Review

Thriving not just surviving: A review of research on teacher resilience

Susan Beltman [a],*, Caroline Mansfield [b], Anne Price [b]

[a] School of Education, Curtin University, GPO Box U1987, Perth, Western Australia 6845, Australia
[b] School of Education, Murdoch University, South Street, Murdoch, Perth, Western Australia 6150, Australia

ARTICLE INFO

ABSTRACT

Retaining teachers in the early stages of the profession is a major issue of concern in many countries. Teacher resilience is a relatively recent area of investigation which provides a way of understanding what enables teachers to persist in the face of challenges and offers a complementary perspective to studies of stress, burnout and attrition. We have known for many years that teaching can be stressful, particularly for new teachers, but little appears to have changed. This paper reviews recent empirical studies related to the resilience of early career teachers. Resilience is shown to be the outcome of a dynamic relationship between individual risk and protective factors. Individual attributes such as altruistic motives and high self-efficacy are key individual protective factors. Contextual challenges or risk factors and contextual supports or protective factors can come from sources such as school administration, colleagues, and pupils. Challenges for the future are to refine conceptualisations of teacher resilience and to develop and examine interventions in multiple contexts. There are many opportunities for those who prepare, employ and work with prospective and new teachers to reduce risk factors and enhance protective factors and so enable new teachers to thrive, not just survive.

© 2011 Elsevier Ltd. All rights reserved.

Contents

* Corresponding author. Tel.: +61 8 9266 2161; fax: +61 8 9266 2547.
E-mail addresses: S.Beltman@curtin.edu.au (S. Beltman), caroline.mansfield@murdoch.edu.au (C. Mansfield), a.price@murdoch.edu.au (A. Price).

1. Introduction

Teacher resilience is a relatively recent area of investigation. While the stresses that face teachers in their daily lives have been well documented (e.g. Goddard & Foster, 2001; Tait, 2008), more recently researchers have focused on teacher resilience i.e. what sustains teachers and enables them to thrive rather than just survive in the profession (e.g. Gu & Day, 2007; Kitching, Morgan & O'Leary, 2009; Sumsion, 2003). As the retention of early career teachers is a significant current concern in many countries (Scheopner, 2010), examining factors that sustain teachers as they move from the pre-service to the early career stage will assist in addressing these issues (Tait, 2008). Rather than consider the form of retention that is "physical continuation in the role", we focus on "quality retention" (Gu & Day, 2007, p. 1314), where motivation and commitment are maintained as teachers are able to meet the challenges encountered in their work and lives and "thrive professionally".

Initially the term 'resilience' was used to explain the capacity of individuals to adapt and thrive despite experiencing adversity (Garmezy, 1974; Masten, Best, & Garmezy, 1990). However, it has been subsequently shown that resilience is not solely a personal attribute, but is a complex construct resulting from a dynamic relationship between risk and protective factors (Benard, 2004). As an emerging field of research, and in part due to the complex nature of resilience, teacher resilience has been conceptualised in the literature in a range of ways (Bobek, 2002; Le Cornu, 2009). Such a range of conceptualisations is important to address the multi-dimensional nature of resilience, but also contributes to ambiguity about the nature of resilience and how to best examine this phenomenon. Teacher resilience has been investigated using a variety of methodologies, ranging from qualitative, in depth case studies to broader quantitative measures. In short, the literature regarding teacher resilience is varied in its theoretical basis and scope. The literature also has the potential to reveal implications for pre-service programmes, for schools, for employers and for the teachers themselves to ensure that teachers become and remain healthy, effective professionals.

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. What is missing however, is a comprehensive review of the current empirical research. This review aims to address this need by bringing together and synthesising the diverse body of current research, raising challenges and issues and pointing to areas for future work. Therefore the paper will provide a timely and unique contribution to the field, complementing existing bodies of literature that examine teacher attrition, stress and burn out. As suggested by Christopher Day:

> Research on teacher retention tends to focus on factors affecting teachers' decision to leave the teaching profession. Instead, what is required is a better understanding of the factors that have enabled the majority of teachers to sustain their motivation, commitment and, therefore, effectiveness in the profession (Day, 2008, p. 256).

Given these conditions, we aim to present a systematic review of recent empirical studies focusing on the following key questions:

(1) What methodologies have been used to examine teacher resilience?
(2) How is teacher resilience conceptualised?
(3) What are the key risk and protective factors for teacher resilience and how do these relate to each other?
(4) What are the implications for pre-service teacher education programmes, schools and employers?

