "multiple individual and contextual factors which work together in complex, dynamic

ways to shape the resilience of individual teachers in a developmental or cyclical way" (Beltman et al., 2011, p.188). Within this definition, teacher resilience is not a fixed or static construct but can fluctuate according to individual traits, circumstances, and the context within which a person works, lives, and socialises.

To understand the individual and contextual factors which work together to enable resilience, this review will work from the assumption that relationships are a central component in protecting an individual's feelings of resilience (Jordan, 2004). Thus, the aim for ECTs is to develop trusting relationships that provide support and become 'resilience-enhancing'. However, an ECT's capacity to seek support will depend upon a range of factors such as confidence and trust in the relationship, alongside their perception of their own ability to offer a meaningful contribution to problem-solving discussions (Jordan, 2004). Jordan's Model of Relational Resilience (2004) proposes that for relationships to enhance feelings of resilience they must be viewed as mutual, in that each individual can offer a meaningful contribution and support for one another. In addition, there must be sufficient trust and confidence within the relationship to allow the ECT to become vulnerable enough to seek support. Therefore, the complexity of relationship building will be impacted by individual factors, such as a person's prior experience of relationships (Jordan, 2004) and interpersonal skills, alongside contextual factors, such as the school culture and the promotion of collaborative working.

Prior literature reviews within the 'Teacher Resilience' field have also highlighted the importance of relational resilience. Beltman et al (2011) conducted a systematic review of 50 papers on teacher resilience. They reported a range of relational and contextual factors that can protect teachers' feelings of resilience. Mentor and leadership relations were associated with resilience for ECTs, when the relationships were positive, pro-social, and from the same teaching subject area. Thus, relationships are an important contextual protective factor for teachers in enabling them to sustain their resilience. However, a review has yet to explicitly analyse research that focuses specifically on ECTs and their use of relationships to enable feelings of resilience.

2.2.4   Models of ECT resilience

Research by Mansfield et al. (2012) highlighted four dimensions of an early career resilient teacher: social, motivational, emotional, and professional-related (Figure 1). These dimensions were developed from interviews with two hundred ECTs and trainee teachers. These four dimensions will be considered to interact both at an individual and contextual level to determine an ECTs' capacity for positive adaptation and subsequent resilience. The social dimension describes the importance of building and maintaining supportive relationships within the workplace which allow ECTs to solve problems via the process of seeking and responding to advice. To do this, the model proposes that an ECT must have strong interpersonal communication skills. The social dimension is considered of primary importance due to the cascading impact upon the other aforementioned areas within the model of resilience. For example, seeking support from colleagues can impact the professional related dimension by supporting with preparation of resources and allowing time for reflection upon teaching skills. This can impact the emotional dimension, in that an ECT will then feel better able to manage the workload demands and stress. This can subsequently impact motivation by enhancing feelings of confidence and self-belief. Thus, these dimensions are inter-related, but the importance of social interactions may be essential in triggering a chain reaction of events which reinforce feelings of resilience in all dimensions.
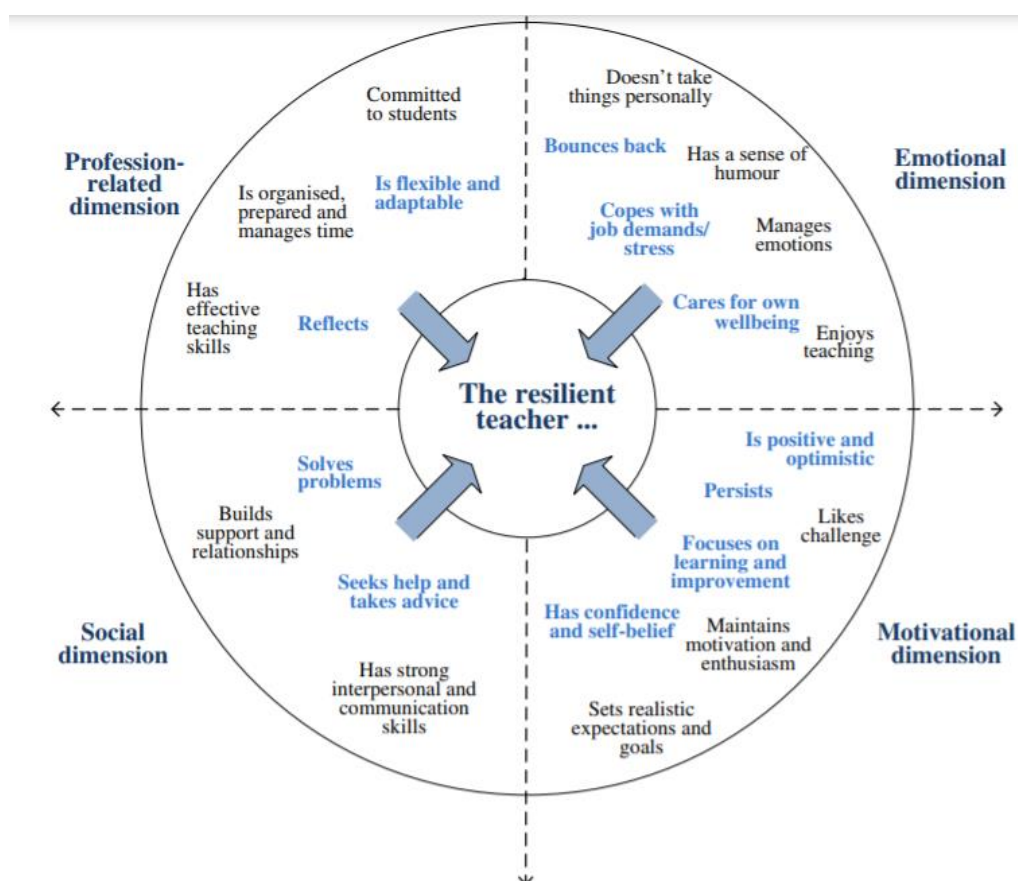
Figure 1. *A four-dimensional framework of teacher resilience developed from interviews with 200 ECTs in Australia. Reprinted from "Don't sweat the small stuff:" Understanding teacher resilience at the chalkface", by C. F. Mansfield, S. Beltman, A. Price, and A. McConney, 2012, Teaching and Teacher Education, 28(3), 357-367. Permission sought for reprint.*

Other models of teacher resilience have been proposed and these all consider relationship quality as an important factor. For example, Mansfield et al. (2014) also created a similar model of ECT resilience based on semi-structured interviews with 13 Australian ECTs. Within this model "resilience is seen as a process located at the interface of personal and contextual challenges and resources "(p. 547). According to this model, ECTs' personal and professional relationships are a central construct to enabling feelings of resilience. However, the efficacy of these relationships may depend upon the historical, social, political, and cultural context within which these relationships operate.

Mansfield et al. (2016) aimed to further extend this work by building an evidence-informed framework for developing resilience within trainee teacher education. A literature review was conducted to understand the factors that influence teacher resilience. The authors go on to propose a framework for developing resilience in pre-service teachers. The four themes of this framework are relationships, wellbeing, motivation, and emotions as factors impacting resilience. The framework recommends pre-service teachers receive support around how to establish effective relationships within novel working environments. This review made the recommendations for pre-service teachers and ECTs but was based on studies researching teachers of all career stages. Thus, further analysis of relational resilience factors specific to ECTs is required.

Whilst there have been reviews into defining and understanding the construct of teacher resilience and both the individual and contextual resources that can serve as protective and risk factors, there has not yet been a review about the importance of relationships in sustaining ECTs' resilience. This review, therefore, aims to understand the relationship specific factors that impact ECTs' resilience.

2.2.5   Aims of the review

This systematic review aims to address a gap in the current psychological and education literature and bring a number of the aforementioned areas of research together through understanding if the quality of ECTs' personal and professional relationships are associated with feelings of resilience in the workplace. To answer this question, the review aimed to answer the following research questions**:** Which relationships within a social network have capacity to build resilience? How do these personal or professional relationships build resilience? How can environmental and individual factors impact the development of teachers' professional and personal relationships?

2.3   Review Methodology

2.3.1   Search strategy

Studies included in this review were obtained through a systematic search of the published literature. Searches were conducted in four electronic databases: PsycINFO via EBSCO, Web of Science via Web of Knowledge, Educational Research Information Centre (ERIC) and Scopus. Search terms (Table 1) were generated using the key terms from the review question and using a teachers' resilience framework generated via synthesis of 200 ECTs' views of teacher resilience (Mansfield et al., 2012).

Table 1   *Search Terms Used Within The Systematic Search*

(teacher* OR educator* OR Early Career teacher N1 OR ECT OR Newly Qualified teacher N1 OR NQT)	AND (Resilience OR resiliency OR resilient OR strengths OR coping OR hardiness OR adapt* OR wellbeing OR well* OR emotion* OR affect* or effic* OR effect* OR longev* OR success OR motivate*)	AND (Attach* OR relation*)	NOT (Stud* OR peer* OR child* OR mother* OR maternal* OR Father* OR paternal* OR parent*)

The systematic search was conducted in August 2021. From the initial 2890 identified papers, 2841 were excluded following the title and abstract screening. Twelve additional articles were identified as meeting the inclusion criteria (see Table 2) within the references of the full-text

search papers. A further 31 papers were excluded during the full-text eligibility search, due to

failing to meet the inclusion criteria. The procedure of the systematic search is illustrated in the

following PRISMA (Moher et al, 2009) flow diagram (Figure 2). A total of 18 papers were included

for this review. See Appendix A for the data extraction table. The data extracted from the eligible

papers included: aims, methodology, definition of resilience, sample, and key findings.

PRISMA 2009 Flow Diagram
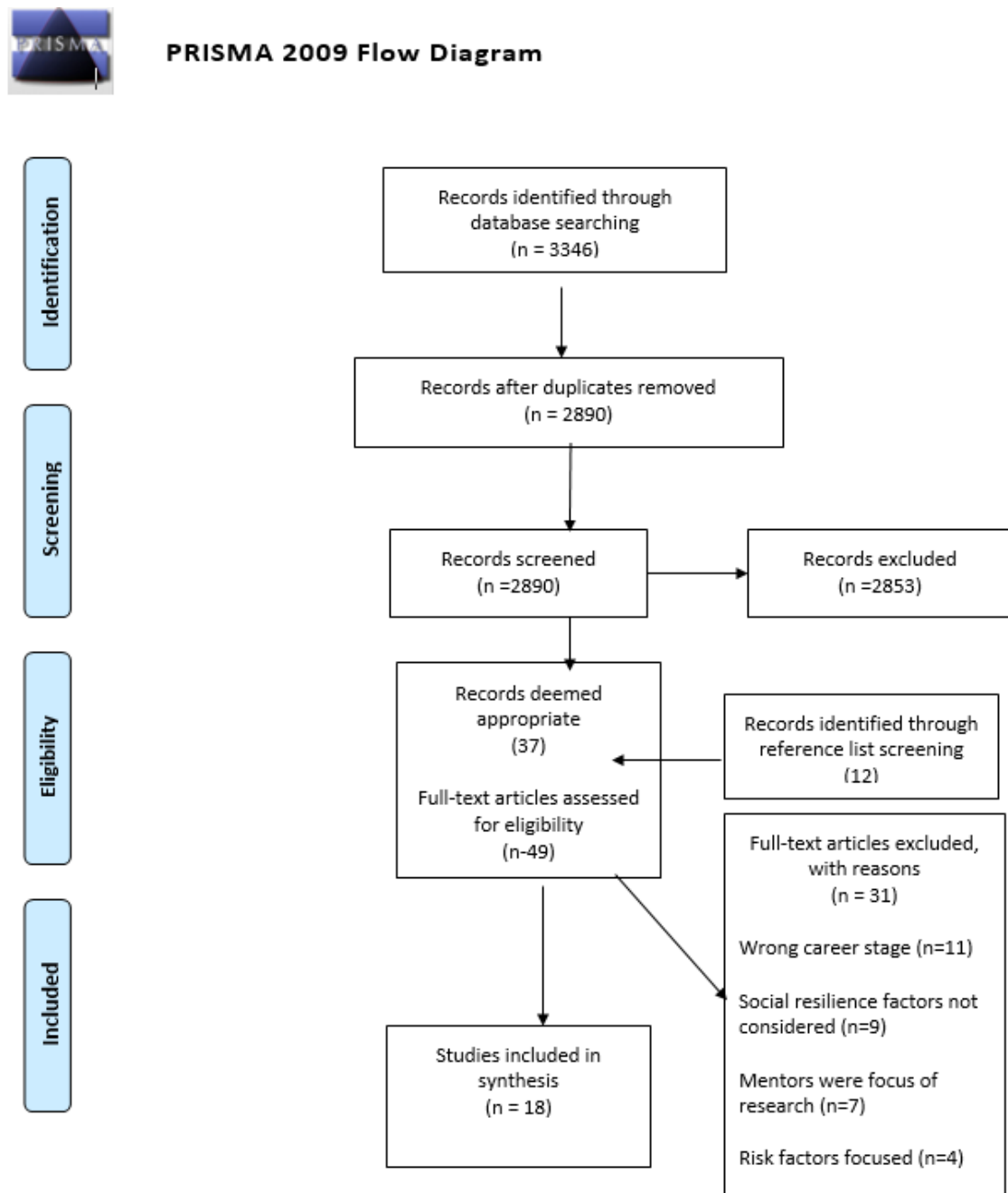
Figure 2. *PRISMA flow chart (Moher et al., 2009). This figure illustrates the systematic literature review process followed for this review. n = number of articles.*

2.3.2   Inclusion and Exclusion criteria

All studies retrieved from the systematic literature review search were screened and subjected to the inclusion and exclusion criteria related to the review question (Table 2).

Table 2   *A description of the inclusion and exclusion criteria*

Inclusion criteria	Exclusion criteria
Empirical paper, published in peer reviewed academic journal	Non-empirical paper, e.g. opinion piece or book, un-published work e.g. dissertations, not peer-reviewed, reviews
Participants are defined as Early Career Teachers (first five years of teaching) and primary or secondary schools.	Pre-service Teachers or teachers with more than 5 years teaching experience or post-16 Teachers
Studies which include a specific measurement of Resilience or factors from the resilience framework (Mansfield et al,2012)	Studies which reference to burnout/stress, analysing intentions to leave the profession
Studies which consider teacher's personal or professional relationships	Studies which reference Mentor not Mentee focussed outcomes
	Studies which focus on leader perception of early career teacher experience
	Studies which analyse teacher- pupil relationships
English Language	Not English Language

2.3.3   Quality Assessment

Quality assessment of the qualitative papers was completed using the Critical Appraisal Skills Programme guidance. Studies were assessed and given a score out of ten; all papers were deemed to be of an acceptable standard to be included in the review. The quantitative and mixed methods studies were assessed using the Joanna Briggs Institute Critical Appraisal tools for cross-sectional studies and given a score out of ten. Overview of scores and the assessment criteria for both checklists are found in Appendix B. Factors within the critical appraisal tools were applied throughout the process of the systematic literature review, therefore studies which did not meet certain quality indicators (e.g., without a clear definition of resilience factors) were excluded throughout the eligibility process. All studies were rated 6/10 or above using the various quality

indicator statements. If studies had fallen below a 50% threshold (5/10) they were removed from the review.

2.4 Data extraction and synthesis

2.4.1 Study characteristics

The 18 studies identified in the current review included a total of 896 participants, with a range of four to 300 participants per study. Studies were conducted across multiple countries: seven in Australia, four in America, four in the United Kingdom; two in Canada and one in Norway. Fifteen of the studies used a qualitative design, two utilised a mixed-method design and two studies adopted a quantitative approach. Six of the studies extracted data from wider surveys exploring a range of outcomes. Two of the studies extracted and analysed data from the same wider project. All studies used ECTs (5 years or less teaching), from Primary and Secondary settings.

2.4.2 Research design

The qualitative studies used a range of different approaches. For example, three studies used network maps to elicit discussions regarding ECT social support. Four studies triangulated information from ECTs with the school leaderships team such as the principal's views. Five studies collected qualitative data (interviews, questionnaires, mapping tools) at multiple time-points to understand resilience and relationships over the course of the first few years of teaching. Six studies completed surveys/questionnaires to develop the content of the interviews.

Two studies adopted a quantitative cross-sectional design. Two studies adopted a mixed method approach.

2.4.3 Definitions of resilience across the included literature

Various resilience definitions were adopted in the papers included within this review. Five studies used an individualistic definition of resilience in that resilience is defined as a personal attribute or characteristic. Three studies understand resilience as a contextual interplay between factors within the individual and the environment. Three studies define resilience as a relational construct in that resilience is embedded in personal and professional relationships, and seven studies did not specifically define resilience but analysed emotional, social, professional, or motivational constructs in relation to teachers' personal and professional relationships. Six papers specifically analysed ECT resilience; within these papers, findings relevant to relationships were extracted. Eight papers specifically analysed teachers' social networks; within these papers, findings relevant to resilience factors were extracted. Four papers specifically analysed ECTs' resilience and personal/professional relationships, thus all findings were relevant to the review.

Other systematic reviews into teacher resilience (Beltman et al., 2011; Subosa, 2021) have also noted the challenges in conceptualising the term resilience. Beltman et al.'s (2011) review found that of the fifty papers reviewed, only twenty-four included an explicit discussion of resilience; the others included related factors defined by the research team. They asserted that "as teacher resilience is an emerging field of research there appear to be pockets of research that directly deal with teacher resilience and others that examine related constructs" (p.186). Thus, within the current review, a wide definition of 'resilience' was adopted and articles which include concepts related to emotional, social, motivational, and professional dimensions of resilience at both an individual and contextual level (Mansfield et al., 2012) were captured within the search criteria. Studies were therefore included without the need for an explicit reference to the term 'resilience'. By adopting a wide lens of interpretation for the construct of resilience, I have been able to include a larger pool of research, leading to a novel understanding of the impact of relationships upon ECTs' resilience.

2.5   Results

All studies evidenced that personal and/or professional relationships have the potential to be used to provide a sense of social support. This social support can enhance factors such as commitment to the profession, wellbeing, and teacher identity, thus enhancing feelings of resilience. To understand the mechanisms behind who is best to offer this support and how these relationships impact resilience, the findings from the systematic review were subsequently organised in relation to the following questions:

1) Which relationships within a social network have capacity to build resilience?

2) How do these relationships build resilience?

3) How can environmental and individual factors impact the development and use of teachers' social networks?

These questions were developed as part of an iterative process which developed according to both the researcher's initial consideration of the area based upon scoping searches, and data extraction from the literature during reading for eligibility.

Table 3   *Organisation of studies*

Question	Studies
Which relationships within a social network have capacity to build resilience?	- Fox and Wilson (2009) - Le Cornu (2013) - Kutsyuruba et al (2019) - Peters and Pearce (2012) - Sikma (2019) - Engvik (2014) - Mansfield et al. (2014) - Papatraianou and Le Cornu (2014)
How do these relationships build resilience?	- Hobson and Maxwell (2017) - Burke et al. (2013) - Jones et al. (2013) - Johnson et al. (2014) - Papatraianou and Le Cornu (2014)
Factors which can affect the development relationships with support ECT resilience	- Bowles and Arnup (2016) - Tait (2008) - Castro et al. (2010) - Gu and Day (2013) - Rippon and Martin (2006)

- Jones et al. (2013)
- Kardos et al. (2001)

2.5.1 Which relationships within a social network have capacity to build resilience? Professional Relationships

Five studies within the review highlighted the importance of professional relationships in building ECTs' resilience. Two categories of professional relationships will be considered; colleagues (Fox & Wilson, 2009; Kutsyuruba et al., 2019; Le Cornu, 2013; Sikma, 2019) and school leaders (Peters & Pearce, 2012).

2.5.1.1 Colleagues

Research by Kutsyuruba et al. (2019) aimed to understand ECTs' views regarding how to develop resilience and promote wellbeing for future recruits to the profession. This was a qualitative Canadian study which conducted telephone interview with 36 ECTs. One of four key themes that emerged from the data analysis was the importance of engaging in what the researchers termed the 'three C's': consulting a mentor, connecting with colleagues, and collaborating with others (consult, connect, and collaborate). Consulting with colleagues occurred formally via mentor arrangements and by informally asking colleagues who are trustworthy and accessible. Connecting with colleagues was described as a supportive mechanism for: enabling socialization, increasing feelings of confidence, and maintaining good mental health. Finally, the data from this research indicated that "positive, affirming collaboration with experienced educators who are accessible was seen as a key to successful development of resilience" (p. 303). This could be due to the practical benefits which these relationships bestow, collaborating with colleagues increases time efficiency and can also enhance confidence and self-efficacy through feeling listened to and valued. Thus, relationships with colleagues can foster resilience if they are utilized for consulting, connecting, and collaborating in order to ease the burden of the practicalities of teaching and increase wellbeing, confidence, and self-efficacy.

Research, by Fox and Wilson (2009) found that ECTs' are particularly skilled at utilizing different colleagues within their social networks to fulfil the functions described within the Three C's (Kutsyuruba, 2019). The UK study aimed to understand ECTs' experiences of building professional relationships as they become part of the teaching profession. This was a three-year qualitative project; eight ECTs were initially interviewed in year one and completed a second survey in year two. In the third year, eleven ECTs completed a network mapping tool to support discussions around their social interactions both within and outside of the school context. The results from the network mapping analysis highlighted the importance of colleague relationships; respect and trust were seen as key to building these relationships. The researchers found that ECTs were consciously activating their social networks to ensure efficient support which aligns with their ideas and beliefs as a practitioner. Teachers often used their own resources to seek out reflective partners beyond the formal roles offered, such as mentors and heads of department. All ECTs described new beneficial connections which they had made with colleagues. Within interviews, the majority of participants also highlighted the value of external links to teachers, such as a network of newly or recently qualified teachers. One participant highlighted that this contact with peers from training was part of a conscious strategy to maintain proximity to this network of support. External links such as these with other ECTs from training or CPD events were beneficial in providing emotional support, advice, resources, and inspiration. Thus, professional relationships with peers and teachers outside the school context can also provide a form of social support which impacts ECTs' day-to-day emotional and professional dimensions of resilience. Moreover, some ECTs are actively aware of the importance of the proximity of these external supports and purposefully utilise these links within their networks to sustain them during the start of their career. However, this may not always be actively encouraged at a systemic level.

Research by Sikma (2019) in the USA also noted the importance of other ECTs as a source of support. This qualitative project conducted interviews, social network maps, and observed four ECTs. The research aimed to understand the types of interactions which ECTs engage in and how these relate to feelings about their work as a teacher. All participants named another newly

qualified teacher as a primary source of support and an important tie within their network. All teachers valued emotional, contextual, academic, and social support from their networks. Emotional support was rated as the highest priority and a main use of other ECTs within their networks. This may be due to the shared experience with their peers and a mutual understanding of the challenges for ECTs. The trust within their relationship determined whether ECTs sought support from an individual, thus there may be less fear of judgement or evaluation in 'peer' relationships allowing ECTs to share more of their emotional burden. Academic support was also highly valued: "all teachers reported feeling overwhelmed and expressed a desire to collaborate and co-plan with their colleagues" (p. 334). Thus, collaboration may be a key factor in enhancing the resilience of ECTs (Kutsyuruba, 2019). Interestingly, all participants valued informal support from colleagues above more formal processes of support, such as from mentors or those in leadership roles. Again, this could be due to the power imbalance within more formal roles which impacts rapport building and trust. Within this research, teacher satisfaction was related to participants utilizing only 'in school' supports (such as colleagues or leaders) to meet their needs. Therefore, whilst other ECTs from beyond the school context may have capacity to provide emotional support, there are less opportunities for academic support and curriculum collaboration, which may be of greater importance when considering satisfaction and ECTs' resilience.

Research by Le Cornu (2013) also found that collaboration was a core element of professional relationships in their capacity to build ECTs' resilience. This research was a qualitative Australian study which included two semi-structured interviews with 60 ECTs with the aim of identifying which relationships impacted on the ECTs' resilience and through what mechanisms this was achieved. For triangulation, interviews were also conducted with a member of the leadership team at the end of the school year. Through thematic analysis of the data, the researchers noted that positive relationships with colleagues fostered a sense of belonging alongside providing professional and emotional support. These relationships were particularly effective when colleagues took time to meet with ECTs and welcomed their views and ideas

within a support network. They found that when this occurred "ECTs were affirmed by the feedback they received from colleagues and this feedback affirmed their own assessment of their capacities as teachers" (p. 4). This feedback therefore developed their own sense of competence and confidence within their new role as a teacher. Therefore, collaborating with colleagues can enhance ECTs' feelings of resilience when they are able to contribute to joint academic practices and receive feedback from colleagues which enhances their feelings of self-efficacy. Le Cornu (2013) also noted that school leaders had a role to play in creating a school culture that cultivated a sense of belonging and encouraged colleagues to collaborate and support one another. This highlights that, ECTs' collegial relationships will be further 'resilience enhancing', when the leadership team models and values collaborative working practices.

2.5.1.2   The role of leadership

Research in Australia by Peters and Pearce (2012) found that principals play a crucial role in the development of school cultures which facilitate collegial relationships. This qualitative study aimed to understand the conditions which facilitate teacher resilience within the first two years of joining the profession. Open-ended interviews were conducted with fifty-nine school leaders and first-year teachers from a mix of primary and secondary schools. The researchers were part of a wider team conducting a longitudinal study into the resilience of ECTs from 2008-2012. One of the five main themes that emerged from the data analysis was that of 'Relationships'. The authors focused on this theme and presented narrative portraits to describe the experiences of two ECTs and their school leaders. The authors argued ECTs "experiences both illustrate the emotional and unpredictable nature of teachers' lives and the critical role of positive staff relationships in sustaining commitment and promoting resilience" (p. 257). The authors proposed that ECT resilience is enhanced when leaders adopt the following responsibilities: a personal interest in wellbeing and CPD, engagement in recruitment, model trusting relationships, and create school cultures that value wellbeing and collaborative learning. Therefore, for ECTs to experience the kinds of collegial relationships that foster resilience, leaders within schools should actively plan and consider their involvement in the recruitment and induction process. It will be important that

ECTs are welcomed into an environment that has a culture and policy that is conducive to building and using collegial relationships for collaborative learning.

2.5.1.3   The impact of professional relationships upon ECTs' resilience

This review so far has demonstrated that the professional relationships within the school community such as colleagues, peers, and school leaders can have the potential to build resilience during ECTs' induction to the teaching profession. However, the quality of these professional relationships matters. To be 'resilience enhancing relationships', ECTs must be using their professional relationships to consult, connect, and collaborate. They may also need to use peers from their external ECT networks to provide emotional support. In addition, the leadership within the school must model these trusting, cooperative relationships, and value a collaborative learning culture. They must also take an active role in the recruitment and induction of an ECT to ensure they feel a sense of belonging within the school environment.

2.5.1.4   Personal relationships

Research into the importance of professional relationships in enhancing resilience of ECTs has highlighted the need for emotional support (Le Cornu, 2013; Peters & Pearce, 2012; Sikma, 2019). One argument here is that emotional support from the role of teaching may be best supported by personal relationships in which there is a deeper understanding of the ECTs' belief systems. Three studies from the review identified the role of personal relationships in support ECTs' feelings of resilience (Engvik, 2014; Mansfield, et al, 2014; Papatraianou & Le Cornu, 2014).

Research by Engvik (2014) found that the relational and emotional nature of teaching provides ethical dilemmas for teachers on a regular basis. They found that ECTs sought guidance for these situations outside of school and within their personal relationships. This research took place in Norway and aimed to understand the importance of networks for the professional development of newly qualified teachers in secondary education. Four interviews took place with ECTs, and they also drew network maps to aid the discussions. Three of the four participants discussed their use of family and friends to consider ethical dilemmas. One participant reflected

that "Most often I take something from the social network outside school" (p. 461). They felt that

the personal network outside of school allows for more open philosophical reflection whereas

professional relationships provide more concrete and 'action focussed' support (p. 464). Two

other participants supported this assumption by saying that they raise the 'big questions' with

family, such as should they continue in the profession when times are tough (p. 462). Another

participant affirmed their use of school links for action-focussed discussions in the following

quote: "The educational challenges are raised with friends who can speak the same language

about the job" (p. 464). Thus, ECTs' networks beyond school become a vital space for reflection

on emotions which the teaching profession raise. Whereas professional relationships within the

school context may be of more use in providing pragmatic support.

Qualitative research by Mansfield et al. (2014) within Australia also suggested that family

and friends have an important role in sustaining ECTs' resilience during their induction to the

profession. Participants with effective personal support networks and close family ties maintained

their commitment to teaching despite the many professional challenges which they encountered.

Participants were actively utilising relationships to manage these challenges, and some noted

becoming intentionally involved in the wider community to find a support network that could

serve as a protective factor. The majority of participants within this research had family members

within the teaching profession. One participant turned to her eldest daughter who was a

secondary teacher for advice and support. They felt that these discussions could be more open

and honest without fear of judgment in comparison to colleagues. Another participant used their

mother for support given that they had twenty-five years of teaching experience. Such accounts

highlight that these personal relationships provided both emotional and professional support by

creating a space for reflection on the career, free from judgement, alongside practical advice

given their understanding of the profession and school systems. The authors concluded that

personal relationships with others who had experience in working within a school may be

particularly effective in enhancing feelings of resilience and commitment as well as increasing

optimism with the view that family members have also "rode the storm" (p. 23).

Research in Australia by Papatraianou and Le Cornu (2014) found that both personal and professional relationships can provide ECTs with academic and emotional support. They examined teachers' informal significant relationships as a mechanism for enhancing resilience. The data was taken from two qualitative studies; one large scale project of 60 ECTs who partook in two semi-structured interviews alongside an interview with a relevant member of the school's leadership team. The second was a smaller intensive study with 17 ECTs over four time-points across the school year. They found that ECTs sought support in the forms of listening and validating emotions, tangible task support, task challenge and task appreciation. These forms of support were essential for creating an environment which facilitates ECT resilience. Moreover, when ECTs received this type of support, they reported increased feelings of competence which supported the development of a positive teacher identity. In each form of support there was evidence of both significant personal and professional relationships. Together these studies highlight that ECTs benefit from receiving informal support from any relationship which has the capacity to listen, validate, and provide tangible support for the task at hand.

2.5.2 How do these relationships build resilience?

The data presented so far indicates that both professional and personal relationships can facilitate resilience when purposely engaged by the ECT to enable them to negotiate the academic and emotional challenges embedded within the profession. The next section of data synthesis aims to understand *how* personal and professional relationships are employed to support with academic and emotional challenges to facilitate resilience in ECTs.

2.5.2.1 Enhanced wellbeing

Three studies within this review highlighted how ECTs' relationships have the capacity to support wellbeing, which in turn provides the resilience required to persevere and positively adapt to the persistent challenges associated with the profession.

Hobson and Maxwell (2017) proposed that self-determination theory (SDT; Ryan & Deci, 2000) provides a framework for considering factors that impact ECTs' wellbeing. The research aimed to understand the extent to which relatedness, competence and autonomy impact the wellbeing of ECTs in England. The research involved secondary analysis of qualitative data collected between 2005 and 2013 from four UK studies. A third of all coded segments were categorised under 'relatedness' and described the importance social connections within schools have for the wellbeing of ECTs. The "presence, absence, nature and intensity of teachers' social connections to significant others in and around schools ('relatedness') was found to be the single most prominent factor both enhancing and impeding ECTs' well-being" (p. 12). Thus, ECTs' experience of positive, regular, supportive interactions with significant others is a central factor in enhancing their wellbeing and preserving their feelings of resilience.

Research by Johnson et al. (2014) in Australia also highlighted the responsibility of school communities to protect the wellbeing of ECTs to sustain resilience. The study aimed to apply a social resilience framework to understanding the lives of ECTs. Sixty graduates at the start of their careers were interviewed from Western and South Australia. Positive working relationships were found to be a core condition for resilience. The authors noted that school communities must "promote a collective ownership and responsibility for the well-being of beginning teachers" (p. 540). Within this study, ECTs reported being better able to cope with the demands of teaching when they received wellbeing check-ins from their colleagues. Johnson et al. (2014) also proposed that relationships offer social capital potential. Social capital has been defined as "the networks of relationships among people who live and work in a particular society that enable the society to exist and be successful" (Oxford Dictionary, 2021). Thus, within a school, social capital relates to the relationships between colleagues that enable the school to thrive and succeed. Relationships with colleagues provided tangible support which saves ECTs time in not needing to 'reinvent the wheel' (Johnson et al., 2014). This practical support in reducing workload can protect the wellbeing of ECTs and enable them to face other challenges with feelings of resilience.

Research by Castro et al. (2010) in the USA also found that ECTs benefit from 'renewal and rejuvenation' thanks to the emotional support provided by colleagues. The study aimed to understand the strategies and resources which new teachers employ to overcome challenges within teaching. Interviews were conducted with 15 first year teachers from a range of primary school settings. They noted that participants who could be defined as 'resilient' were proactive in their consideration of necessary strategies and resources required to overcome adversity. For example, 'resilient' teachers often mentioned spending time with other teacher friends as part of social gatherings when they were experiencing difficulties in their role. They noted that these meetings provide outlets for 'renewal and rejuvenation' which impacted their overall feelings of wellbeing.

This research therefore suggests that wellbeing is constructed socially for teachers. Opportunities to meet with friends and teachers outside of school provides space for rejuvenation and can provide social capital which supports with teacher workload. Therefore, school communities must prioritise the wellbeing of ECTs and "promote a collective ownership and responsibility for the well-being of beginning teachers" (Johnson et al., 2014, p. 540) to ensure they are welcomed into school communities which recognise the importance of wellbeing and collaboration.

2.5.2.2   Enhances commitment

Two studies within the review also suggest that ECTs' relationships have the capacity to enhance their feelings of commitment to the profession. These feelings of commitment are thought to enhance ECT resilience in the face of adversity.

Research by Burke et al. (2013) aimed to understand what influences ECTs to remain in the profession and what strategies might assist in their retention. The mixed method study used an online survey (n=258) to develop 31 factors which ECTs were required to sort according to importance in their decision to remain in the profession. Forty-two teachers also completed telephone interviews to aid researchers' understanding of the factors. Some of the most

important factors in ECTs' commitment to the profession were collegial support, collaboration, mentoring, induction, staff culture, school climate, and leadership support. This demonstrates that the institutional and organisational context, the social interactions, and climate within a school, have significant potential to shape an ECTs' commitment to the profession and thereby enhance their resilience during times of challenge.

Research by Jones et al. (2013) sought to understand the extent to which ECTs' perceived fit within a school is associated with higher levels of commitment to the profession. The quantitative study collected data from 185 ECTs, 47 of whom worked as special education teachers. Findings suggested that ECTs' perception of colleague support and 'fit' within the wider staff culture was a strong positive predictor of their commitment to the school and profession. What these studies emphasise is that colleague relationships alongside school organisational practices and cultures are critical in enhancing ECTs' feelings of commitment to both the school and profession, which in turn provides a sense of resilience.

2.5.2.3 Build Teacher Identity

A robust teacher identity is thought to be a central factor in ECTs' feelings of resilience (Pearce & Morrison, 2011). Bullough (2005) suggested that individuals develop a core identity which aligns closely with their 'true' values and personal beliefs. People also have situational identities which can vary according to the context within which one finds themselves. Bullough (2005) suggested that cultural and environmental factors within a school institution can both inhibit or enable the identity formation depending on the ethos of a school community and the match of beliefs and values. Three studies which have already been presented (Johnson et al., 2014; Le Cornu, 2013; Paptriano & Le Cornu, 2014) demonstrated findings which evidenced the role that personal and professional relationships and school culture can play in supporting ECTs to develop a 'teacher identity'.

A key finding from Johnson et al. (2014) suggested that teacher identity plays a central role in developing ECTs' resilience and that identity can be developed via social interactions within

the school community. The authors concluded that ECTs need to be explicitly supported to engage in self-reflection which challenges their beliefs, values, and assumptions to negotiate the dilemmas within teaching so to develop a robust teacher identity. This process should also be modelled by experienced colleagues and embedded within school culture and practices. They noted that teachers:

> "who are socially and emotionally responsive in their professional relationships, and who have a personal commitment to the broader moral and ethical dimensions of teaching, are more likely to succeed in shaping a satisfying professional identity and thus enhance their resilience" (p. 543).