2. Method

2.1. Parameters for the review

The selection process for relevant literature involved two phases. In *phase 1*, we searched education, social science, psychology and health science data bases (e.g. ERIC, Psycharticles, Science Direct, Proquest), specific publisher data bases (e.g. Sage Journals Online, Wiley Interscience) and web sites regarding teacher retention and resilience. Searches were limited to publications in English from the year 2000 onwards using the key terms 'resilience' and 'teach'. Given the recent nature of this topic, terms related to the authors' knowledge of the extant retention literature such as 'stress', 'burn out', 'coping', 'peer support', 'wellbeing' and 'optimism' were also used, where the focus is on what sustains teachers. The search resulted in 260

publications. In *phase 2*, we removed papers if they were duplicates, were not empirical studies, or were not published in peer-reviewed journals or conference proceedings. Although the review was aimed at the pre-service to early career phase, papers focusing on experienced teachers were included when they traced experiences over time, or shed light on teachers thriving in difficult situations. The resulting 50 papers form the basis of this review (see Appendix).

2.2. Analysis

The process of analysis began by dividing the selected papers between the authors and two research assistants. Each individual constructed a summary table for each of their papers, outlining the aim, how resilience was conceptualised, participants, method, key findings and implications. A summary paragraph was also written for each paper. The first author combined these details into a single table and checked any inconsistencies or missing information. A brief summary of each paper appears in the Appendix. Papers' key constructs or conceptualisations and definitions of resilience were identified and summarised. Factors that were seen as challenges (risk factors) or supports (protective factors) were identified and categorised, as were the implications proposed in the papers. The following section outlines the main findings.

3. Results

3.1. Overview of research methods

To gain an overview of the nature of the recent empirical research conducted, the first key question investigated in the review was: What methodologies have been used to examine teacher resilience? To address this question, the selected papers were categorised according to the country in which the research was located, the nature and size of the sample, the methodological approach used and the sources of data. The Appendix contains details for each study. The largest group of studies was set in the USA (17–34%), with 15 (30%) in Australia (see Table 1). This was not completely surprising given the location of the search (Australia) and that many available data bases originated from the USA. The issue of teacher retention is also an important one in these countries, as in the others with multiple papers. In a study from England more than one paper was written about the same research project (the VITAE project) which examined teachers' lives across the different career phases of 300 primary and secondary teachers. Four papers from the VITAE project, presenting different aspects of its findings, are included in this review (Day, 2008; Day & Gu, 2007; Gu & Day, 2007; Sammons et al., 2007).

Methodological approaches were classified as qualitative, quantitative or mixed methods. Most studies (*n* = 23) used qualitative methods with fewer than 30 participants (see Table 2). Sample size varied from 1 to 3235. The largest group of participants was early career teachers (*n* = 21), followed by experienced teachers (*n* = 14) and teachers at multiple career stages (*n* = 9). Six studies solely focused on pre-service teachers.

Consistent with the aim of understanding teachers' experiences, interviews were the most frequent source of data (see Table 3). Although multiple sources of data were generally used, only nine studies combined quantitative and qualitative data. Many studies developed their own surveys but where established instruments were used, these are listed in the Appendix. In addition, 19 papers collected longitudinal data (four from the VITAE project) over periods ranging from 2 months to 5 years.

Table 1
Location of studies.

Country of Research	Number of studies
USA	17
Australia	15
UK[a]	6
Canada	4
Ireland	3
Germany, Greece, Hong Kong, Portugal, Singapore	Each 1
Total	50

[a] Four studies from same project.

Table 2
Sample size and methodological approach.

Sample size	Actual range	Qualitative	Quantitative	Mixed methods	Number of studies
Not specified		2	0	0	2
<49	1–28	23	0	4	27
50–199	54–170	2	4	2	8
>200	211–3235	2	8	3	13
Total		29	12	9	50

Table 3
Sources of data.

Type of data source	Number of studies
Interviews	34
Questionnaires/surveys	17
Scales/validated instruments (2 online)	16
Documents	15
Observations	10
Online discussion	3
Focus groups	2
Student achievement	2
Drawings	1

Table 4
Examples of definitions of resilience.

Definition	Source
" a quality that enables teachers to maintain their commitment to teaching and their teaching practices despite challenging conditions and recurring setbacks"	Brunetti (2006, p. 813)
"capacity to overcome personal vulnerabilities and environmental stressors, to be able to 'bounce back' in the face of potential risks, and to maintain well-being"	Oswald et al. (2003, p. 50)
"using energy productively to achieve school goals in the face of adverse conditions"	Patterson et al. (2004, p. 3)
"capacity to continue to 'bounce back', to recover strengths or spirit quickly and efficiently in face of adversity"; "a dynamic construct subject to influence by environmental, work-specific and personal contexts"	Sammons et al. (2007, p. 694)
"a mode of interacting with events in the environment that is activated and nurtured in times of stress"	Tait (2008, p. 58)

In summary, the papers reviewed were mainly qualitative with small samples, aiming to understand the experiences and characteristics of teachers at varying career stages. Most studies came from countries where teacher attrition is a concern. Few studies explicitly focused on pre-service teachers and most examined particular cohorts over time or retrospectively. Some studies examined course or system level contextual strategies implemented to assist with retention and teacher development, but what is noted is a lack of intervention studies, particularly in relation to developing personal characteristics such as motivation and self-efficacy that have been found to be important in enhancing resilience.