Hence, through actively utilising and engaging in emotional professional relationships which allow ECTs to openly question their beliefs, they will be better able to develop a robust teacher identity which will contribute to building their resilience.

Research by Le Cornu (2013) proposed that ECTs' identity development is constructed socially rather than individually and internally. They argue that identity is built in context via interactions with significant others: "The significant personal and professional relationships promoted the early career teachers' resilience by building their self-esteem and a positive teacher identity" (p. 10). Thus, the support provided by colleagues, family and friends can boost confidence and self-esteem and thereby indirectly contribute to an ECT's teacher identity. Once ECTs feel as though they identify as a teacher, and their peers and colleagues also view them as a teacher, they are better able to sustain their resilience.

Papatraianou and Le Cornu (2014) aimed to understand the role of teachers' informal relationships in building resilience. They found that when personal or professional relationships provided support (in the form of listening, validating, acknowledging, appreciating, offering advice, and confirming the challenges of teaching), ECTs reported increased confidence and competence within their teaching role, which resulted in being able to build a positive teacher identity.

It can therefore be seen that the support which relationships provide has an important role in building confidence, competence, and self-esteem that sustains resilience. In addition, these relationships allow space and time for ECTs to reflect on their identity as a teacher and for more experienced colleagues to model this process. This leads to ECTs developing their own situational identity, which can enhance resilience in times of adversity, as they believe in themselves as a 'Teacher' and feel respected and valued within their school communities as a fellow professional.

2.5.3   Factors which can affect the development of 'resilience-enhancing' relationships

The data within the literature review suggests that both personal and professional relationships can enhance feelings of resilience through the process of enhancing wellbeing, commitment, and teacher identity. The next section of the results will address the individual traits and environmental factors that can enhance or inhibit the use of relationships as a protective factor in maintaining ECTs' resilience.

2.5.3.1   Individual traits

Three studies demonstrate the impact of individual traits in enhancing or inhibiting the development of relationships that can be used to support ECT resilience (Bowles & Arnup, 2016; Castro at al., 2010; Tait, 2008). Research by Bowles and Arnup (2016) aimed to examine the strategic processes involved within ECT resilience. One hundred and sixty ECTs within Australia completed online measures of positive adaptability and resilience. The findings found three clear groups: innovators, adapters, and stabilisers. Innovators were the most resilient and were described as individuals who are less likely to engage in traditional methods of problem solving and prefer novel solutions. Whereas stabilisers are cautious regarding change and favour traditional approaches. Based on these findings, the authors suggest that "in institutions where change is a constant, such as schools, having a disposition that has a preference for stability may result in a poor fit between the individual and the culture of the organisation" (p. 16). Here the innovators are theoretically more confident to trial different teaching methods and share novel

ideas with the team which may result in stronger collegial relationships and higher feelings of resilience and belonging. Whilst ECTs that struggle with change may consult, connect, and collaborate less with peers thus impacting their resilience (Kutsyuruba et al, 2019).

Furthermore, the findings reported that social support was highly correlated with ECT resilience (r=.51). Therefore, an individual's capacity for adaptive change (innovators, adapters and stabilisers) may impact the way in which they connect with and use their social networks. This study also included teachers with up to ten years of experience, meaning that the results were able to be interpreted for ECTs separately; however, it was found that the length of time teaching did not positively influence resilience. Bowles and Arnup (2016) therefore argue that:

> "placing people under stress does not automatically teach them to learn to deal with it without actively engaging in learning, reflecting, and practising new skills. Thus, it is reasonable that teacher resilience does not alter over the first years of teaching" (p. 17).

It could be that resilience is not automatically threatened for ECTs who have a high capacity for adaptive change and are a good fit for the school organisation. It may be of more importance to consider if an ECT is both intrinsically wired to work innovatively and are supported by colleagues and leaders to learn, reflect, and try new strategies for managing the challenges within the profession.

Research by Tait (2008) sought to understand the relationships between ECTs' resilience, personal efficacy, and emotional competence. The first phase of the research included 22 ECTs who completed a questionnaire to identify teachers for interview who were reported to have a "a positive and optimistic attitude toward teaching despite having had a stressful beginning "(p. 62). Four teachers were interviewed from a variety of schools within Toronto; all teachers were described as adept at recognising signs of stress within themselves. The ECTs could also reflect on the strategies which they deployed to cope with stress. A key similarity in their strategies to manage stress and manage their mental health was utilizing social support. Thus, resilient ECTs may be better able to recognise their personal signs of stress and then subsequently draw upon

their social network to manage the situation. The 'resilient' ECTs within this project were all experienced in previous careers and had connections to the church. Therefore, perhaps work, and cultural experiences of using social networks to manage stress can impact ECTs' coping strategies and abilities to use and build 'resilience enhancing' relationships within the school community.

Research by Castro et al. (2010) aimed to understand the resilience strategies which ECTs actively deploy. Help-seeking was highlighted as a key strategy for ECTs in protecting their resilience. Help-seeking was defined as working with colleagues to attain the required resources or information. Within this study, many participants sought help from 'adopted mentors' both within and outside of the school community, to assist with resources and problem solving. All participants initiated the search for supportive relationships. However, mentoring relationships may not automatically meet ECTs' relational needs, and they will need to be skilled in deploying help-seeking strategies from a range of professional and personal relationship sources. This can be difficult for ECTs as they are at a vulnerable time of transition to a new environment and may feel pressure to succeed. As such, an ECTs' confidence to help-seek may impact their ability to use social relationships to support them in managing their day-to-day teaching and thus impact their resilience in the face of challenge.

2.5.3.2 School climate

External factors within an ECTs' environment can also impact their capacity to build and use relationships in a manner which will serve as a protective factor for their resilience within the profession. Three studies within the review (Gu & Day, 2013; Kardos et al., 2001; Rippon & Martin, 2006) highlighted the importance of 'school cultures' that value consulting, connecting, and collaborating with colleagues (Kutsyuruba ,2019).

Research by Gu and Day (2013) conducted a mixed methods study within the UK to understand how ECTs' capacities for resilience were influenced by factors within the relational and organisational conditions of their work and lives. A survey was conducted with 300 teachers from 100 primary and secondary schools within the UK. Portraits of one beginning and one mid-

career teacher were presented from 218 teachers who reported high resilience. The survey was part of a wider research project looking at variations in teachers' work lives and effectiveness across all career stages. The results from early career teachers were considered for the purpose of this review. The study found that school relationships were the most important factor when considering resilience ratings. Analysis from the ECTs' portrait suggested that when leaders created collaborative school cultures, they felt better able to build feelings of efficacy, commitment to the school/profession and face the demands of teaching with a feeling of resilience. For one ECT, "Support and recognition from strong leadership and the transformation of negative cultures in their school had consolidated their long-term commitment to teaching" (p. 32). During the three years of contact with the ECT used for the portrait, they consistently reported extremely supportive staff relationships that assisted them both professionally and socially. They reported that their teaching colleagues helped enable commitment and motivation. These relationships were made possible thanks to the cultures created by leaders. The authors concluded that:

> "Building resilience in an organisational setting places a great deal of importance on the effectiveness of the organisational context, structure and system, and on how the system functions as a whole to create a supportive environment for individuals' professional learning and development, to build a trusting relationship amongst its staff, to foster a collective sense of efficacy and resilience and, through this, to sustain resilience" (p. 38).

Interestingly, analysis from this research also found that 78% of Early and Middle career teachers were more likely to retain their sense of resilience than teachers in the late stage of their career. This work highlights that it is all school staff's responsibility to build cultures and organisational practices that facilitate open, trusting dialogue between colleagues both professionally and socially to ensure resilience is sustained not only within ECTs but all teachers throughout any stage of their career.

Furthermore, research by Rippon and Martin (2006) highlighted the impact of the induction period for introducing ECTs into the school climate. The researchers conducted four group interviews across the school year which aimed to understand the experiences of ten ECTs from Scotland who were 'grappling with relationships in the social context of their school environment during their first year of teaching' (p. 305). Their experiences were combined and reported via a single narrative of 'Gemma'. Within the narrative, Gemma was able to manage the 'misery' of an overworked day via speaking with another ECT whom she had trained with but was not part of her school. After the call, Gemma was motivated to tackle her marking and planning. It was important that she felt accepted as an equal peer of the more established teachers within her school. Interestingly, her belief in her capabilities was related to collegial interactions, rather than actual performance. A key finding from the group interviews was that ECTs have to be seen as equal to their established colleagues in order to feel accepted and gain 'teacher status'. However, this may be challenging to do within individualistic school cultures where there are minimal induction practices which support ECTs in collaborating with their colleagues.

Research by Kardos et al. (2001) described three types of school cultures that can impact ECTs' ability to thrive and sustain their resilience. The research aimed to understand a school principal's role in creating the professional culture. Semi-structured interviews were conducted with 50 ECTs from Massachusetts. The analysis identified three types of professional cultures: novice, veteran and integrated. Veteran professional cultures were described by ECTs as schools in which the behaviours, concerns and habits of more experienced teachers determined the nature of professional interactions. Within these cultures, many teachers worked independently and had little effect on each other's pedagogy. Within this type of school culture, ECTs described difficulties finding colleagues to discuss and problem solve their work in depth. In this context, ECTs thrived through finding support informally from other colleagues who were only slightly more experienced. The researchers described this as a 'novice-oriented subculture'. Full novice cultures were described as schools with a great sense of community due to a large proportion of ECTs, however participants reported feeling unsure of their working practices and being offered

minimal professional guidance. Whereas integrated cultures were the most effective in supporting ECTs. Within integrated cultures, colleagues provided continuous support which involved 'ongoing exchange across all experience levels' (p. 262). The role of leadership was essential in creating integrated cultures which valued connection among teachers in various career stages.

This evidence suggests that both personal and professional relationships can enhance resilience for ECTs. However, the capacity to develop these relationships, and utilise them to sustain resilience, depends upon a range of individual and environmental factors which can support or inhibit an ECT's capacity to benefit from the protective factors within relational networks. Individuals will need to be of an innovative disposition in which they confidently seek help and adopt novel solutions to working (Bowles & Arnup, 2016). They will also need to actively reflect upon and deploy strategies that they know to have previously managed stress; ECTs with prior work experience of cultures which share stresses and look to support others may be more effective at this (Tait, 2008). School environments will need to adopt integrated working cultures (Kardos et al., 2001) which support inductive practices and assume a joint responsibility to building organisational practices which welcome collaboration and support the professional development of ECTs (Gu & Day, 2013).

2.6   Discussion

2.6.1   Summary of results

The reviewed research provides a good breadth of evidence to support the insight that the social climate and networks available to ECTs both within and beyond the school community are essential in providing emotional and academic support. This support enables them to thrive in response to the current high demands within the profession. This review suggests that social networks should be analysed and thoughtfully deployed by ECTs as a protective factor during their induction to the profession. Furthermore, it has underscored that school leaders have an

important role to play in modelling the importance of relationships, shaping a collaborative

working culture and putting policies and practices in place that don't leave the socialization of

ECTs into the profession down to chance.

2.6.2 Implications for school leaders

From synthesis of the literature, there are three main ways in which school leaders can

support ECTs in using their social networks to sustain resilience: plan for the social induction of an

ECT to the school, highlight the value of social networks beyond the school context and encourage

ECTs to reflect on their use of social networks. These main findings are discussed in more detail

below.

2.6.2.1 Plan for the social induction of an ECT to the school

Leaders must take an active role in the recruitment and induction of ECTs and should

consider how they can be effectively integrated within the school culture (Burke et al., 2013;

Peters & Pearce, 2012; Rippon & Martin, 2006). To do this, leaders will need to reflect upon the

current social dynamics and the balance of career experience across the school (Kardos et al.,

2001). It cannot be assumed that ECTs will automatically form effective supportive relationships

which allow them to collaborate with others from simply offering a 'mentor' (Castro et al., 2010).

Leaders will need to model to all staff the importance of collaboration and demonstrate the value

of colleagues connecting (Johnson et al., 2014). To achieve this, all staff will need time planned

throughout the school day, week, and year which is allocated with the sole purpose of enhancing

collaboration and connection among all teachers. For example, regular team building

opportunities to support the development of trust and respect.

2.6.2.2 Encourage and highlight the value of social networks beyond the school context

Other ECTs can offer both emotional and academic support for ECTs that is free from

judgement (Fox & Wilson, 2009; Sikma, 2019). Leaders should plan to support ECTs in connecting

with other ECTs beyond the school context either within part of a wider school grouping, local

authority or via the local teacher training providers. ECTs should have regular planned opportunities to benefit from and spend time with other ECTs either formally through CPD network days or more informal catch-up sessions. Leaders will also need to model the emotional support which can be afforded from personal social networks beyond the school community in providing 'renewal and rejuvenation' (Castro et al., 2010). Here, family and friends have potential to provide a safe space to listen and validate the ethical and philosophical dilemmas which teaching can present (Engvik, 2014; Mansfield, et al, 2014). This should be embedded in policies to ensure it is part of a school culture, such as 'phone a friend Fridays', so that ECTs are aware of the need to seek and receive emotional supported from their loved ones. This support may be particularly effective where loved ones have had experience working within schools (Mansfield, et al, 2014).

2.6.2.3   Encourage ECTs to reflect on their personal and professional social networks

ECTs will also need to be able to actively consider who is within their social network and what kind of support they can afford. For example, if their mentor is not someone who they trust and respect, they will need to recognise this and seek out an 'adopted' mentor (Castro et al., 2010; Fox & Wilson, 2009). Likewise, if their immediate colleagues do not share their belief system, they will need to seek out other sources of professional reflection which align with their personal values (Fox & Wilson, 2009). In addition, they should be supported in considering who within their wider networks has capacity to listen and provide a safe space to offer emotional support for them to manage the ethical burdens of teaching (Mansfield et al., 2014). Again, this will need to be embedded within policy to ensure all teachers, and not only ECTs, are able to recognise the signs of stress and know who the sources of support within their social networks are (Tait, 2008). This could be formally via a process of supervision in which ECTs can choose an individual who they are able to reflect with on a regular basis and who can support them in recognising signs of stress and direct them to personal connections who may offer renewal and rejuvenation. This could also be a more informal process in which staff members are given time in weekly meetings to off load to a loved one on the phone or a trusted colleague within the school.

2.6.3   Strengths of literature reviewed

The papers included in the review were rated between fair to good in methodological quality (See Appendix B). There were a good range of qualitative techniques adopted across the research projects (e.g., social network maps, interviews with both ECTs and leadership team, and questionnaires/surveys to develop the content of interviews/focus groups). A further strength of the research was that seven of the studies were part of large-scale research projects. This meant that the researchers could gain reasonably large sample sizes for qualitative studies (five contained < 50 participants and two contained sample sizes < 100 participants). In addition, there was greater funding and resources to allow longitudinal analysis of ECTs' relationships and reporting of resilience at multiple time-points.

In terms of contribution to the field, this is the first review to explicitly focus on and consolidate studies on the impact of relationships upon ECTs' resilience. It is also novel in adopting wider terminology and search terms to define resilience and social networks to capture a good breadth of studies that embrace the key principles of resilience without explicitly using that term (e.g., positive adaption strategies). As a result, the included studies bring together an emerging field of work through applying a resilience lens to work on the importance of ECTs' social networks.

2.6.4   Limitations of literature reviewed

Whilst all the studies included in the review met the necessary criteria through rigorous quality assessment (See Appendix B), there were some consistent limitations of the evidence base. Firstly, six of the studies extracted data from wider surveys exploring a range of outcomes. Therefore, the data was not collected with the current research question in mind. This led to a lack of clarity regarding recruitment and ethical procedures which had taken place for the original project (See Appendix B). In addition, the potential researcher bias inherent in secondary qualitative data analysis was not adequately addressed. Of the six studies, none of the authors discussed the impact of their own role as the researcher when interpreting the data or considered

the impact of the original researcher's intentions. This lack of clarity regarding the initial data collection within the wider projects is disappointing and is likely to have been a pragmatic decision made by the authors due to word limits for publications. However, the findings from these studies are not dissimilar to those in which the data was a primary source. Perhaps most importantly, the extraction of 'resilience' concepts from the data was subject to the researcher's own personal construction of the term. Researcher experience and knowledge has shaped the construction of resilience for this review and the papers which fall into the inclusion criteria. Research suggests that definitions of resilience may be culturally bound (Ungar, 2008) and school systems and the subsequent pressures which ECTs face will vary by country and culture. Many of the studies are from Western countries with similar schooling systems (UK, USA and Australia). Therefore, the results may not extend and generalise to a wider international context but are appropriate given the focus to make interventions in UK practice.

Finally, it should be considered that there were some wider methodological issues within this field of literature. Firstly, much of the research is qualitative in nature with small sample sizes and therefore may only hold utility to the specific context of teaching for the participants within the study. For example, recruitment of ECTs and induction period requirements vary according to different education systems. In Australia and the USA, often ECTs are required to spend time teaching in a more rural area due to recruitment difficulties outside of towns or cities. This will therefore be likely to influence collegial relationships and their subsequent importance, since ECTs may have re-located for their role. Given that this is the first review synthesising the literature regarding the importance of relationships for ECT resilience, future syntheses will be required as teacher resilience research evolves to understand the generalisability of these findings.

2.7   Conclusions and future research

Overall, the research synthesised in this review strongly indicates the powerful impact of ECTs' social networks in sustaining their resilience. A key takeaway is that personal relationships

may be particularly effective in providing a safe space for ECTs to reflect on the emotional toll of

teaching and to consider wider ethical dilemmas that arise without perceived judgement (Engvik,

2014; Mansfield et al., 2014). Similarly, professional relationships may be particularly effective in

affording more practical support which supports with resourcing and ensures ECTs are not having

to 're-invent the wheel' (Johnson et al., 2014). Interestingly, the evidence suggests that

professional and personal relationships are not limited in the support they can afford

(Papatraianou & Le Cornu, 2014). Many ECTs used peers and colleagues for emotional support. In

addition, many reported problem-solving practical teaching problems with friends and family

members, particularly those with a school experience (Mansfield et al., 2014). These relationships

have the capacity to improve ECTs' wellbeing, enhance their commitment and support them in

building feelings of confidence and self-esteem that enable the development of a positive teacher

identity (Burke et al., 2013; Hobson & Maxwell, 2017; Papatraianou & Le Cornu, 2014). It is

important that individual and contextual factors are considered when understanding the potential

impact of relationships upon ECTs' resilience. An ECT's confidence and ability to seek help from

their support network will depend upon their adaptability to the change (e.g., whether they are

an innovator or stabiliser), self-esteem, and feelings of 'teacher identity' (Bowles & Arnup, 2016;

Jordan, 2004, Le Cornu, 2013). Capacity to use their social network, will also depend on their own

ability to recognise sources of stress and prior patterns in seeking out appropriate support.