3.2. Conceptualisations of resilience

The second question of interest was: How is teacher resilience conceptualised in the literature? In the papers that explicitly discussed resilience (*n* = 24) conceptualisations and definitions incorporated common ideas (see examples in Table 4). In summary, teacher resilience is a dynamic process or outcome that is the result of interaction over time between a person and the environment (e.g. Bobek, 2002; Day, 2008; Sumsion, 2003; Tait, 2008). Individual characteristics such as self-efficacy, confidence and coping strategies are important in overcoming challenging situations or recurring setbacks (e.g. Castro, Kelly, & Shih, 2009). Difficulties are not simply managed, but individuals are able to bounce back quickly and efficiently, persevere and thrive (e.g. Malloy & Allen, 2007). Successful adaptation occurs despite obstacles and personal wellbeing is maintained (Howard & Johnson, 2004). Reciprocal, mutually supportive personal, professional and peer relationships are important in this process (Sammons et al., 2007). The outcome is that teachers maintain job satisfaction and commitment to their profession (Brunetti, 2006).

It has been stated that the field of teacher resilience is an emerging one. In support of this notion, only 13 papers reviewed had the word "resilience" or "resiliency" in their titles, and of the papers that explicitly examined resilience, six did not define it. In order to reach the above explanation of resilience, multiple ideas were combined and further clarification and refinement of what is meant by 'teacher resilience' is still required in the literature. Approaching this task from multiple perspectives would add robustness to conclusions reached. Authors in the papers reviewed approached their examination of resilient teachers from different conceptual frameworks, although there was consensus across the papers that multiple individual and contextual factors work together in complex, dynamic ways to shape the resilience of individual teachers in a developmental or cyclical way.

Nearly half the papers (*n* = 26) did not explicitly examine resilience, but did address the question of what sustains teachers and enables them to thrive rather than just survive, particularly in the early stages of the profession. These papers could be grouped into three categories that related to the above conceptualisations of resilience: a focus on individual factors; on contextual factors; and on individual perceptions of, and responses to, specific contexts of teacher work. Individual factors examined included motivation (Sinclair, 2008; Watt & Richardson, 2008) and self-efficacy (e.g. Chan, 2008; Tschannen-Moran & Woolfolk Hoy, 2007; Tsouloupas, Carson, Matthews, Grawitch, & Barber, 2010; Woolfolk Hoy & Burke Spero, 2005). Contextual factors examined included professional development (Anderson & Olsen, 2006), induction and mentoring

(Fantilli & McDougall, 2009; Shank, 2005; Smith & Ingersoll, 2004), relationships with students (e.g. Hirschkorn, 2009) and with administrators and colleagues (Jarzabkowski, 2002; McCormack & Gore, 2008; Schlichte, Yssel, & Merbler, 2005). The remaining group of papers focused on teachers' perceptions of and responses to different contexts such as the passage of time from pre-service to initial teaching positions (Chong & Low, 2009; Demetriou, Wilson, & Winterbottom, 2009; Flores, 2006; Freedman & Appleman, 2008; Goddard & Foster, 2001; Goddard & O'Brien, 2004; Kaldi, 2009; Manuel, 2003). Other contexts could be particularly challenging such as teaching in difficult schools (Olsen & Anderson, 2007; Prosser, 2008), or working as a casual teacher (Jenkins, Smith, & Maxwell, 2009; McCormack & Thomas, 2005).

The above discussion has begun to draw together the varying definitions and explanations of resilience and their underlying conceptual frameworks. Continuing to examine different perspectives on teacher resilience will help further interrogate this construct.