Moreover, an ECT's help-seeking behaviours will depend upon the type of whole-school culture

and the involvement of leaders within the induction process as a critical formative stage (Kardos

et al., 2001).

What this review demonstrates, is that it may not be the case that ECTs' resilience is

solely at risk due to their career stage, but instead personal traits and environmental factors can

either work together to protect or inhibit resilience (Bowles & Arnup, 2016; Gu & Day, 2013). ECTs

may only be at increased risk of low resilience due to their transition into a new school culture.

Given that ECTs are in the process of developing their own identity as a teacher and 'proving' their

worth through a formal induction process they may attribute inefficient organisational practices

to a lack of their own efficacy rather than a contextual misfit. This attribution and internalisation of wider failings to their own practice, rather than recognising the limits placed on them by their context, may lead to prematurely leaving the profession. This is significant, because without addressing these issues, ECTs may be more likely to leave the profession rather than trying a different school context. To mitigate this, teaching training providers should seek to prepare ECTs for the challenges and benefits of assimilating into their new school climates so that they can recognise 'veteran orientated cultures' and individuals who are resistant to novel solutions through collaborative working (Bowles & Arnup, 2016; Kardos et al., 2001). ECTs should be able to consider the questions to ask upon interviews and school visits to understand if there would be a good fit between the individuals' beliefs and organisational working practices at the school. These need to be taken seriously if the current problem of ECT attrition is to be addressed and for which this review has described a number of personal and practical interventions.

To build on the current state of knowledge in the field, future research of a longitudinal nature is required to understand how resilience and support networks may fluctuate throughout the first five years of a teacher's career. This will allow for a better understanding of the complex ways in which relationships can serve to protect resilience over time. Further research is also required to better understand the impact of explicitly using relationships to enhance resilience in ECTs who are struggling with the demands of teaching. Finally, within this review ECTs from any school setting (Primary, Secondary, Specialist or Mainstream Provision) were included. However, Primary and Secondary settings vary greatly in both the number of colleagues they have access to and the proximity within which they work. Primary teachers may have more opportunities to meet and connect with others due to smaller size schools. Due to these differences in accessibility of colleague connection and collaboration between Primary and Secondary settings, future research should seek to understand if there are key differences for ECTs in navigating the social climate of different educational settings.

Chapter 3 Empirical Paper: Does attachment security priming enhance resilience in early career teachers?

3.1 Abstract

The third chapter in this paper reports on experimental research examining the impact of attachment security priming on early career teacher (ECT) resilience. The study also measured the relationship between resilience and attachment orientation whilst aiming to understand if colleagues or mentors were fulfilling attachment functions for ECTs. Participants completed two online questionnaires three days apart. ECTs (n=116) were allocated to either the intervention (n = 58) or control condition (n = 58). A mixed model ANOVA was used to understand the difference between the intervention and control conditions for total resilience and social resilience scores at times 1 (pre-prime) and 2 (post-prime). Differences in total resilience scores were found to be marginally significant at time 2 (p = .077) and significant for social resilience scores at time 2 (p = .017). Regression analysis found that those with higher attachment avoidance scores reported higher resilience scores prior to the manipulation. It is thought that this finding could be attributed to the isolated nature of COVID-related working practices. Regression analysis also found that those who scored higher (versus lower) on attachment anxiety were more likely to include a colleague or mentor within their attachment network. Finally, t-test analysis found that those who included a colleague or mentor within their attachment network had significantly higher resilience scores (p = .003) at time one compared to those who did not. The extent to which colleagues and mentors fulfilled different attachment functions for ECTs is explored and implications for key stakeholders are considered.

3.2 Introduction

This introduction presents the research literature and theoretical framework underpinning this empirical paper. The study aims to test the effect of attachment security priming (ASP), as a novel intervention to activate a secure internal working model and increase early career teachers' (ECTs') ratings of resilience. This is based on a more comprehensive literature review in Chapter 2. This paper aims to understand the effect of ASP upon resilience, whilst also exploring any association between attachment orientation and resilience ratings and

use of colleagues/mentors in fulfilling attachment functions. The aim of this research is to enable

practical implications for ECTs, schools and supporting practitioners through developing a better

understanding of the social dimension of resilience. This is a novel approach as research has yet to

consider ECT resilience through the lens of attachment theory. As such this addresses a gap in the

literature and contributes towards a newer wave of resilience intervention research (Masten &

Obradovic, 2006; Subosa, 2021).

3.2.1   Resilience and UK ECTs

The first five years of teaching are a period of vulnerability for teachers during which

attrition and drop-out rates are highest (Department for Education, 2018). At the start of a career

in teaching, individuals are less likely to have developed a robust teacher identity, and feelings of

self-efficacy can fluctuate according to their experiences, support, and context (Mansfield et.al,

2016). The literature highlights this as a significant formative period in which the experiences of

ECTs can have the greatest impact upon their career (Gu & Day, 2007). In response, the

Department for Education (DFE; 2022) have placed an increased focus on supporting ECTs within

UK policy by extending support from one to two years. The need for such policy intervention is

underscored by the latest figures that 20% of ECTs leave the profession during the first two years

of their career. Moreover, this figure increases to 33% of ECTs who leave within the first five years

of teaching (DFE, 2018). However, these statistics do not account for the increasing demands that

have been placed upon those within the profession over the last two years due to the COVID-19

pandemic. During this period, many ECTs will have missed out on training from their university

provider, continued professional development opportunities, and valuable time to collaborate

with their peers and be practically supported by their mentors. In addition, ECTs have been

expected to quickly adapt their practice to suit online delivery whilst managing competing

personal demands in relation to Covid measures put in place by the UK Government (Kim &

Asbury, 2020).

Whilst the full impact of Covid-19 on ECTs is still unknown, the literature highlights that teaching within the UK Education System has become increasingly challenging even prior to the pandemic. The teaching profession has seen an increase in performative cultures and increased accountability due to the need to evidence progress as part of the performance review process and pay progression; moreover, there has been a decline in teacher autonomy due to a highly imposed curriculum (Flores, 2020; Sachs, 2016). As a result of these increasing work pressures, the need to protect teacher resilience has developed. Projects such as (ENTRÉE) ENhancing Teacher REsilience in Europe (Entrée-Online, 2022) have been developed as a response to promote teachers' resilience and well-being in a profession that has become increasingly complex (Gratacos et al., 2021). Currently resilience research and interventions for ECTs within a UK context are limited (Kangas-Dick & O'Shaughnessy, 2020; Mansfield et al., 2016). Further understanding of ECT resilience is required to ensure retention within the profession amid the growing challenges (Gratacos et al., 2021; Kangas-Dick & O'Shaughnessy, 2020).

3.2.2   Defining resilience within teaching practice

Resilience is a term that has stimulated a vast amount of research over the last few decades (Beltman et al., 2011; Subosa, 2021). This can be attributed to the increasing prevalence of the positive psychology movement which aims to understand the protective factors that sustain individuals during times of adversity, rather than contributory risk factors (Simonton & Baumeister, 2005). The history of resilience research has been categorised into three waves: first was the identification of risk and protective factors, then the consideration of mechanisms involved in the development of resilience, and finally intervention studies (Masten & Obradović, 2006). This study is situated within the most recent wave of research as an empirical project assessing the impact of an intervention for enhancing resilience.

Resilience definitions vary between researchers and paradigms and there is yet to be a clear consensus regarding contributory factors and the measurement of key constructs (Luthar et al., 2000). However, definitions commonly refer to positive adaptation in adverse circumstances

(Rasmussen et al., 2019). Within this study, resilience was defined as "a dynamic process encompassing positive adaptation within the context of significant adversity" (Luthar et al., 2000, p. 543). Four resilience factors will be considered (social, emotional, motivational, and professional) as contributing towards an ECT's ability to positively adapt to their career in the teaching profession (Mansfield et al., 2012). This four-factor model of ECT resilience is based upon 200 Australian ECTs' definitions of 'teacher resilience' and can be seen in Figure 1. The current context of teaching for ECTs is defined as 'adverse' and their ability to overcome the daily challenges is considered a resilience outcome (Gu & Day, 2013). This study deploys a relational resilience framework in which relationships are deemed to be a central component in positive adaptation and subsequent protection of an individual's feelings of resilience (Jordan, 2004). From this perspective, resilience is impacted by individual factors such as prior relationship experience as well as contextual factors, such as the environments' capacity for connection (Jordan, 2004). In sum, this study will work from the theoretical assumption that positive adaptation is underpinned by our relationships. Therefore, teachers' relationship experiences will influence social, emotional, motivational, and professional factors which contribute to feelings of resilience.

Prior research with ECTs has typically focussed on the factors that contribute to burnout and attrition within the profession (Brown & Nagel, 2004). However, many researchers are now considering what keeps individuals in the profession, particularly throughout the transitional period into their career as a teacher during which risk factors are more salient. This move reflects a shift from a reactive perspective of teacher wellbeing to a more proactive stance (Wosnitza et al., 2018). In addition, this proactive stance has developed alongside thinking that has shifted from understanding resilience initially as an individual trait (Masten, et al., 1990) to a more holistic state of being which develops from a dynamic interaction between individuals and contextual factors (Ainsworth & Oldfield, 2019). Thus, in viewing resilience as a state rather than a trait, there is more opportunity to intervene and enable retention within the profession through intervention (Beltman et al., 2018; Silva et al., 2018).

Within the current study, teacher resilience is deemed to consist of "multiple individual and contextual factors which work together in complex, dynamic ways to shape the resilience of individual teachers in a developmental or cyclical way" (Beltman et al., 2011, p.188). This definition has been compared to the Bronfenbrenner ecological systems framework (Bronfenbrenner, 1992; Kangas-Dick & O'Shaughnessy, 2020) in that resilience is a fluctuating state according to the individual (traits and experiences), their microsystem (immediate environment), mesosystem (social connections), exosystem (indirect environment) and macrosystem (cultural and social values) within which they interact, work, live, and socialise.

Current research into ECT resilience has been heavily focussed on qualitative methods which have attempted to understand teachers' perceptions, individual experiences, and definitions (see Chapter 2) (Beltman et al., 2011; Subosa, 2021). Furthermore, Kangas-Dick and O'Shaughnessy (2020) recently conducted a systematic literature review into teacher resilience interventions, finding only ten experimental research designs, none of which focussed on the ECT population or were conducted in the UK. Of these ten, the interventions were centred around Cognitive Behavioural Therapy, Acceptance Commitment Therapy or mindfulness-based approaches. The current study therefore addresses a gap in the literature, as existing research has yet to quantify the association between UK ECT resilience and collegial relationships whilst considering the contribution of attachment theory as a tool to prime felt security.

3.2.3   Attachment theory and ECT resilience

Atwool (2006) argues that attachment quality is an integral component of the four areas deemed to be central to resilience (positive connections, culture, a supportive family, and particular individual characteristics), and asserts that "Attachment theory has much to contribute to understanding the processes underpinning resilience" (Atwool, 2006, p. 316). Similarly, Rasmussen et al. (2019) conducted a literature review entitled 'Attachment as a core feature of resilience' with the aim of identifying attachment as a common characteristic associated with what could be defined as 'resilient people'. From assessing the literature, the authors noted weak

to moderate correlations between resilience and attachment and concluded that secure attachment is associated with the presence of resilience. They further propose that having a secure attachment style may be a pre-requisite for positive adaptation. The current study builds on these findings and seeks to test them empirically to determine the (proposed) relationship between ECT resilience and attachment.

Attachment styles can be conceptualised as the ways through which individuals have internalised their patterns of care in the early years (Ainsworth, 1978). Patterns of neglect have been associated with avoidant attachment styles whereas patterns of inconsistent care have been associated with anxious attachment styles (Brennan et al., 1998). In contrast, patterns of care which consistently meet a child's needs have been found to lead to a secure attachment style (Ainsworth, 1978). These internalisations of patterns of care accumulate to create an internal working model (IWM) that shapes an individual's expectations of others (Bowlby, 1988; Mikulincer & Shaver, 2005). Attachment styles can be used to characterise IWMs and are measured along two dimensions; attachment-related anxiety (fear of abandonment) and attachment-related avoidance (fear of intimacy) (Brennan et al., 1998). Individuals who score high on the anxiety dimension seek relationship intimacy and are hypervigilant to the threat of abandonment; whereas individuals who score high on the avoidance dimension are uncomfortable with and avoid emotional closeness. Those who score low on both dimensions could be described as having a 'secure attachment' which is considered as a protective factor for wellbeing (Mikulincer & Shaver, 2007) and has been associated with the presence of resilience (Rasmussen et al., 2019).

Attachment styles will play an important role in how capable an ECT is in self-regulating their own emotions within the classroom and their ability to build and maintain healthy relationships with colleagues (Bowlby, 1988; Mikulincer & Shaver, 2005). ECTs' prior relationships will have shaped their internalised responses to managing their own distress. Individuals who score high on the attachment anxiety dimension may struggle to regulate their own emotions,

and this can be attributed to being in a state of hypervigilance over fear of abandonment or

rejection. Within the school workplace, they will seek intimacy with their colleagues and will be

more likely to build relationships. However, they may present with behaviours which make it

challenging to maintain the relationships or to use them in an effective manner. Whereas

individuals who score high in the attachment avoidance dimension will avoid emotional closeness

and prefer to be self-reliant. As such they may then be less likely to form or effectively use

collegial relationships. Finally, individuals with a secure attachment orientation (those who score

low in attachment anxiety and avoidance) will be more likely to make and maintain effective

collegial relationships, they will be able to regulate their emotions in response to challenge or

criticism and feel safe to share emotional and personal information with their colleagues. From a

relational resilience framework (Jordan, 2004), ECTs' resilience is built via relationships and the

four-factor model also suggest social factors play a significant role in sustaining ECT resilience

(Mansfield et al., 2012). Therefore, attachment orientation may impact an ECT's use of

relationships which enable positive adaptation to the profession and subsequent feelings of

resilience.

Individuals have both 'global' attachment styles which refer to their general IWM and

expectation of any interaction and 'relationship specific' styles which refer to their IWM within a

given interpersonal relationship (Collins & Read, 1990). Relationship specific styles develop

according to experiences in long-term relationships (Collins & Read, 1990). Research suggests that

these relationship-specific attachment styles can be primed to manipulate a secure IWM (Baldwin

et al., 1996); this can then change the way an individual with an individual feels, behaves and

processes information (Rowe et al., 2020). One type of supraliminal priming is visualisation, which

has been found to increase self-esteem (Carnelley & Rowe, 2007) and overall positive affect whilst

decreasing negative affect (Mikluncer & Shaver 2007; Mikluncer et al., 2001; Rowe et al., 2020).

Attachment security priming (ASP) can be used to increase positive affect by guiding participants

to visualize a person with whom they have a secure relationship; this activates a secure internal

working model. Once a secure IWM has been activated, then people act, think and feel like those

who are generally securely attached. For example, they can better regulate their emotions, will be more trusting of others, and may be more inclined to interact socially. Therefore, activating a secure IWM can impact the interpretation of information and subsequent feelings of individuals and potentially increase social behaviours that contribute to resilience. Thus, given that a global secure attachment style has been associated with the presence of resilience (Rasmussen et al., 2019), ASP may be an effective way to prime a secure IWM that can enhance an ECT's internal perception of social relations/interactions and subsequent resilience.

3.3   Methodology and Research Design

3.3.1   Research Aims and Hypotheses

3.3.1.1   Research Question 1) Does attachment security priming enhance feelings of resilience for early career teachers?

Understanding the impact of ASP upon ECTs' ratings of resilience was the main aim of this research. The use of attachment security priming (ASP) allows for testing causal processes as the attachment style of an individual is temporarily manipulated, and could therefore influence emotional, motivational, professional and social dimensions of teacher resilience (Mansfield et al., 2012). The first research question therefore considers the impact of ASP upon ECT ratings of resilience. Three subsequent hypotheses have been developed in relation to this question.

> **Hypothesis 1:** Attachment security priming (versus neutral priming) will increase early career teachers' ratings of resilience.
>
> **Hypothesis 2:** Before the prime, the two prime groups will not differ in teacher resilience scores. After the prime, the securely primed group will have higher resilience scores than the neutral primed group.
>
> **Hypothesis 3**: Participants who complete the attachment security priming visualisation task (versus those who complete the neutral visualisation task) will score higher on a felt security manipulation check measure.

3.3.1.2 Research Question 2) Is attachment orientation related to teacher resilience?

Given that research has highlighted an association between secure attachment and overall resilience (Rasmussen et al., 2019) this research seeks to understand and extend these findings to the ECT population. Thus, the second research question aims to understand the relationship between ECT resilience and attachment anxiety/avoidance pre-prime. Two hypotheses have been developed in relation to this question.

> **Hypothesis 4**: Early career teachers who score high in attachment avoidance or attachment anxiety (versus those who score low on these dimensions) will report lower resilience scores prior to the priming task.
>
> **Hypothesis 5:** Early career teachers with high avoidance or high anxiety scores (versus those with low) will report a higher increase in ratings of resilience after the attachment security priming (versus neutral priming).

3.3.1.3 Research Question 3) Do mentors and/or colleagues fulfil attachment functions for early career teachers and are these relationships associated with ratings of resilience?

Finally, research also suggests that a teacher's attachment orientation will impact the size of their social network and likelihood of seeking support (Wallace & Vaux, 1993). Given that social support has been conceptualized as a dimension of teacher resilience, understanding whether teachers use their mentors and/or colleagues at work as attachment figures, and if this is related to resilience scores, is the third research question. Three hypotheses have been developed in relation to this question.

> **Hypothesis 6:** Early career teachers who score high on the attachment anxiety dimension will be more likely than those who score low on the attachment anxiety dimension to include school mentors and/or colleagues within their attachment network.
>
> **Hypothesis 7:** Early career teachers who score high on the attachment avoidant dimension will be less likely than those who score low on attachment avoidance to include school mentors and/or colleagues within their attachment network.
>
> **Hypothesis 8:** Early career teachers who include their mentors and/or colleagues within their attachment network (versus those who do not) will report higher resilience scores pre-prime.

3.3.2   Research Design

A mixed group experimental design was used with ECTs who were in their first five years

of teaching to test the impact of ASP on reported feelings of resilience. The first independent

variable was the intervention group. This is a between group variable and had two levels, the

experimental group (those who received the ASP visualisation task) and the control group (those

who received the neutral visualisation task). The second independent variable is attachment

orientation. This generates two scores that assess attachment orientation on a continuum;

participants will have an *avoidance* scale score and an *anxiety* scale score. The dependent

variables were resilience and attachment network colleague/mentor inclusion. Resilience was a

within-subjects repeated measure with two levels, pre-prime and post-prime. The attachment

network inclusion was a between subject variable with two levels: inclusion of a mentor or

colleague, or lack of inclusion of a colleague or mentor (See Appendix C for a copy of the

measures used in part one and two of the study).

3.3.3   Participants

The participants selected for the study were ECTs within their first five years of qualifying.

Participants were recruited via various sources throughout April 2021 through to February 2022.

Initially, participants were recruited via emails sent from Reading University and Southampton

University PGCE co-ordinators (for both Primary and Secondary courses). The next round of

participants were recruited via emails from the School Improvement Officer and Special

Educational Needs Coordinators from Wokingham local authority. The study was also periodically

advertised on closed Facebook groups for UK ECTs and Educational Psychologists (in July 2021 and

January 2022).

In order to compute sample size estimation for each research question and hypotheses,

statistical power analyses were performed using G*Power (Version 3) (Faul et al., 2007). The

results from each analysis were conducted to detect a medium effect size (Cohen, 1988) for .80

power. Based on these estimations, a sample size of 128 was required. In this respect the

research was slightly underpowered in that 12 more participants were required to reach this threshold.

Of the 116 participants, 23 reported that they had *more* than 5 years teaching (i.e., potentially beyond the time-frame to still be considered an ECT). Of these 23, 4 were deemed to be data entry errors and manually corrected. Analysis was run with and without these 19 cases of participants with more than 5 years experience. No significant differences were found and therefore the decision was made to include these participants' responses in the final analysis. Even with the inclusion of these participants, the mean number of years teaching still fell within the requirements of an ECT (M=3.34, SD=2.80).

Given that the data collection was conducted during the pandemic, participants were asked to disclose their current working condition within the COVID-19 climate, participants could select from online (n=35), in school (n=52) and both online and in school(n=29). More than half of the sample were working either online or a mix of online and in person (n=64) and were therefore impacted by COVID-19 measures when taking part in the study. The potential impact of this will be discussed later.

Most participants were currently teaching in the primary sector (n=64); then, secondary (n=35), specialist provision (n=5) or unspecified (n=12). All participants were asked to select additional demographic information which described their schools. This information is presented in Table 4 below.

Table 4   *Summary of demographic information*

Demographic information	Frequency of selection
Small setting	10
Medium setting	20
Large setting	9
High proportion of students with English as an additional language	12
High proportion of students in receipt of free school meals	12
Urban setting	7
Rural setting	10

3.3.4   Measures

3.3.4.1   Teacher Resilience.

The Teacher Resilience Questionnaire (Mansfield, 2012; Mansfield & Wosnitza, 2015) was displayed to participants in part one and part two of the study. This measure consists of 26 items within four factors: emotional, social, motivational, and professional. There are four professional items (such as, '*I am organised in my school work*'), four emotional items (such as, '*if I felt upset at school I could manage to stay calm*'), four social items (such as, '*when I am unsure of something I seek help from colleagues*') and twelve motivational items (such as, '*I feel generally optimistic about school*'). Items were assessed using a 5-point Likert-type scale (1 = *completely agree* to 5 = *completely disagree*), thus participants gained total scores ranging from 26 to 130. This measure was validated within research by Wosnitza et al. (2018) who reported the Cronbach alpha (a measure of internal consistency) for the total and four subscales from a subset of teachers within Ireland as follows: total (α=0.92), emotional (α=0.83), professional (α=0.77), motivational (0.86)

and social (α=0.79). For this study, resilience total and social subscale totals were computed; the Cronbach's alpha for the total resilience scale was (α = .93) and for the social resilience scale (α = .69).

3.3.4.2 Adult attachment orientation

To assess teachers' attachment orientation, the Experience in Close Relationships questionnaire was used which had been adapted to ask about any close others not just romantic relationships, this is a 36-item self-report attachment measure developed by Brennan et al. (1998). The measure has two 18-item subscales: attachment avoidance and attachment anxiety. In the current study, internal consistency was high: attachment anxiety subscale (α = 0.89), attachment avoidance subscale (α = 0.86).

3.3.4.3 Attachment networks

The Attachment Network Questionnaire (Trinke & Bartholomew, 1997; and adapted by Luke et al., 2020) was used to assess the characteristics of teachers' attachment hierarchies. This measure asks participants to list 10 important individuals in their lives with whom they have a strong emotional connection. They are also asked to provide a range of background information, such as the nature of the relationship, frequency of contact and length of time that the person has been known to the participant. They then rank these individuals in terms of their importance in meeting four key attachment functions emotional connection, secure base, safe-haven, and death impact (Bowlby, 1988). A safe haven is a person who can be relied upon for support, a secure base creates a secure foundation upon which an individual feels able to explore, an emotional connection depicts the level of bond or connection, and death impact describes the impact a death of the attachment figure would have upon the individual. Participants do not have to rank every individual on every function but are asked to rank all for the emotional closeness function. Participants' responses were then dummy coded (1=inclusion of mentor/colleague, 0= Not included). Top rankings of colleagues or mentors for each question were then totalled.

3.3.4.4   Prime

To prime participants, the attachment security priming prompt devised by Bartz and Lydon (2004) and the neutral prime from the work of Mikulincer and Shaver (2001) were used. The participants were asked to complete a visualisation and writing task for 10 minutes, they could not proceed with the study until this time had elapsed and they had included at least 50 characters in their written response. Those in the secure prime were instructed to visualise a close relationship and note down associated thoughts and feelings. Those in the neutral prime were asked to visualise and write about a shopping trip during which they were alone.

3.3.4.5   Felt-security

Participants then completed a 10-item measure of felt-security as a manipulation check (Luke et al., 2012), this was found to have good internal reliability within this study ($\alpha = .91$). All measures used within this study can be found in Appendix E.

3.3.5   Procedure

Ethical approval was obtained from the University of Southampton's School of Psychology Ethics Committee and Research Governance (ERGO number: 62710.A2). Within the first Qualtrics survey, every participant was shown a virtual information sheet and consent form at the start of the session. The participants could take as much time as they required to carefully read through the information and consent sheet before giving their consent by marking five boxes (See Appendix C). Both forms explained that they could withdraw from the research at any point during the study without consequence. All participants were provided with a debrief statement at the end of the research. See Appendices C, D and F for ethical information and the information sheet, consent form and debrief from which were presented on Qualtrics.

After providing consent, access was granted to part one of the study (Experience in Close Relationships Questionnaire, the Attachment Network Questionnaire, and Teacher Resilience Questionnaire- in this order). At the end of part one, participants were randomly assigned to the

experimental condition (ASP, n = 58) in part two or the control condition (neutral visualisation task, n=58). Participants were not made aware of the different conditions.

Participants then received an email three days later with a link to either the experimental or control condition for part two of the Qualtrics survey. This included a priming task, a felt-security manipulation check and the Teacher Resilience Questionnaire (in this order). Participants had 48 hours to complete part two. Both parts of the study took on average forty minutes to complete and participants received a £10 Amazon voucher for their time if the full survey had been completed. Once the amazon voucher had been sent for completion, the participants' email address was deleted and there would subsequently be no way to identity their data for deletion.

3.4 Results

3.4.1 Data Preparation and Analysis

The analytical plan for this study was pre-registered with the Open Science Framework (https://archive.org/details/osf-registrations-przas-v1) before downloading the survey data from Qualtrics. Two changes were made to the plan following submission. Firstly, it was decided to run exploratory analysis of the use of colleagues/mentors in the ANQ due to such a high proportion of participants choosing to include and rank these attachment figures (n = 55). In addition, it was decided that the social subscale for the Teacher Resilience Scale would be coded and the results from the social subscale would be reported alongside resilience totals.

Data was input into SPSS (Statistics 27). Participants needed to have completed both parts of the survey, engaged in the priming task by responding with a relevant response of at least 50 characters, and not responded in a uniform manner across the measures to be included within the analyses. 116 participants were included and paid for their time; 58 had been randomly allocated to the experimental condition and 58 within the control condition.

Preliminary analyses were carried out on the data for each total or subscale score for all questionnaires to screen for violations to assumptions for parametric tests. Outliers were assessed by visual inspection of boxplots and interpretation of z-scores; normal distribution was assessed by visual inspection of histograms and Normal Q-Q plots, as well as Shapiro-Wilk tests, and homogeneity of variances was assessed by Levene's Test for Equality of Variances. Two outliers were identified for the Teacher Resilience Scale in part two of the study, these were defined as outliers given that they were more than 3 standard deviations from the mean (Tabachnick & Fidell, 2013). A winsorisation approach was taken and the two values were assigned one more unit from the next highest score (Tukey & McLaughlin, 1963). Descriptive Statistics for each variable and the time in which they were measured is displayed in Table 5.

Table 5   *Descriptive statistics for each measure at each time point*

	Total Means	Std. Deviation	Item Response Means	Std. Deviation
Resilience Pre-Prime	62.07	15.36	2.39	0.59
Resilience Post-Prime	61.91	17.71	2.40	0.74
Social Resilience Pre-Prime	9.16	2.90	2.29	0.72
Social Resilience Post-Prime	9.44	3.47	2.36	0.87
Attachment Avoidance	75.16	16.04	4.18	0.89
Attachment Anxiety	79.41	17.63	4.41	0.98
Felt-security manipulation check	43.07	10.96	4.25	1.00

3.4.2   **Research question 1: Does attachment security priming enhance feelings of resilience for early career teachers?**

Hypothesis 1: Attachment security priming (versus neutral priming) will increase early career teachers' ratings of resilience.

Hypothesis 2: Before the prime, the two prime groups will not differ in teacher resilience scores. After the prime, the securely primed group will have higher resilience scores than the neutral primed group.

Descriptive statistics were assessed for the total resilience and social resilience scores within both conditions (see Table 6 and Table 7). Both the full resilience scale and social subscale showed a *reduction* in scores from pre-to-post prime for the neutral condition and an *increase* in scores for those in the secure experimental condition. This interaction between prime and time can be seen in Figures 3 and 4.
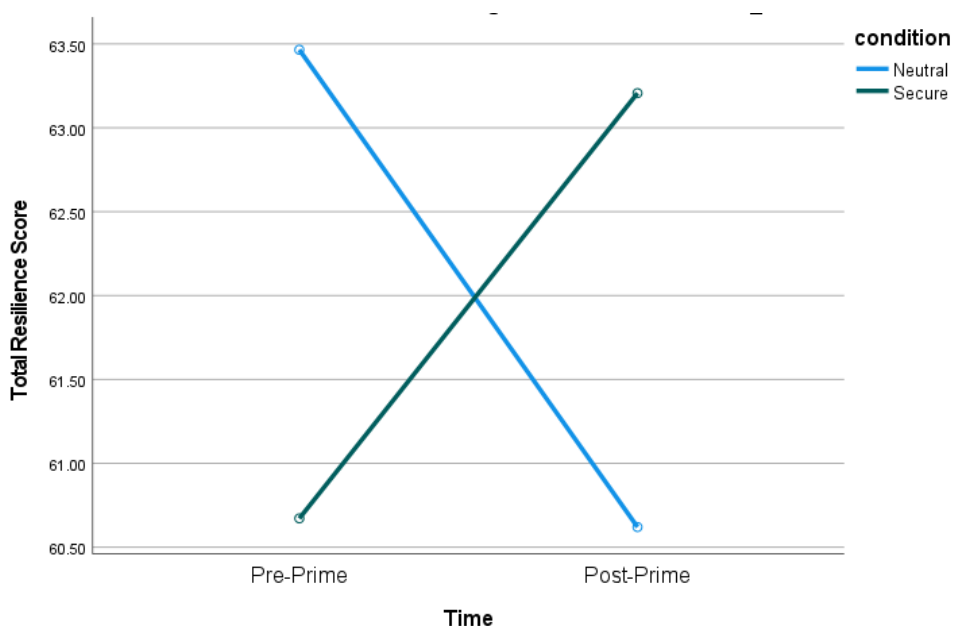
Figure 3.   *Total resilience scores by condition*
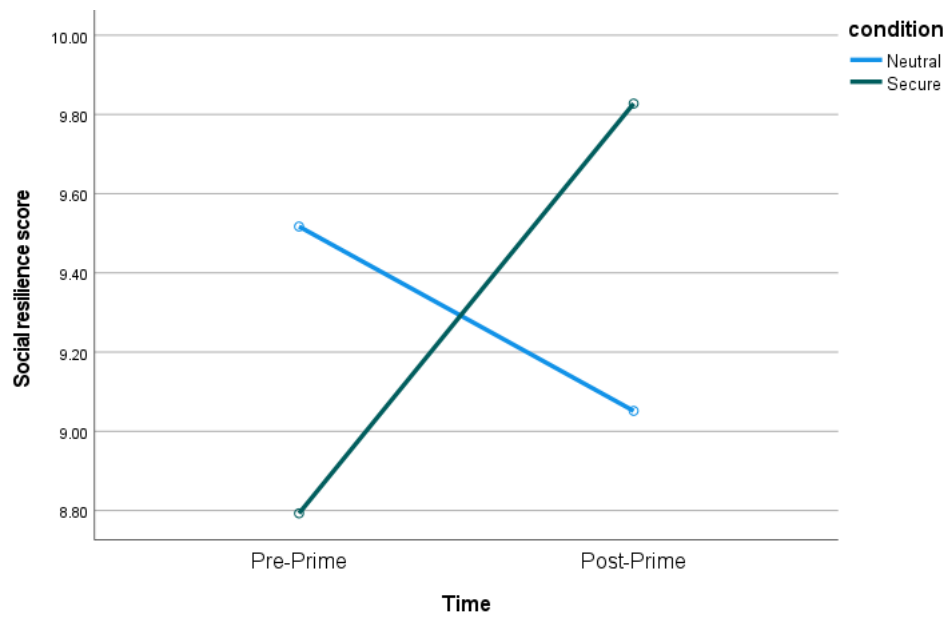
Figure 4. *Social resilience scores by condition*

Table 6   *Descriptive statistics for total resilience scores*

	Total Mean	Std. Deviation
Resilience Pre-Prime		
Neutral	63.47	16.05
Secure	60.67	14.65
Resilience Post-Prime		
Neutral	60.62	17.49
Secure	63.21	18.00

Table 7   *Descriptive statistics for total social resilience scores*

	Total Mean	Std. Deviation
Social Resilience Pre-Prime		
Neutral	9.52	2.66
Secure	8.79	3.10
Social Resilience Post-Prime		
Neutral	9.05	3.00
Secure	9.83	3.87

To determine whether the interaction between prime and time was statistically significant, a mixed-design 2x2 ANOVA with time (pre-prime and post-prime) as a within-subjects factor and prime (neutral and secure) as a between-subjects factor and resilience as the DV was conducted. The predicted interaction between the prime and time could be defined as marginally significant, $F (1, 114) = 3.19$, $p = .077$, $\eta_p^2 = .027$. Therefore, ASP increased participants' resilience scores (as stated in Hypothesis 1), and resilience scores were higher for those in the ASP priming versus neutral priming condition (as stated in Hypothesis 2); these improvements approached significance. Although I did not predict significant main effects for time or prime, I report the statistical results for them here for completeness: there was no significant main effect of time (pre -and post-prime) on resilience $F (1, 114) = .011$, $p = .918$, $\eta_p^2 = .000$, and there was no main effect of prime on resilience scores, $F (1,14)=.001$, $p = .969$, $\eta_p^2 = .000$.

To determine whether the interaction between prime and time was statistically significant, I conducted a mixed-design 2x2 ANOVA with time (pre-prime and post-prime) as a within-subjects factor and prime (neutral and secure) as a between-subjects factor and social resilience subscale scores as the DV. The predicted interaction between the prime and time was significant, $F (1, 114) = 5.91$, $p = .017$, $\eta_p^2 = .049$. Figure 4 shows that ASP compared to neutral priming significantly increased participants' social resilience scores. There was no significant main

effect of time F (1, 114) = .850, p = .358, η_p^2= .007 or prime on social resilience scores, F

(1,14)=.019, p = .889, η_p^2=.000.

Hypothesis 3: Participants who complete the attachment security priming visualisation task (versus those who complete the neutral visualisation task) will score higher on a felt security manipulation check measure.

To better understand the impact of the secure priming task in creating a secure IWM, an independent-samples t-test was conducted to compare felt security scores for participants in the experimental (secure prime) and control condition (neutral prime). There was no significant difference in the scores for the experimental (M=43.69, SD=10.08) and control (M=41.24, SD=9.90) conditions, t (114) = -1.32, p = .190, though the means were in the predicted direction.

3.4.3 Research Question 2: Is attachment orientation related to teacher resilience pre-prime?

Hypothesis 4: Early career teachers who score high in attachment avoidance or attachment anxiety (versus those who score low on these dimensions) will report lower resilience scores prior to the priming task.

To answer the second research question, a multiple linear regression was carried out with attachment avoidance and attachment anxiety scores as predictors and pre-prime resilience scores as the criterion. The results indicated that attachment anxiety and avoidance explained 17.2% of the variance in resilience scores pre-prime (R^2 = .17, F(2,113) = 11.71, p < .001). It was found that attachment avoidance significantly predicted resilience scores (β = .43, p < .001), but anxiety did not (β = -.08, p = .440). For every unit increase in the avoidance score there was a .43 increase in the resilience score.