3.3. Risk factors or challenges

A key question for this review of literature was: What are the key risk factors for teacher resilience? Conceptualisations of resilience include a common thread of adverse conditions or challenging situations that present as risk factors. The large body of research on teacher stress, retention and attrition has already documented many factors that provide challenges for teachers (see, for example, Borman & Dowling, 2008; Buchanan, 2010; Guarino, Santibañez, & Daley, 2006; Hong, 2010; Macdonald, 1999; Scheopner, 2010). While comparing factors identified in the two bodies of literature would be an interesting and important activity, it is beyond the scope of this paper. On the other hand, focusing solely on protective factors would limit the current paper. An additional point is that resilience may be evidenced only in times of adversity or when challenges are present. As Tait (2008, p. 58) indicated, it "is activated and nurtured in times of stress". A full understanding of teacher resilience also includes an understanding of the personal and contextual challenges or risk factors present for teachers. This section indicates the factors that studies indicated were likely to provide risk or challenge for teacher resilience.

3.3.1. Individual risk factors

According to Day (2008, p. 250) "teaching demands significant personal investment" but few of the papers reviewed explored personal challenges or difficulties with the most frequent being negative self-beliefs or confidence (Day, 2008; Fleet, Kitson, Cassady, & Hughes, 2007; Kitching, Morgan, & O'Leary, 2009; McCormack & Gore, 2008). The second most frequent personal risk factor was difficulty asking for help (Fantilli & McDougall, 2009; Flores, 2006; Jenkins et al., 2009), followed by a perceived conflict between personal beliefs and practices being used (Flores, 2006; McCormack & Gore, 2008). As the focus of the search was on factors that sustained teachers, the lack of intensive examination of personal challenges in the literature examined could perhaps be anticipated.

3.3.2. Contextual risk factors

There was, however, more extensive examination in the literature on the complex contextual challenges of teachers' lives and work. These could be grouped according to the contexts of the pre-service programme, the family, the school or classroom and the broader context of professional work. Challenges associated with *pre-service programmes* included unsuitable course structures faced by Indigenous Australian and Torres Strait Islander early childhood teacher education graduates during their course (Fleet et al., 2007). Other examples of difficulties included academic workload (Kaldi, 2009) and timetabling issues (Sinclair, 2008). *Family* contextual constraints included negative pressure to leave teaching (Olsen & Anderson, 2007),

Table 5
Classroom/school and professional contextual challenges.

Challenge	Number of studies
Classroom/school context challenges	
Classroom management/disruptive students	12
Meeting needs of disadvantaged students	7
Unsupportive/disorganised leadership staff	6
Lack of resources/equipment	5
Relationships with students' parents	5
Geographical/social isolation	3
Relationships with colleagues	2
Scrutiny of peers, parents, principal	2
Using material prepared by others	1
Professional work challenges	
Heavy workload, lack of time, non-teaching activities	6
Difficult schools, courses or classes	4
Externally imposed regulations	3
Poor hiring practices; insecurity	3
Curriculum/classroom knowledge	2
Unsupportive/no mentor	2
Low salary/poor funding	2

lack of infrastructure at home (Fleet et al., 2007) or balancing work and family commitments (Fleet et al., 2007; Smethem, 2007).

As well as challenges associated with pre-service programmes and with families, there were also those associated with the work of being a teacher. The most frequently identified challenges (see Table 5) related to two types of teaching contexts: the more proximal *individual school or classroom* context (e.g. disruptive students) and the broader *professional work* context (e.g. workload).

Behaviour management was the most frequent challenge of the *school or classroom context*. Howard and Johnson (2004), for example, interviewed resilient teachers in difficult schools who had all experienced frequent displays of violence and disorder, such as children "throwing furniture, punching, kicking and biting" (p. 406) and frequent verbal abuse from the students or parents. Demetriou et al. (2009) provided a vivid account of the challenges faced by 817 new graduates and argued that disruptive students, coupled with a lack of support, could lead to a "slump in confidence" (p. 459), and a decision to leave teaching. Many teachers in Australia begin their careers as casual, relief or substitute teachers, and beginning casual teachers have been found to face management difficulties (Jenkins et al., 2009; McCormack & Thomas, 2005). New graduates could not rely on behavioural strategies that were based on the need for rapport to be developed between the teacher and students. Their ability to follow through on consequences was limited as they were often in a transitory position. On the other hand, if they requested help from the school executive this could call into question their ability as a teacher and jeopardise their chances of future work.

The most common *professional work context* challenge was lack of time due to heavy workloads and non-teaching duties such as paperwork or meetings (e.g. Castro et al., 2009). High workloads, demoralising policy initiatives and lack of support negatively influenced teachers' commitment across all phases of experience in the VITAE project (Day, 2008). Overall in this study, teachers working in particularly challenging circumstances in secondary schools were at greater risk of losing their commitment to and motivation for teaching, with heavy workloads, poor student behaviour and unsupportive leadership cited as the most frequent negative pressures. Almost half of the new Canadian teachers surveyed by Fantilli and McDougall (2009) reported having thought about leaving teaching as a result of the challenges they faced.