A multiple linear regression was also carried out to investigate the relationship between attachment avoidance and attachment anxiety scores and social resilience subscale scores pre-prime. The results of the regression indicated that attachment anxiety and avoidance explained 14.0% of the variance in social resilience scores pre-prime (R^2 = .14, F(2,113)

= 9.23, $p < .001$). Similarly, it was found that attachment avoidance significantly positively predicted social resilience scores ($\beta = .40$, $p < .001$), but anxiety did not ($\beta = -.05$, $p = .629$). Counter to expectations, those high in avoidance reported higher social resilience. These results therefore do not confirm Hypothesis 4.

Hypothesis 5: Early career teachers with high avoidance or high anxiety scores (versus those with low) will report a higher increase in ratings of resilience after the attachment security priming (versus neutral priming).

To test examine whether the effect of the prime is the same for people with different levels of attachment anxiety and attachment avoidance, a moderated regression was carried out using PROCESS v.3.3 (Hayes, 2017). Attachment anxiety did not moderate the effect of prime condition on resilience ($R^2 = .034$, F(3, 112) = 1.33, $p = .269$). Moreover, attachment avoidance did not moderate the effect of prime on resilience ($R^2 = .018$, F(3, 112) = 1.33, $p = .576$). These results therefore do not confirm Hypothesis 5.

3.4.4 Research Question 3: Do mentors and/or colleagues fulfil attachment functions for ECTs and are these relationships associated with ratings of resilience?

Hypothesis 6: Early career teachers who score high on the attachment anxiety dimension will be more likely than those who score low on the attachment anxiety dimension to include school mentors and/or colleagues within their attachment network.
Hypothesis 7: Early career teachers who score high on the attachment avoidant dimension will be less likely than those who score low on attachment avoidance to include school mentors and/or colleagues within their attachment network.

To understand if attachment orientation was related to the chances of colleagues/mentors fulfilling attachment functions, a logistic regression was performed with inclusion of a colleague or mentor as the dependent variable and anxiety and avoidance subscales as predictor variables. A total of 116 cases were analysed and the full model significantly predicted colleague or mentor inclusion (omnibus *chi-square* = 39.36, df = 2, $p < .001$). The model accounted for between 28.8% and 34.8% of the variance in colleague inclusion, with 74.5% of the colleague inclusion successfully predicted and 70.5% of predictions for the lack of inclusion being

accurate. Overall, 72.4% of predictions were accurate. Table 8 provides coefficients and the Wald statistic for each of the predictors. This shows that only attachment anxiety reliably predicted colleague inclusion. The values of the coefficients reveal that each increase in anxiety score is associated with an increase in odds of inclusion of a colleague of 1.08 (95% CI 1.05 – 1.13). These results therefore confirm Hypothesis 6 but not 7.

Table 8   *Coefficients and the Wald statistic for each of the predictors*

	B	Wald	Sig
Attachment Anxiety	.086	19.17	<.001
Attachment Avoidance	.025	2.34	.126

Hypothesis 8: Early career teachers who include their mentors and/or colleagues within their attachment network (versus those who do not) will report higher resilience scores pre-prime.

Furthermore, to understand if including colleagues/mentor relationships in one's network was associated with increased resilience, an independent-samples t-test was conducted to compare total resilience scores pre-prime between participants who included a mentor and/or colleague in the ANQ and those who did not. There was a significant difference in the total resilience scores for participants who included a mentor and/or colleague (M=65.2, SD=16.31) versus those who did not (M=59.2, SD=13.99); t (114)=-2.13, p = .035. Therefore, participants who included a mentor and/or colleague within the ANQ reported higher total resilience scores pre-prime than those who did not, confirming Hypothesis 8.

An independent-samples t-test was also conducted to compare social resilience subscale scores pre-prime between participants who included a mentor and/or colleague and those who did not. Again, there was a significant difference in the social resilience scores for participants who included a mentor and/or colleague (M=10.00, SD=3.01) versus those who did not (M=8.39,

SD=2.51); t (114)= -3.09, p = .003. These results suggest that participants who included a mentor and/or colleague within the ANQ also reported higher social resilience scores pre-prime than those who did not include them.

Descriptive analysis was also explored to understand if colleagues or mentors were included in the ANQ and how they were rated. Participants could include up to 10 participants within the questionnaire and were asked to then rank these individuals according to different attachment functions. A total of 279 individuals were included within the ANQ by all participants, of these 57 were described as colleagues or mentors. Participants' inclusion totals ranged from 1 to 8 individuals (M=2.41, SD=1.53). See Table 9 for the frequencies and percentages for each question where a colleague and/or mentor was ranked first for an attachment function. On average 31.38% of top rankings across all questions were for colleagues and/or mentors.

Table 9   *The frequencies and percentages where a colleague or mentor was ranked first for each question*

ANQ Questions	Frequency	Percentage
Whom would you want to go to, to help you feel better when something bad happens to you or you feel upset, whether or not you actually go to them?	21	36.8%
Whom do you actually go to, to help you feel better when something bad happens to you or you feel upset?	18	31.6%
Whom would you like to be able to count on to always be there for you and care about no matter what?	14	24.6%
Who do you actually count on to always be there for you and care about no matter what?	14	24.6%
Whom is it important for you to see or talk with regularly?	18	31.6%
Whose death would have the greatest impact or effect on you, regardless of what the effect may be?	20	35.1%
Who can make you feel upset?	16	28.1%
Rank order all of the persons on the list in terms of to whom you feel most emotionally connected, regardless of whether the connection is positive, negative, or mixed.	22	38.6%

3.5   Discussion

3.5.1   Research Question 1) Does attachment security priming enhance feelings of resilience for early career teachers?

Statistical analysis shows marginal support for Hypothesis 1 and 2 (ASP increases ECTs' ratings of resilience). The interaction between prime and time upon resilience scores was approaching significance for total resilience scores and significant for the social resilience subscale scores. It was hypothesised that those in the ASP experimental condition would report higher scores on the felt security manipulation check compared to those in the control condition (Hypotheses 3). Although the felt security scores were higher for those in the experimental condition than the control condition, this difference was not statistically significant. Therefore, this hypothesis was not confirmed. However, it should be noted that participants could access this study in their own time and on any electronic device. The ASP task required participants to complete a visualisation and writing task; and participants could not move onto the next section until 10 minutes had elapsed. However, given that this was not a lab study, it is likely that participants may have encountered distracting stimuli within their environments during the ASP task which could have impacted their ability to engage. This may be why the felt security totals did not significantly differ between conditions. Future research should seek to employ more controlled conditions during the ASP task.

3.5.2   Research question 2) Is attachment orientation related to teacher resilience?

I predicted that ECTs high in either attachment anxiety or avoidance would report lower (pre-prime) resilience (Hypotheses 4 and 5). However, in contrast, I found that ECTs high in attachment avoidance reported higher resilience, and the results for attachment anxiety scores were not significant. This was not anticipated given that individuals who score high on attachment avoidance are less likely to form close bonds with their colleagues and be able to use their social network to enhance feelings of resilience. One explanation of these results may come from the Covid context; over half of the participants reported they were working either solely online (n=35)

or a mixture of in school and online (n=29). Perhaps, ECTs high on attachment avoidance reported

higher resilience scores due to the remote COVID-19 working conditions which produced fewer

social demands. For example, individuals who prefer to work alone and do not trust or rely on

others to meet their needs may have thrived during social isolation measures as there would have

been fewer opportunities to be physically present within both their professional and personal

relationships. Moreover, there are other known factors which are associated with ECT resilience,

such as teacher identity (Mansfield et al., 2016). Therefore, it could be that individuals high on

attachment avoidance may also have been found to be high in teacher identity and this may have

increased their reporting of total and social resilience scores.

Attachment orientation (avoidance/anxiety) did not moderate the impact of prime upon

resilience scores as hypothesised (5). This could be attributed to the lack of control over

extraneous variables during the priming task. Although a larger sample size would have been

desirable for conducting this moderation analysis as moderation effects tend to be small (Shieh,

2009).

3.5.3 Research Question 3) Do mentors and/or colleagues fulfil attachment functions for early career teachers and are these relationships associated with ratings of resilience?

The results suggest that at least half of the ECTs do use colleagues and mentors as

attachment figures. Moreover, they fulfil the criteria of attachment figures in that ECTs seek

proximity to them, use them as a safe haven, secure base and would mourn the loss of colleagues.

This finding aligns with previous work into colleagues as attachment figures (Luke et al., 2020).

When ranking their attachment network according to different functions (see Table 7) on average

31% of top rankings across all questions were colleagues. It should be noted however that on

average participants included a low number of people within their networks (M=2.41), therefore

this will have increased the odds of a colleague being ranked first. Despite this, the fact that

participants felt colleagues held enough value to be included within this small group, is evidence

of their powerful role within ECTs networks. Interestingly, across all questions, colleagues were most likely to be ranked first when asked to whom they felt most emotional connection. For this question 38% ranked a colleague or a mentor first; therefore, it appears that within this group of ECTs, mentors and colleagues were fulfilling a range of attachment functions and most likely to be fulfilling an emotional connection. This aligns with previous research which has highlighted emotional support as a priority for ECT collegial relationships (Sikma, 2019). This study therefore adds to a body of evidence, highlighted in Chapter 2, suggesting the important role colleagues play within ECTs' social networks.

Moreover, it was hypothesised that participants high in attachment anxiety would be more likely to include a mentor or colleague in their attachment network (Hypothesis 6) which was confirmed. This finding aligns with attachment theory, given that individuals characterised as high in attachment anxiety are more likely to keep individuals close for a fear of abandonment (Brennan et al., 1998). The results did not confirm Hypothesis 7 (those higher in attachment avoidance will be less likely to include a colleague/mentor). Therefore, ECTs high in attachment avoidance were not less likely to have collegial relationships within their close network. This finding may go some way in explaining the higher resilience scores for individuals high in attachment avoidance, given that in this study they were perhaps benefiting from social relationships. Finally, Hypothesis 8 was confirmed in that participants who included a mentor or colleague within their network reported higher resilience scores pre-prime compared to those who did not. Prior research has not yet empirically measured the association between collegial relationships and resilience. However, these findings align with prior research highlighting the important role of colleagues in ECT resilience (Fox & Wilson, 2009; Kutsyuruba et al., 2019; Le Cornu, 2013; Sikma, 2019). Taken together, these findings suggest the important role ECTs' relationships play in their resilience and how attachment orientation may impact their ability to develop and use resilience-enhancing relationships.

3.5.4   Study Strengths and Limitations

There are a number of strengths of this study which should be noted. Firstly, the use of ASP has enabled the study to test causal process given that the task temporarily manipulates an individual's attachment style to secure. Furthermore, the research questions are novel. This is the first study to test ASP in the ECT population to understand any impact upon ratings of resilience. Furthermore, research has yet to empirically study the relationship between attachment orientation and use of collegial relationships upon ECTs ratings of resilience. Therefore, this study addresses both a gap in the quantitative literature available on ECT resilience and uniquely applies attachment theory to the field of teacher resilience. This study therefore paves the way for future research bridging the field of resilience and attachment orientation to understand if these findings are replicable in different cultures and contexts.

There are also a number of potential limitations to the study that need to be acknowledged here. Firstly, the research was slightly underpowered for and moderation analyses, and a further 12 participants would have been required for 0.8 power. A further potential issue was the timing of the research during the Covid-19 pandemic and long window of data collection (April 2021 through to February 2022) which meant that ECTs who took part in the study may have been working within various different circumstances due to the fluctuations in restrictions and social distancing throughout this time period. This may have therefore impacted the potential for interactions with colleagues and the circumstances therefore could have been better suited to individuals high in attachment avoidance.

Furthermore, 23 participants reported that they had been working as a teacher longer than five years and therefore would not be defined as ECTs. Most of these participants completed the survey during the first round of data collection, during which the study had only been sent to university providers to forward on the information to their previous teacher training cohort. Therefore, these participants should not have had more than one year teaching, which is why we included them in the analyses. Four of these were clear data entry errors based

on the time which the data was collected, these responses were edited; however, others were more ambiguous and as such were not changed. In addition, it is possible that some participants included experience in schools prior to gaining their teaching qualification. However, analysis was run with and without this group of participants and no significant differences were found, therefore it was decided that they would be included within the final analysis.

A further limitation could be the conditions of the study, whereby participants were able to complete the priming task in their own time and on any electrical device. Therefore, many ECTs would have likely done this in their own homes, during which other stimuli could have distracted them from the task. For example, being on a personal electrical device whilst completing the ASP task meant that participants may have been able to check messages or emails which could have interfered with activating a secure IWM. This may explain the non-significant effect of prime on the felt security manipulation check and marginally significant results for total resilience scores.

Finally, a limitation of this study is that other variables known to be related to teacher resilience, such as teacher identity, were not controlled for in the linear regressions thereby leading to a limited understanding of this correlational relationship. A pragmatic decision was made to not include other control variables due to implications upon study duration; however further research is required which controls for other known factors that impact teacher resilience to better interpret these findings.

3.5.5   Directions for future research

To the author's best knowledge, this is the first quantitative study directly assessing ECT resilience, attachment orientation, and social networks in UK ECTs. Further studies are required with larger sample sizes to validate and further interpret the significance of these findings within different cultures or contexts. It will be important that future research is conducted during a more stable time where ECTs' working conditions are not varying as a

response to COVID-19. This study securely primed ECTs once, and the study conditions have the potential to be subject to a vast range of extraneous variables. Therefore, future studies should consider the logistics of monitoring participants during the ASP task, for example, visiting schools and setting up the task within the staff room. Furthermore, given that ASP appeared to increase total resilience scores after one instance, future research should aim to test if regular ASP tasks have a consistent impact upon resilience. A review of ASP literature found that repeated priming study designs created a cumulative effect over time and may be the most impactful (Rowe et al., 2020). Thus, future repeated priming designs would enable researchers to understand any long-term impact upon ratings of resilience.

Moreover, this study has found that attachment orientation (attachment anxiety and avoidance) contributes to 17% of the variance in ECTs' resilience scores. Future research should seek to extend this finding by measuring other factors such as self-efficacy or teacher identity (Mansfield et al., 2016) to understand if more of the variance in resilience scores could be accounted for using other variable dimensions.

Future research should also seek to examine if these results extend to ECTs internationally. Research suggests that definitions of resilience may be culturally bound (Ungar, 2008). Furthermore, school systems and the pressures which ECTs face will vary by country and culture. Research should seek to explore if these findings are mirrored or contrasted in other countries and cultures. This research used the four-dimension model of resilience (Mansfield et al., 2012) which had been shaped by Australian ECTs' views of resilience. This measure had been validated in various European countries (Wosnitza et al, 2018). However, it may be that there are culture-specific questions which embody ECT resilience within the UK education system.

Lastly, this study worked from the assumption that social resilience had a cascading impact upon resilience as a larger construct and therefore used the four-dimensional model. Future research may seek to develop a social resilience measure specific to UK ECTs'

descriptions and experiences of utilizing relationships to enable positive adaptation to the profession.

3.6   Conclusion

The results from this study suggest that ASP can increase the resilience scores of ECTs. Furthermore, resilience scores are higher for participants who included a colleague or mentor within their attachment network and individuals who score high on attachment anxiety are more likely to include a colleague or mentor. Finally, almost half of ECTs consider a mentor or colleague to be part of their attachment network and 31% of top rankings for attachment functions were colleagues or mentors. Top rankings described when an individual ranked a colleague as first for meeting an attachment function (see Table 9 for further information). These findings can be taken together to suggest that firstly, colleagues and mentor relationships significantly contribute to ECT resilience; and secondly, attachment orientation impacts whether these collegial relationships develop in the first instance. There is preliminary evidence to suggest that ASP can impact ECTs resilience, but further research is required within more controlled conditions and over a longer period.

The remainder of this paper will present three recommendations for ways that school leaders and stakeholders can practically apply these findings to protect and enhance ECT resilience.

3.6.1   Recommendation 1 - Leaders should encourage and value the development of social networks within their schools:

Given that having close collegial connections is associated with higher resilience scores, school leaders have an important role to play in creating an environment that facilitates the development and maintenance of these relationships. This will need to involve regular, planned opportunities which allow for collaboration on professional tasks but also social opportunities which allow for more personal emotional connection. It will be important to

acknowledge that when staff members leave a school community this may break important attachment relationships for multiple staff members remaining in their roles. Having strategies in place which allow for the development of new relationships may enhance resilience of remaining staff and prevent high attrition rates within the given school setting. Leaders will need to be aware of the importance of IWM and prior relationship experiences in how teachers will relate to one another, where some may need more support in place to build, use, and maintain effective relationships. School's link Educational Psychologists are well placed to offer systemic support to schools around creating a sense of belonging, relationships formation and maintenance, as well as promoting an awareness of attachment theory and implications for staff, children, and parents. Any planned actions to support collegial relationships should be written into policy and procedures for schools so that the ethos and relevant practices are clear for ECTs and new staff joining the community. A relevant practice from these results could be for leaders to encourage weekly social activities (such as fitness classes or visits to a local pub).

3.6.2   Recommendation 2 - All those involved in teacher training and ECT development should understand factors that contribute to resilience within the profession:

Currently, much of the teacher training curriculum and ECT framework within the UK focusses on evidencing meeting teaching standards and enhancing curriculum delivery (DFE, 2022). Rightly so, there is an emphasis on meeting the children's needs and evidencing progress. However, there is a distinct lack of consideration for teachers to reflect on their own emotional needs and active recognition for how they plan to manage the demands of the profession. It will be essential that all those involved in teacher training and ECT development are trained in understanding factors that contribute to ECT resilience and disseminate this information to new entrants to the profession. It will be essential that ECTs themselves are aware of the four factors that contribute to resilience and are supported in activating their social network. With the growing evidence base for teaching resilience over the past decade, initiatives are being developed internationally to support teachers in understanding protective factors which

enable them to sustain their resilience in a career with multiple challenges. For example, ENhancing Teacher REsilience in Europe is a project that 'aims to enable young European teachers to improve their resilience in the face of increasing demands of rapidly changing school contexts' (Entree-Online, 2022). It provides online learning opportunities for teachers and is based upon a team of international researchers' work. It states that "Teachers are assisted to draw on personal, professional and social resources, to "bounce back" and to also thrive professionally and personally, and to experience job satisfaction, positive self-beliefs, personal wellbeing and an ongoing commitment to the profession." (Entree-Online, 2022). This is a useful and free resource that leaders can share with ECTs in their schools as a starting point.