Interestingly, although often facing challenges in their everyday work, many teachers actively sought challenges, particularly as they gained more experience and confidence. For example, Anderson and Olsen (2006) found graduates with 3–6 years of experience were looking for new roles and responsibilities. Teachers in difficult schools reported finding challenges "energizing and exciting" (Brunetti, 2006, p. 819). Identifying challenges and their impacts is important, but as the focus in this review is what sustains teachers, we also identified protective factors or supports for teacher resilience.

3.4. Protective factors or supports

The following section addresses the question: What are the key protective factors for teacher resilience? The literature was selected with the aim to examine what sustains teachers when difficulties arise, and a range of individual and contextual protective factors emerged.

3.4.1. Individual protective factors

In the face of challenges such as those already identified what kinds of teachers survive and thrive? Few studies used quantitative tools to measure the individual factors – most were inferred from qualitative research methods. Table 6 shows the number of papers reporting each category of individual protective factor. Key personal attributes included *altruistic motives* and a *strong intrinsic motivation* for teaching. Sinclair (2008), for example, examined the motivation and commitment of over 200 first year Australian teacher education students. Their motivation to teach was multidimensional and hierarchical, with intrinsic motivations (e.g. working with children, altruism) significantly higher than extrinsic motivations (e.g. career change, job conditions). Motives such as the status of teachers or perceiving teaching to be an easy job were not evident. Other studies similarly found a lack of extrinsic motivation in teachers (e.g. Chong & Low, 2009; Morgan, Ludlow, Kitching, O'Leary & Clarke, 2010).

Another key finding was that resilient teachers possess a sense of *self-efficacy*, feeling confident and competent, taking credit for and drawing sustenance from their accomplishments. For teachers to be resilient and effective, they need strong and enduring sense of efficacy (Day, 2008). "Teachers' self-efficacy is a little idea with big impact" (Tschannen-Moran & Woolfolk Hoy, 2007, p. 954), with "a profound effect on resilience and persistence" (Kitching, Morgan, & O'Leary, 2009, p. 54). Efficacy beliefs "appear to be most easily impacted in the early years of teaching experience and somewhat resistant to change once established" (Tait, 2008, p. 59).

The personal strengths and characteristics of resilient teachers were interrelated. Gu and Day (2007, p. 1311) found that having an inner motivation to teach, "an important professional asset of teachers", was associated with "a strong sense of professional goals and purposes, persistence, professional aspirations, achievement and motivation." Self-efficacy was an interactive process and a key component of resilience. While high self-efficacy was important for teacher resilience, self-efficacy could be enhanced as teachers encountered and overcame challenges in their teaching.

In another example illustrating the interrelationships between individual characteristics, Yost (2006) examined multiple views of ten successful early career teachers' personal and professional qualities. The teachers identified knowing your students, perseverance, patience, showing enthusiasm, having a positive attitude, being organised, creativity and being personable. Observations indicated that the teachers were able to meet their students' needs, create a

Table 6
Individual protective factors.

Protective factor	Number of studies
Personal attributes	
Altruism; moral purpose; influence of faith	8
Strong intrinsic motivation – sense of vocation	7
Tenacity; perseverance; persistence	7
Positive attitude; enthusiasm; optimism	4
Not primarily motivated by extrinsic rewards	3
Sense of humour	3
Emotional intelligence; emotional stability	2
Gender – females use more active coping strategies	2
Patience	1
Flexibility	1
Willingness to take risks/accept failure	1
Self-efficacy	
Sense of competence, pride, confidence	8
Internal locus of control; belief in ability to make a difference	6
Self-efficacy increases with experience	3
Coping skills	
Proactive problem-solving skills including help-seeking	5
Able to let go, accept failure, learn + move on	3
Use of active coping skills	3
High levels of interpersonal skills, strong networks; socially competent	6
Teaching skills	
Know students; help them succeed; high expectations	4
Skilled in range of instructional practices	3
Confidence in teaching abilities	2
Creative + explore new ideas	2
Professional reflection and growth	
Self-insight, self-evaluation, reflection	5
Professional aspirations	5
Professionally proactive - act as mentors, role models, leaders	4
Committed to ongoing professional learning	4
Self-care	
Take active responsibility for own wellbeing	3
Significant supportive relationships	3
Type of qualification	1

positive, supportive classroom climate, and use a range of instructional practices along with critical reflection and problem-solving strategies to cope with challenges. Their principals noted strengths such as the ability to vary instruction to meet student needs, collaborate successfully with parents and other staff, take on leadership roles and volunteer to assist at school events.

On a positive note, rather than being regarded as innate attributes (Day & Gu, 2007), the characteristics of resilient teachers can be learnt (Howard & Johnson, 2004). Castro et al. (2009) viewed resilience as a process of adaptation rather than a set of individual attributes. In this process individuals are regarded as active agents who employ strategies to overcome adversities faced in their environment. Many papers offered recommendations for pre-service programmes, such as developing various personal attributes and skills, building a climate of resilience at university and remaining connected with graduates into the early years of teaching. These will be discussed later in this paper, although recommendations for the teachers themselves, as active agents, were generally absent from the literature reviewed.

3.4.2. Contextual protective factors

Many papers (*n* = 40) referred to important contextual supports that could be considered as protective factors for teacher resilience (see Table 7).

> ...the provision of responsive and differentiated support to meet teachers' professional and personal learning needs at different times in their work and lives can help counter declining commitment trajectories, enhancing the continuity of positive development of teachers' professional commitment and, thus, their effectiveness (Day & Gu, 2007, pp. 439–440).

School administrative staff and structures were supportive when leadership was strong, open, and well-organised, resources fairly distributed and encouraging feedback provided. "Strong caring leadership" is a major source of personal support for teachers (Howard & Johnson, 2004, p. 412). New teachers could be assisted by ensuring they are not required to teach out-of-field (Bobek, 2002), not assigned the most difficult classes (Hirschkorn, 2009) and that their successes and

Table 7
Contextual protective factors.

Contextual support	Number of studies
School/administrative support	21
Mentor support	14
Support of peers and colleagues	14
Working with the students	13
Characteristics of pre-service programme	3
Support of family and friends	2

contribution to the school are recognised (e.g. Sumsion, 2004). Visible and continued practical support in instructional leadership and behaviour management is crucial (e.g. Goddard & Foster, 2001), but Tschannen-Moran and Woolfolk Hoy (2007) also found meaningful feedback from school leaders was so infrequent that it was irrelevant in shaping teachers' efficacy judgements.

Mentor relationships could provide valuable support for early career teachers, especially if the mentor was positive, pro-social, professional (e.g. Olsen & Anderson, 2007) and from the same teaching area (Smith & Ingersoll, 2004). Well-designed and well-funded mentor programmes where graduates have some input can offer benefits such as increased retention rates, enhanced self-reflection and problem-solving abilities, higher levels of self-esteem, positive attitude and confidence, and reduced feelings of isolation and stigma regarding asking for help in both pre-service and early career teachers (e.g. Fantilli & McDougall, 2009). Where formal mentor programmes were unavailable or ineffective, new teachers would seek out their own mentors (Castro et al., 2009) with a powerful, positive impact (Yost, 2006).

Peers from the pre-service course could provide informal support for new teachers (e.g. Freedman & Appleman, 2008). Anderson and Olsen (2006) suggested that work colleagues are an important source of hope and inspiration, assisting educators to cope with work difficulties and sustain their commitment, particularly in very challenging situations (Brunetti, 2006). Colleagues could boost morale (Howard & Johnson, 2004) and others' positive outlook could be contagious (Jarzab-kowski, 2002).

School students were not originally envisaged by the reviewers as sources of contextual support but the papers reviewed showed that students could provide supports as well as challenges for teacher resilience. Brunetti's (2006) inner city teachers had a deep respect for the way their students dealt with and overcame difficult circumstances and felt a powerful responsibility and commitment to them. Positive student–teacher relationships sustained teachers in the face of challenges (Kitching, Morgan, & O'Leary, 2009).

3.5. Relationship between risk and protective factors

Many challenges or risk factors and many supports or protective factors have been identified and most papers in this review attempted to illustrate the complex, dynamic relationships between them. Some studies looked at the relationship between particular factors, others identified factors most relevant over time at different career stages, and some explored the interrelationship of specific characteristics to form typologies of teachers.

Considering the relationship between particular individual and contextual factors, Yost (2006, p. 70) found that a perceived unsupportive school administration could induce "high efficacy teachers" to move to a school where they saw a better fit between themselves and the school philosophies and practices. According to Yost, a positive, supportive school environment, however, may not be enough to assist a struggling teacher to achieve success. In contrast, two related Irish studies found that positive events in teachers' lives "had a much stronger lifting of teachers' self-efficacy than the lowering effect of negative events" (Kitching et al., 2009, p. 54). Morgan, Ludlow, Kitching, O'Leary, and Clarke (2010), in their study of 700 beginning primary school teachers in Ireland, confirmed these findings. The presence or absence of positive experiences had a stronger impact on teacher efficacy than negative experiences. In addition, the frequency of experiences (at the local level) was a stronger influence than their intensity. Therefore, it was concluded that removing negative experiences is not enough to promote the commitment and efficacy of early career teachers since frequent positive experiences (such as positive relationships with students) are far more influential. Teachers were able to cope with negative experiences, as long as they had regular, local positive experiences in their schools and with their students.