3.6.3   Recommendation 3 - Build in time for ECTs to reflect on their social network as part of wellbeing practices:

Given that the ASP task significantly increased social resilience scores, this suggests that activating a secure IWM can impact an ECTs ratings and perceptions of resilience. Therefore, tasks that encourage ECTs to visualise and describe loved ones could be embedded within wellbeing practices to support staff resilience. For example, encouraging staff to keep a picture of a loved one near them, or encouraging staff to talk about their loved ones with colleagues and share positive experiences they have had outside of the workplace. Activating relationship-specific attachment styles will ensure participants who may not have a secure global attachment orientation are temporarily primed to feel the benefits of a secure IWM to increase positive affect (Rowe et al., 2020) and enhance feelings of resilience.

Overall, this study is the first of its kind to empirically test the impact of ASP whilst exploring the relationship between resilience and attachment orientation. The findings have highlighted the important role collegial relationships play in ECT resilience and the role attachment orientation may play in impacting individual's ability to use relationships to support ECT resilience. Further research is required to better understand the relationship between attachment orientation and ECT resilience alongside other factors that may contribute. In

addition, it will be important that future research explores any longer-term impact of ASP for

ECTs' resilience.

Appendix A

3.7   Data Extraction table

	Author / date of publication / Geographical context	Aims/ Objective	Methodology	Concepts explored	Definition of resilience	Sample	Findings	Critical appraisal rating
1	Peters & Pearce (2012) Australia	What promotes teacher resilience and retention in the first two years of teaching?'	open-ended interviews at one time point The authors are part of a team of researchers involved in a longitudinal study (2008–2012)	relationships, school culture, teacher identity	'the process of, capacity for, or outcome of successful adaptation despite challenging or threatening	School leaders and first year teachers from 59 schools	Early career teacher resilience is enhanced when leaders: 1. take a personal interest in ECTs' development; 2. participate in hiring and induction practices; 3. model and foster trusting relationships 4. develop supportive and collaborative school cultures	8/10

					circumstances' (Masten, Best, & Garmezy, 1990, p. 425).			
2.	Sikma (2019) USA	What do ECTs support networks look like?	One-on-one interviews, social network map creation, and observations. This paper is derived from a larger study.	Social networks Social capital theory Collaboration	Job satisfaction and happiness	focused on four new elementary teachers.	ECTs need and value the following supports: emotional, contextual, relational, academic, and social. The number of strong ties and reciprocity in an ECT's social network is associated with overall satisfaction and happiness.	8/10
3.	Engvik (2014) Norway	What is the importance of networks for the professional development of ECTs?	Interviews and network maps	Social networks	Professional identity development	Four ECTs	Being acknowledged by colleagues is a key for professional development. The relational and emotional demands of the teaching profession produce a need for ethical guidance from colleagues and personal relationships.	8/10

| 4. | Bowles and Arnup (2016)

Australia | To examine the processes associated with ECT resilience | Quantitative-online questionnaire

An online version of the Resilience Scale for Adults (RSA; Friborg, Barlaug, Martinussen, Rosenvinge, & Hjemdal, 2005) was used to measure resilience. | Positive adaptability

Resilience | Gu and Day's (2007, p. 1302) definition of resilience of teachers, 'as the capacity to continue to ''bounce back' | 160 ECTs participated in the study. | Innovators were most resilient (Innovators are less likely to use traditional methods and procedures and prefer novel methods when finding solutions) Stabilisers (individuals resistant to change) were least resilient.

Resilience was closely associated with adaptive Functioning (ability to adjust to stress and work towards a goal). The strongest association involved taking action to perform a change (r = .56) and utilising social support (r = .51). | 10/10 |
|---|---|---|---|---|---|---|---|---|
| 5. | Mansfield, Beltman & Price (2014)

Australia | _ What personal and contextual challenges do early career teachers face? How so these challenges influence retention? | Qualitative-semi-structured interview | participants were asked to describe teacher resilience. | ECT resilience is their ' capacity to sustain their passion, enthusiasm and strong sense of fulfilment' | The participants were 13 ECTs. | Those participants with strong family and friend support networks maintained their commitment to the profession.

High proportion of participants had family members in the teaching profession

Participants intentionally became involved in the wider community beyond school to build supportive relationships.

Mentor relationship quality is important. | 8/10 |

					(Gu & Li, 2013, pp. 288–289).			
6.	Papatraianou & Le Cornu (2014) Australia	Understanding teachers' significant relationships in supporting their resilience .	two semi-structured interviews with 60 early career teachers and a member of the leadership team. Data collected in four stages over the course of a year with 17 early career teachers.	Informal relationships	Day & Gu (2013) "the capacity to manage the unavoidable uncertainties inherent in the realities of teaching" (p.39)	Two qualitative studies, a large scale study of 60 early career teachers in Australia and an intensive study of 17 early career teachers	Highlights the benefits of receiving support from a wide range of networks, whether they be in school, outside of school, or online. Important forms of support were being: - listened to and emotionally supported, - offered professional advice, - acknowledged and appreciated by others, - being professionally challenged. This social support could be from personal or professional relationships. ECTs who received this social support were more able to assume a positive teacher identity.	6/10
7	Le Cornu (2013) Australia	To identify the relationships which impacted on the early	two semi-structured interviews with 60 early career teachers An interview was also	How early career teachers interpreted their lived	Jordan's (2006) model of relational resilience.	60 ECTs	Resilience developed through their experience of positive relationships. Positive relationships with other teaching staff foster a sense of belonging and also provide emotional and professional support. Feedback from colleagues increased ECTs' self-belief.	7/10

		career teachers' resilience.	conducted with a member of the leadership team.	experiences and constructed meaning.			Family and friends provided emotional support.	
8	Kutsyuruba et al., (2019) Canada	interviews regarding induction and mentorship programs on the retention of ECTs	Mixed method study Only qualitative interview data was discussed in this paper	teachers asked to provide advice to new teachers regarding resilience and well-being	the ability to adjust to situations that require adaptation and to view the situations as opportunities to continue teaching and learning, even under the most adverse of conditions (Huisman	telephone interviews with 36 teachers within their first five years of teaching	Four key findings of factors which contribute positive adaptation under adverse conditions: - work-life balance - A positive mindset - reflective inquiry - use of the 3 C's (consult, connect, and collaborate). Consultation via mentors or trusted colleagues over problems, collaborating with more experienced colleagues, and connecting on a personal level to sustain mental health. ECTs' personal confidence and efficacy depend on access to supportive relationships. Collaboration provided practical benefits to ECTs which can increase time efficiency.	6/10

					et al., 2010; Patterson et al., 2004).			
9	Hobson and Maxwell (2017) England	Examining the extent to which competence, relatedness, autonomy Shaped the well-being of ECTs in England	secondary analysis of qualitative data (Heaton, 2004; Seale, 2011) generated between 2005 and 2013 for four separate studies.	Self Determination Theory Resilience as individual dispositions	well-being is enhanced when psychological needs for competence, relatedness and autonomy are fulfilled	43 Secondary ECTs	36% of all coded segments relate to relatedness and 28% for competence 6% for autonomy. Teachers' social connections to significant others both within school and their wider networks ('relatedness') was found to be the single most important factor for ECTs' well-being.	6/10
10	Tait (2008) Canada	To explore the relationships Between resilience, and commitment to	Four teachers were interviewed who reported a positive and optimistic attitude toward	Resilience Personal efficacy Emotional intelligence	Resilience is a mode of interacting with events in the environme	4 ECTs	All four teachers came to teaching from a series of other careers and jobs. All had had experience working with children prior to teaching and connections to a church community. All four recognized the signs of stress.	8/10

		the profession.	their experiences teaching.		nt that is activated and nurtured in times of stress.		In the interviews, participants told of a wide range of strategies they used to cope with stress, all four looked for social support and tried to take care of their health.	
11	Gu and Day 2013 England	How teachers perceived their capacities to be resilient.	Mixed methods Portraits of one beginning teacher and one mid career teacher who reported a high levels of resilience	Perceived capacity to be resilient	is influenced by individual circumstance, situation and environment and which is not a static state.	300 teachers in different phases of their careers in 100 primary and secondary schools in England	The relational conditions of the workplace were reported as the most important contributing factor to sustaining resilience for all participants. ECTs benefit from the support of strong school leadership and collaborative school cultures.	6/10
12	Rippon and Martin	Experiences of a group of 10 ECTS negotiating	Participants attended group interviews at four points during	Teacher identity	New teachers in schools with a	Ten postgraduate student teachers.	Many schools have individualistic work cultures which impact social relationships between colleagues. This affects induction procedures and	10/10

	(2006) Scotland	relationships in their new schools.	their first year to discuss different themes Lived experiences are plotted together in the story of 'Gemma'	Social context of schools	collaborative ethos will be able to acquire their positive teacher identity more easily than those placed in schools with more individualistic styles of working,		impedes the development of newly qualified teachers. Without sufficient induction, collaboration does not appear to take place. This is an issue as collaboration with colleagues contributes the development of a positive teacher identity, a key factor which is known to impact resilience.	
13	Burke et al., (2013). Australia	What are the relevant experiences of beginning teachers in their first four years of teaching? What influences them to remain in the	Mixed Methods Quantitative Online survey interviews to develop factors 31 factors to be sorted on the basis of which factors are most important in their decision to	Resilience is defined as ECTs capacity to stay within the profession	Mentoring Induction Teacher retention	258 eligible teachers completed the survey 42 completed telephone interviews	Quantitative analysis counted the number of times a factor was ranked best or worst in supporting them to remain in the profession. The results suggest that improving student engagement, experiencing professional challenges, and enjoying collegial support are the most important factors influencing teacher decisions to stay in the profession.	9/10

		profession? What strategies assist retention?	remain in the profession					
14	Jones, et al. (2013) USA	Is perceived fit with the school staff associated with higher levels of commitment to the profession.	Quantitative data collected at two time points in 2007 and 2008.	Early career teachers Commitment was seen as a resilience outcome Perception of fit was used to understand social support/interactions	Commitment-considered two definitions of commitment-to school and to teaching assignment.	ECTs from Michigan and Indiana. 185 teachers, 47 were special education teachers.	For both groups of teachers, perception of fit was a strong predictor of commitment to assignment and commitment to school. When novice teachers feel that support is available to them-and if they value this support then they feel more committed to their schools.	10/10
15	Kardos et al., (2001). USA	To clarify the principal's role in	Qualitative Interviews	Professional cultures	Colleagues	interview data gathered from 50	Within integrated professional cultures (those where teachers of all career stages collaborated) ECTs felt most supported.	6/10

		shaping the professional cultures that ECTs experience				first-year and second-year teachers	Principals play a key role in the development of an integrated professional culture.	
16	Fox and Wilson. (2009) UK	To understand ECTs' experiences of building professional relationships.	Qualitative Eight ECTs were interviewed. This was supplemented in Year 2 by a questionnaire. In the third year of the programme, 11 teachers (Including, the original eight) were surveyed using a network mapping Tool. Finally, three of the teachers (common to both	Social networks	Social networks	Three case studies, of teachers leaving one UK university's Post Graduate Certificate in Education,	Highlight the importance of: - trust and respect in establishing relationships, - finding 'peers' who they can reflect and collaborate with. Most in-school links were within departments. Personal/professional relationships with heads of departments and mentors were key in feeling welcomed into and part of a department. For ECTs, it was support from peers across school that were cited as most valued.	9/10

			samples) were then Interviewed.					
17	Johnson et al., (2014). Australia	_ To understand the interplay among individual, relational, and contextual conditions that operated over time to promote teacher resilience.	Qualitative interviews with 60 graduates who were beginning their teaching careers, also interviewed a member of the leadership team.	Resilience Social cultural and political	social conception of resilience	60 graduates	The five major themes were: _ Policies and practices _ Teachers' work _ School culture _ Relationships _ Teacher identity It was found that the most supportive schools: - promote a sense of belongingness and social competence, - provide transition and induction processes - develop a professional learning community Relationships should: - promote a sense of belonging and well-being. - foster professional growth	10/10
18	Castro, et al., (2010).	What strategies do new teachers	Qualitative interviews	Resilience strategies	''a dynamic within a social	fifteen first-year teachers	Resilient teachers demonstrated agency in the process of overcoming adversity	10/10

| | USA | employ in response to adverse situations? | | | system of interrelatio nships'' (Gu & Day, 2007, p. 1305). | | Help seeking becomes a way of self-preservation (eg- establishing one's own resilience). Participants with difficult mentoring relationships sought out their own ''adopted'' mentors. Participants also spent time with teacher friends. These social gatherings provided outlets for renewal and rejuvenation. | |

Appendix B

3.8   CASP appraisal checklists used for qualitative papers

Note. CT= Can't tell

	Was there a clear statement of the aims of the research?	Is a qualitative methodology appropriate?	Was the research design appropriate to address the aims of the research?	Was the recruitment strategy appropriate to the aims of the research?	Was the data collected in a way that addressed the research issue?	Has the relationship between researcher and participants been adequately considered?	Have ethical issues been taken into consideration?	Was the data analysis sufficiently rigorous?	Is there a clear statement of findings?	Are the results valuable?	Total score
1. Peters & Pearce (2012) Australia	Yes	Yes	Yes	Yes	Yes	CT	CT	Yes	Yes	Yes	8/10
2. Sikma (2019)	Yes	Yes	Yes	Yes	Yes	CT	CT	Yes	Yes	Yes	8/10

USA										
3. Engvik (2014) Norway	Yes	Yes	Yes	CT	Yes	CT	Yes	Yes	Yes	Yes	8/10
4. Mansfield, Beltman & Price (2014) Australia	Yes	Yes	Yes	CT	Yes	CT	Yes	Yes	Yes	Yes	8/10
5. Papatraianou and Le Cornu (2014) Australia	No	Yes	CT	CT	Yes	CT	Yes	Yes	Yes	Yes	6/10
6. Le Cornu (2013) Australia	Yes	Yes	Yes	CT	No	CT	yes	Yes	Yes	Yes	7/10
7. Kutsyuruba et al., (2019) Canada	No	Yes	CT	Yes	No	No	Yes	Yes	Yes	Yes	6/10
8. Hobson and Maxwell	Yes	Yes	No	CT	Yes	CT	CT	Yes	Yes	Yes	6/10

(2017) England										
9) Tait (2008) Canada	Yes	Yes	Yes	Yes	CT	CT	Yes	Yes	Yes	8/10
10) Gu and Day (2013)	No	Yes	Yes	Yes	No	CT	CT	Yes	Yes	Yes	6/10
11) Rippon and Martin (2006) Scotland	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10/10
12) Burke et al., (2013). Australia	Yes	Yes	Yes	Yes	Yes	CT	Yes	Yes	Yes	Yes	9/10
13) Kardos et al., (2001). USA	No	Yes	CT	Yes	CT	CT	Yes	Yes	Yes	Yes	6/10

14) Fox and Wilson. (2009) UK	Yes	Yes	Yes	Yes	Yes	CT	YES	Yes	Yes	Yes	9/10
15) Johnson et al., (2014). Australia	Yes	Yes	Yes	Yes	Yes	CT	Yes	Yes	Yes	Yes	10/10
16) Castro et al., (2010). USA	Yes	Yes	Yes	Yes	Yes	CT	Yes	Yes	Yes	Yes	10/10

3.9   Joanna Briggs Institute checklist for Quantitative studies

	Were the criteria for inclusion in the sample clearly defined?	Were the study participants and the setting	Was the exposure measured in a valid and reliable way?	Were objective, standard criteria used for measurement?	Were confounding factors identified?	Were strategies to deal with confounding factors stated?	Were the outcomes measured in a valid and reliable way?	Was appropriate statistical analysis used?	

		described in detail?								
17) Bowles and Arnup (2016)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10/10
18) Jones et al. (2013) USA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10/10

Mixed methods studies:

10) Gu and Day (2013)	Yes	Yes	Yes	Yes	CT	CT	Yes	Yes	8/10
12) Burke et al. (2013)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	10/10

Appendix C

3.10   Participant Information Sheet

Study Title: Relationships, Visualisation and Teaching

Researcher: Lauren Dobson

ERGO number: 62710

You are being invited to take part in the above research study. To help you decide whether you would like to take part or not, it is important that you understand why the research is being done and what it will involve. Please read the information below carefully and ask questions if anything is not clear or you would like more information before you decide to take part in this research. You may like to discuss it with others but it is up to you to decide whether or not to take part. If you are happy to participate you will be asked to sign a consent form.

What is the research about?

My name is *Lauren Dobson* and I am a *Trainee Educational Psychologist* at the University of Southampton in the United Kingdom. I am inviting you to participate in a study regarding your relationships and teaching experience. During the study you will also complete a visualisation task. I will be aiming to understand how we can enhance Newly Qualified Teacher's experiences within the classroom.

This study was approved by the Faculty Research Ethics Committee (FREC) at the University of Southampton (ERGO Number: *62710*).

Why have I been asked to participate?

You have been asked to take part because you are a newly or recently qualified teacher (within the last three years). You are receiving an invitation to participate because *either Reading/Southampton University or Wokingham local authority SENCO's have* agreed to forward to you the information about this study on the researcher's behalf. The researcher aims to recruit around 130 participants for this project.

What will happen to me if I take part?

You will complete two questionnaires three days apart which in total should take approximately 20 minutes of your time. You will complete a brief visualization task at time point two.

Are there any benefits in my taking part?

If you decide to take part in this study, you will receive a £10 amazon voucher for your time and your participation will contribute to knowledge in this area of research. *The voucher will be issued upon completion of the second questionnaire.*

Are there any risks involved?

It is expected that taking part in this study will not cause you any psychological discomfort and/or distress, however, should you feel uncomfortable you can stop the survey at any time.

What data will be collected?