Another approach to address the complex relationship between individuals and contexts was to identify different stages or phases in teaching careers and specific factors prominent in each phase. For instance, the VITAE project outlined six professional life phases relating to experience, rather than age or responsibilities (Day, 2008). The six phases were: 0–3 years – commitment: support and challenge; 4–7 years – identity and efficacy in the classroom; 8–15 years – managing changes in role and identity: growing tensions and transitions; 16–23 years – work-life tensions: challenges to motivation and commitment; 24–30 years – challenges to sustaining motivation; and 31+ years – sustaining/declining motivation, coping with change, looking to retire (pp. 247–9). As teachers moved through the phases, they reported increased perceived effectiveness, but each phase presented different challenges. For example, beginning teachers (0–3 years) were in the phase Commitment: Support and Challenge. An important feature in this phase was developing their sense of self-efficacy in the classroom, with the support of school or departmental leaders facilitating this, and poor pupil behaviour having a negative impact.

The second phase (Identity and Efficacy – 4–7 years) was characterised by a sense of increased confidence about their effectiveness as teachers, but managing heavy workloads had a negative impact. Similarly, Anderson and Olsen (2006) found that teachers in the first and second year of their career spoke about their feelings of being tired and over-whelmed and needing "survival support" such as mentoring and observing and being observed by more experienced teachers. Their focus was on classroom management and logistics. Teachers in their 3rd to 6th years expressed different interests and were looking outside their classrooms for new challenges such as leadership roles and exploring larger, macro issues.

In other studies identifying stage differences, Goddard and Foster (2001, p. 353) reported six stages and emphasised the powerful influence that initial teaching experiences have on the rest of a career. Similarly, Hirschkorn (2009) investigated beginning teachers and found differences as they moved through their first practicum, second longer practicum, first teaching appointment and second appointment. Tschannen-Moran and Woolfolk Hoy (2007) examined the broader stages of novice and experienced teachers and found differences in the sources of their self-efficacy. For example, newer teachers tended to rely on comparing themselves with observed teachers or obtaining affirming comments from others. More experienced teachers could rely on memories and previous experiences of success to assist them in judging themselves as competent teachers.

In a final approach to address the complex relationship between individual and contextual factors, several studies reported how various characteristics clustered together to form typologies. Reporting all the details of these is beyond the scope of this paper, but each found types of teachers who would be more resilient and those less likely to be resilient and more in need of specific interventions. Klusman et al.'s (2008) large, quantitative study of German teachers identified four types of teacher self-regulatory behaviour. These were: (H) type: healthy–ambitious, high scores on both occupational engagement and resilience; (U) type: unambitious, low occupational engagement but high resilience; (A) type: excessively ambitious, high on engagement and low on resilience; and (R) type: resigned, low engagement and low stress resistance. Healthy-ambitious (H-type) teachers had the lowest ratings on emotional exhaustion, the highest ratings on job satisfaction, and their students reported a significantly more positive, motivating experience. These were seen as those with the best adaptive pattern, whereas the excessively-Ambitions (A-type) who strived for perfection but had difficulty with emotional distancing were seen to be at long-term risk both professionally and personally.

In another study examining the interrelationship of specific factors, Watt and Richardson (2008) examined characteristics such as motivation, professional engagement and career aspirations of over 500 students in 1-year Australian teacher education programmes and found three distinct profiles. The profiles were the same across genders and programme (primary/elementary, secondary, etc.). Highly Engaged Persisters (45%) saw more intrinsic rewards in teaching and aspired to stay in teaching for their entire career. Highly Engaged Switchers (27%), on the other hand, were from more affluent backgrounds and typically decided to try teaching for 5 years and keep other options open. A third group, Lower Engaged Desisters (28%), were reported to have become disaffected during their university studies and were not comfortable with the fit between themselves and teaching as a career path because of bad practicum experiences or the realisation of the work involved in teaching. This group was more concerned with extrinsic rewards from teaching.