The questions in this survey ask for information in relation to your age, gender, teaching experiences and relationships. *You will be asked to provide an email address which will only be used for sending your Amazon voucher: the email address will be stored separately to your data and will be deleted once you have confirmed receipt.*

Will my participation be confidential?

Your participation and the information we collect about you during the course of the research will be kept strictly confidential. Only members of the research team and responsible members of the University of Southampton may be given access to data about you for monitoring purposes and/or to carry out an audit of the study to ensure that the research is complying with applicable regulations. Individuals from regulatory authorities (people who check that we are carrying out the study correctly) may require access to your data. All of these people have a duty to keep your information, as a research participant, strictly confidential. The information you provide will not mean that you are identifiable, and your email address will be stored separately to any data from the survey. All *electronic data will be encrypted, and password protected. Only the researcher and their supervisor will have access to the data as part of the researcher's thesis project.*

Do I have to take part?

No, it is entirely up to you to decide whether or not to take part. If you decide you want to take part, you will need to tick a box on the consent form to show you have agreed to take part.

What happens if I change my mind?

You can withdraw your data from the study up until you have received your Amazon voucher. After that, we will delete your email address so will have no way of identifying your data for withdrawal from the study. Therefore, we will keep the information about you that we have already obtained for the purposes of achieving the objectives of the study only.

What will happen to the results of the research?

All data will be pooled and only compiled into data summaries or summary reports. Only the researcher and their supervisor will have access to this information. The information collected will be analysed and *written up as part of the researcher's thesis. Data may also be published in a journal and presented at conferences.* Research findings made available in any reports or publications will not include information that can directly identify you. The University of Southampton conducts research to the highest standards of ethics and research integrity. In accordance with our Research Data Management Policy, data will be held for 10 years after the study has finished when it will be securely destroyed.

Where can I get more information?

Should you have any further questions with regards to this study you can contact the researcher Lauren Dobson at: ld15g11@soton.ac.uk or the researcher's supervisor Katherine Carnelley at: K.Carnelley@soton.ac.uk.

What happens if there is a problem?

If you have a concern about any aspect of this study, you should speak to the researcher who will do their best to answer your questions.

If you remain unhappy or have a complaint about any aspect of this study, please contact the University of Southampton Research Integrity and Governance Manager (023 8059 5058, rgoinfo@soton.ac.uk).

Data Protection Privacy Notice

The University of Southampton conducts research to the highest standards of research integrity. As a publicly-funded organisation, the University has to ensure that it is in the public interest when we use personally-identifiable information about people who have agreed to take part in research. This means that when you agree to take part in a research study, we will use information about you in the ways needed, and for the purposes specified, to conduct and complete the research project. Under data protection law, 'Personal data' means any information that relates to and is capable of identifying a living individual. The University's data protection policy governing the use of personal data by the University can be found on its website (https://www.southampton.ac.uk/legalservices/what-we-do/data-protection-and-foi.page).

This Participant Information Sheet tells you what data will be collected for this project and whether this includes any personal data. Please ask the research team if you have any questions or are unclear what data is being collected about you.

Our privacy notice for research participants provides more information on how the University of Southampton collects and uses your personal data when you take part in one of our research projects and can be found at
http://www.southampton.ac.uk/assets/sharepoint/intranet/ls/Public/Research%20and%20Integrity%20Privacy%20Notice/Privacy%20Notice%20for%20Research%20Participants.pdf

Any personal data we collect in this study will be used only for the purposes of carrying out our research and will be handled according to the University's policies in line with data protection law. If any personal data is used from which you can be identified directly, it will not be disclosed to anyone else without your consent unless the University of Southampton is required by law to disclose it.

Data protection law requires us to have a valid legal reason ('lawful basis') to process and use your Personal data. The lawful basis for processing personal information in this research study is for the performance of a task carried out in the public interest. Personal data collected for research will not be used for any other purpose.

For the purposes of data protection law, the University of Southampton is the 'Data Controller' for this study, which means that we are responsible for looking after your information and using it properly. The University of Southampton will keep identifiable information about you for 10 years after the study has finished after which time any link between you and your information will be removed.

To safeguard your rights, we will use the minimum personal data necessary to achieve our research study objectives. Your data protection rights – such as to access, change, or transfer such information - may be limited, however, in order for the research output to be reliable and accurate. The University will not do anything with your personal data that you would not reasonably expect.

If you have any questions about how your personal data is used, or wish to exercise any of your rights, please consult the University's data protection webpage (https://www.southampton.ac.uk/legalservices/what-we-do/data-protection-and-foi.page) where you can make a request using our online form. If you need further assistance, please contact the University's Data Protection Officer (data.protection@soton.ac.uk).

Once you have confirmed receipt of your Amazon voucher your email address will be deleted and all data subsequently held will be anonymous.

Thank you for taking the time to read the information sheet and considering taking part in the research.

Appendix D

3.11   Consent questions

Please answer Yes;/No to the following questions:

1. I have read and understood the information sheet and have had the opportunity/understand how to ask questions about the study.
2. I agree to take part in this research project and agree for my data to be used for the purpose of this study.
3. I understand that should I withdraw from the study then the information collected about me up to this point may still be used for the purposes of achieving the objectives of the study only.
4. I understand that I will not be directly identified in any reports of the research.
5. Do you consent to taking part in this survey?
6. I consent to my email address being stored to link my data with part two of the study and to send my amazon voucher.
7. I understand that my email address will be removed from the researcher's records once the voucher has been awarded and I have confirmed receipt.

Appendix E

3.12   Qualtrics content

Project title- Does attachment security priming enhance resilience in newly qualified teachers?

Content of part 1 and part 2 of the survey

Version number 3, 8/10/2021

Ergo number: 62710

Background information

Today's Date:

Age:

Gender:

Years or Months spent teaching:

Context of school (tick all that apply):

 Mainstream Primary, Mainstream Secondary, Specialist provision, urban setting, rural setting, large setting (1000 students or more), Medium setting (500-1000), small setting (less than 500 students), High percentage of students in receipt of free school meals, High percentage of students with English as an additional language.

Current teaching context due to COVID 19:   In school, Online, Both (space for description of the split between online and in school teaching)

Measure for Adult Attachment styles. ECR: Experiences in Close Relationships Questionnaire (Brennan, Clark, & Shaver, 1998)

The following statements concern how you generally feel in your close relationships. Please indicate the extent to which you agree with each statement by writing the number from the scale on the line provided for each question. Please remember: we are interested in how you think/feel generally.

Strongly Disagree   Neutral   Strongly Agree

0   1   2   3   4   5   6   7   8

_____ 1. I prefer not to show people close to me how I feel deep down.

_____ 2. I worry about being abandoned.

_____ 3. I am very comfortable being close to others.

_____ 4. I worry a lot about my relationships.

_____ 5. Just when people start to get close to me I feel myself pulling away.

¬¬_____ 6. I worry that people won't care about me as much as I care about them.

_____ 7. I get uncomfortable when people want to be very close.

_____ 8. I worry a fair amount about losing my relationships.

_____ 9. I don't feel comfortable opening up to others.

_____ 10. I often wish that my loved ones' feelings for me were as strong as my feelings for them.

_____ 11. I want to get close to others but they keep pulling away.

_____ 12. I often want to merge completely with others, and this sometimes scares them away.

_____ 13. I am nervous when others get too close to me.

_____ 14. I worry about being alone.

_____ 15. I feel comfortable sharing my thoughts and feelings with those I am close to.

_____ 16. My desire to be close sometimes scares others away.

_____ 17. I try to avoid getting too close to others.

_____ 18. I need a lot of reassurance that I am loved by those close to me.

_____ 19. I find it relatively easy to get close to others.

_____ 20. Sometimes I feel that I force others to show more feeling, more commitment.

_____ 21. I find it difficult to allow myself to depend on others.

_____ 22. I do not often worry about being abandoned.

_____ 23. I prefer not to be close to others.

_____ 24. If I can't get those close to me to show interest in me, I get upset or angry.

_____ 25. I tell those close to me just about everything.

_____ 26. I find that others don't want to get as close as I would like.

_____ 27. I usually discuss my problems and concerns with those close to me.

_____ 28. When I'm involved in a relationship, I feel somewhat anxious and insecure.

_____ 29. I feel comfortable depending on others.

_____ 30. I get frustrated when those I am close to aren't around me as much as I would like.

_____ 31. I don't mind asking others for comfort, advice, or help.

_____ 32. I get frustrated when those close to me are not available when I need them.

_____ 33. It helps to turn to others in times of need.

_____ 34. When those close to me disapprove of me, I feel really bad about myself.

_____ 35. I turn to others for many things, including comfort and reassurance.

_____ 36. I resent it when those I am close to spend time away from me.

Attachment Network Questionnaire

Part A

List the significant persons in your life -- those persons to whom you currently feel a strong emotional tie, regardless of whether that tie is positive, negative, or mixed. List as many or as few persons as you deem necessary. You can list these persons in any order. In addition, please complete the other information requested about these persons.

First name/

Initials-

Please number individuals who have the same first name or initials eg

F.S 1

F.S 2   Relationship Sex

M/F   Age

(years)   Distance from You

1= same house

2= within a 10 minute drive

3= within 1 hour drive

4= within a day drive

5= more than a day drive Frequency of Contact

(visit, phone, write)

1= daily/almost daily

2= at least once/week

3= at least once/month

4= 3 to 4 times a year

5= approx. once/year

6= less than once/year   Amount of Time You Have Known Each Other (years)

1.

2

3

4

5

6

7

8

9

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10.

Please answer the following questions about the persons you listed in the previous section.

1a. In the previous section, did you list any person(s) who is (are) a work colleague?

No   Yes

1b. If yes, please provide the name(s) or initials of the person(s) who is (are) a work colleague that you listed in the previous section.

_____

_____

_____

2a. In the previous section, did you list any person(s) who is (are) your work supervisor/line manager?

No   Yes

2b. If yes, please provide the name(s) or initials of the person(s) who is (are) your work supervisor/line manager that you listed in the previous section.

_____

_____

Part C

Please refer to the list of persons that you provided. For each question, only rank those persons that apply. For a particular item, the person with whom it applies the most would receive a value of "1", the person with whom it applies the second most would receive a value of "2", and so on until you have run out of persons for which the item applies. You can use form below to provide your rankings.

A.   Whom would you want to go to, to help you feel better when something bad happens to you or you feel upset, whether or not you actually go to them?

B.   Whom do you actually go to, to help you feel better when something bad happens to you or you feel upset?

C.   Whom would you like to be able to count on to always be there for you and care about no matter what?

D.   Whom do you actually count on to always be there for you and care about you no matter what?

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E.	Whom is it important for you to see or talk with regularly?

F.	Whose death would have the greatest impact or effect on you, regardless of what the effect may be?

G.	Who can make you feel upset?

H.	Rank order all of the persons on the list in terms of to whom you feel most emotionally connected, regardless of whether the connection is positive, negative, or mixed. PLEASE RANK EVERYONE FOR THIS QUESTION

Name/

Initials	A. Want to go to	B. Actually go to	C.

Like to count on	D.

Actually

count on	E.

See/talk regularly	F.

Impact of death	G.

Makes you upset	H.

Emotional connection

1

2

3

4

5

6

7

8

9

10.

Teacher Resilience Questionnaire

Original questionnaire (26 items)

The following statements concern how you feel when working at the moment. Please indicate the extent to which you agree with each statement. Please remember: we are interested in how you think/feel at the moment.

1   TR-Prof   At the moment, I feel I can be flexible when situations change at school.
    Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

2   TR-Prof   At the moment, I feel I can quickly adapt to new situations at school   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

3   TR-Prof   At the moment, I feel I am well organised in my school work   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

4   TR-Prof   At the moment, I feel I can reflect on my teaching and learning to make future plans Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

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5   TR-Emot   At the moment, I feel if something went wrong at school I wouldn't take it too personally   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

6   TR-Emot   At the moment, I feel I could find the funny side of a challenging school situation   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

7   TR-Emot   At the moment, If I felt upset or angry at school I could manage to stay calm   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

8   TR-Emot   At the moment, I feel I can balance my role as a teacher with other dimensions in my life   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

9   TR-Mot   At the moment, I feel I am generally optimistic at school Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

10   TR-Mot   At the moment, at school I can focus on building my strengths more than focusing on my limitations   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

11   TR-Mot   At the moment, I feel I can make mistakes at school and see these as learning opportunities   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

12   TR-Mot   At the moment, In my role as a teacher I feel able to set goals and work towards achieving them Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

13   TR-Mot   At the moment, I feel I have realistic expectations of myself as a teacher   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

14   TR-Mot   At the moment, I feel that if I put my mind to something at school I can be successful   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

15   TR-Mot   At the moment, I feel I am good at maintaining my motivation and enthusiasm when things get challenging at school Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

16   TR-Mot   At the moment, I feel I can enjoy learning when I am at work   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

17   TR-Mot   At the moment, I feel like I can face challenges in my work   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

18   TR-Mot   At the moment, I feel that I am persistent in my work   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

19   TR-Mot   At the moment, I feel I can have control over my work life   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

20   TR-Mot   At the moment, I feel like It's important to me that I put in effort to do my job well   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

21   TR-Soc   At the moment, I feel that when I am unsure of something I can seek help from colleagues   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

22   TR-Soc   At the moment, I feel I am good at building relationships in new school environments   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

23   TR-Prof   At the moment, I feel that in my role as a teacher, I am a good communicator   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

24   TR-Soc   At the moment, I feel I can look at a situation a number of ways to find a solution   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

25   TR-Prof   At the moment, I feel I can view situations from other people's perspectives at work Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

26   TR-Soc   At the moment, I feel I can work to generally resolve conflicts with others   Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

Survey 2- emailed to participants three days later

Secure Visualisation and writing Task

We now want you to complete a visualization task.

Please think about a close relationship you have in which you find it easy to be close to the other person and feel very comfortable depending on the other person. In this relationship you don't worry about being abandoned or about the other person getting too close to you. It is crucial that the nominated relationship is important and meaningful to you, as well as being a current relationship in your life.

1. What is the nature of the relationship (e.g., romantic partner, friend, parent)?

2. How long have you known this person? Please indicate in years and (if applicable) months.

Now, take a moment and try to get a visual image in your mind of this person. What does this person look like? What is it like being with this person? You may want to remember a time when you were actually with this person. What would he or she say to you? What would you say in return? What does this person mean to you? How do you feel when you are with this person? How would you feel if this person was here with you now?

Please jot down your thoughts in the space provided below. You will have 10 minutes to complete this task. The experimenter will let you know when the 10 minutes are up. Remember that there are no wrong or right answers and you will not have to submit the work that you write, so feel free to write anything down. If you finish before the 10 minutes are up, please continue to think about the relationship and write down anything else that comes to mind about the relationship.

Please begin.

(Participants will be required to enter a minimum of 50 characters to be able to go to the next part of the survey)

OR

Participant Number:

Visualisation and writing Task

We now want you to complete a visualisation task.

We are interested in how people feel after thinking about particular topics. We would like you to write for 10 minutes about a supermarket trip you took recently on your own when you had no interaction with friends or relatives during the trip. Try to think of a particular time that you visited a supermarket to do a large or weekly shop and give information about the sequence of events that you completed as you moved around the store. For example, you may have selected a trolley and walked down the first aisle, picking up items as you went. Please try to give as much detail as possible about what you picked up or looked at, i.e., did you have to weigh an item or did you have to reach up to a top shelf?

Please jot down your thoughts in the space provided. You will have 10 minutes to complete this task. The experimenter will let you know when the 10 minutes are up. Remember that there are no wrong or right answers and you will not have to submit the work that you write, so feel free to write anything down. If you finish before the ten minutes are up, please continue to think about the scenario and write down anything else that comes to mind.

Please begin.

Felt Security

Please respond to the items below using the following 6-point rating scale.

1   2   3   4   5   6

not at all   very much

Thinking about the visualization task makes me feel …

_____ comforted

_____secure

_____supported

_____ safe

_____ loved

_____ protected

_____ better about myself

_____ encouraged

_____ sheltered

_____ unthreatened

Teacher Resilience Questionnaire

Mansfield, F.F. & Wosnitza, M. (2015). Teacher Resilience Questionnaire – Version 1.5. Perth, Aachen: Murdoch University, RWTH Aachen University.

Original questionnaire (26 items)

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       Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

2	TR-Prof	At the moment, I feel I can quickly adapt to new situations at school	Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

3	TR-Prof	At the moment, I feel I am well organised in my school work	Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

4	TR-Prof	At the moment, I feel I can reflect on my teaching and learning to make future plans	Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

5	TR-Emot	At the moment, I feel if something went wrong at school I wouldn't take it too personally	Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

6	TR-Emot	At the moment, I feel I could find the funny side of a challenging school situation	Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

7	TR-Emot	At the moment, If I felt upset or angry at school I could manage to stay calm	Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

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10	TR-Mot	At the moment, at school I can focus on building my strengths more than focusing on my limitations	Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

11	TR-Mot	At the moment, I feel I can make mistakes at school and see these as learning opportunities	Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

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13	TR-Mot	At the moment, I feel I have realistic expectations of myself as a teacher	Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

14	TR-Mot	At the moment, I feel that if I put my mind to something at school I can be successful	Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

15	TR-Mot	At the moment, I feel I am good at maintaining my motivation and enthusiasm when things get challenging at school	Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

16	TR-Mot	At the moment, I feel I can enjoy learning when I am at work	Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree

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Appendix F

3.13   Debrief form

[Title of project] Does attachment security priming enhance resilience in newly qualified teachers?

Debriefing Statement (written) (Version number 1, 26/01/21)

ERGO ID: 62710

The aim of this research was to understand the relationship between attachment orientation and feelings of resilience for newly qualified teachers. It is expected that previous and current relationship experiences will impact feelings of resilience. Your data will help our understanding of how to enhance newly qualified teachers' feelings of resilience. Once again results of this study will not include your name or any other identifying characteristics and the research did not use deception. A summary of research findings will be available at https://eprints.soton.ac.uk/ upon completion of the project in September 2022.

If you have any further questions please contact me at ld15g11@soton.ac.uk.

Thank you for your participation in this research.

If you have questions about your rights as a participant in this research, or if you feel that you have been placed at risk, you may contact the University of Southampton Research Integrity and Governance Manager (023 8059 5058, rgoinfo@soton.ac.uk).

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