Other typologies relating to commitment and retention were reported. Smith and Ingersoll (2004, p. 688), in their survey of 3235 beginning US teachers, examined three groups based on their career trajectories: Leavers (14%; beginning teachers leaving the profession at the end of their first year), Movers (15%; beginning teachers moving to a different school at the end of their first year) and Stayers (71%; beginning teachers remaining in the same school to teach for a second year). New teachers were more likely to leave or move if they were employed as part-time, itinerant or substitute teachers, or were in special education. Olsen and Anderson's (2007, p. 9) interviews with fifteen early career urban teachers also revealed three groups but they were labelled differently: Stayers (40%) planned to continue teaching indefinitely; Uncertains (40%) could not speculate about their future or planned to leave after teaching for a while; and Leavers/Shifters (20%) wanted to move into other education roles and were already preparing for the future by taking on multiple education-related roles. Smethem's (2007) interviews with eighteen beginning teachers also revealed a similar typology. Career Teachers (50%) were committed to teaching as a long-term, permanent career with ambitions for remunerated promotion; Classroom Teachers (22%) were content to remain for a long career in the classroom with pupils; and Portfolio Teachers (28%) saw teaching as a temporary career (p. 470).

Finally, the Vitae Project in the UK, as already indicated, described different stages of professional teaching careers (Day, 2008), but went beyond this to examine each stage in detail, finding different types of teachers within each stage in relation to their identity, motivation, commitment, and effectiveness (Sammons et al., 2007). Over the whole of the teachers' lives they could also be divided into subgroups depending on the balance between their professional, socially situated and personal identities: Stable Positive or Negative and Unstable Positive or Negative. Each dimension of identity could be subjected to various positive or negative influences and the way teachers managed these affected whether they were stable or unstable, positive or negative. The scenario where the dimensions are in balance (stable positive) was the most optimal, but even within this group some could be at risk of less commitment if they perceived it to be difficult to balance personal and professional roles (stable negative).

Despite evidence of phases and typologies, Olsen and Anderson (2007) regarded the career development of teachers to be idiosyncratic rather than normative. One implication of this is that quality professional development must respond to teachers' needs, interest and aspirations (Anderson & Olsen, 2006; O'Sullivan, 2006; Patterson, Collins, & Abbott, 2004).

3.6. Implications from the literature

A gap noted in the studies reviewed was a discussion of implications for prospective and practicing teachers themselves. If resilient teachers are those who are confident, proactive and professionally reflective (see Table 6), it was interesting to see that the onus for enhancing resilience seemed to be on pre-service programmes and employers as indicated below.

3.6.1. Implications for pre-service teacher education programmes

Based on their empirical findings, recommendations for pre-service teacher education programmes were made in 22 papers (see Table 8). In general, however, these were extrapolated from reported risk and protective factors, and were not the outcome of specific interventions. For example, Woolfolk Hoy and Burke Spero (2005, p. 353) suggested that teacher educators prepare students "to seek and create support for themselves in the early years of teaching." Flores (2006) argued that teacher education programmes need to provide opportunities for students to reflect on and discuss their beliefs and values about teaching and learning. Specific personal skills such as managing stress could be taught (Chan, 2008), and assisting with self-regulation and coping behaviours could enhance occupational wellbeing and quality of classroom instruction (Klusmann et al., 2008). Resilience-building activities in pre-service and induction programmes should include teaching social skills, assertiveness training, self-regulation, and empathy (Tait, 2008).

Two authors raised some possibly contentious points about selection of prospective teachers. Tait (2008, p. 72) argued that, given the expense of recruiting, training and inducting teachers and the high attrition rate, "admissions procedures for pre-service programmes could include measures of resilience as a possible indicator of teaching success and long-term commitment to the profession." In a similar vein, Sinclair (2008) argued that measures of motivation on entry could assist in attracting students who have strong, multiple motivations to sustain their commitment despite coursework or practicum difficulties. Such measures have yet to be developed.

3.6.2. Implications for employers

The most frequent implication suggested by the papers reviewed for schools and employing bodies (see Table 9) was the need for employers, policy makers and teacher educators to facilitate processes leading to positive career trajectories (e.g. Sumsion, 2004). Support includes ensuring that new teachers, who are more strongly influenced by contextual factors, have successful classroom experiences, sufficient resources and constructive, supportive feedback in a school environment that is positive, participatory and collegial (Tschannen-Moran & Woolfolk Hoy, 2007).

Induction "needs to go beyond the mere practical advice and socialisation process" and "include opportunities for self-questioning and reflection not only on teachers' own practice but also on the values and norms underlying the educational settings in which they work" (Flores, 2006, p. 2049). Providing new teachers with "reasonable" teaching assignments in their area of expertise and avoiding last minute hiring would assist in the retention of novices (Tait, 2008). Specific strategies for school principals were recommended, such as leadership training on how to promote a collaborative school culture, and how to set up mentors and collaborative teams (Fantilli & McDougall, 2009). Jarzabkowski (2002) demonstrated the benefits of formal and informal staff interaction through activities such as birthday celebrations and social outings. Shank (2005) suggested that all teachers could benefit from collaborative learning groups within schools.

A contentious issue in relation to employers was differentiated pay for teachers. Day (2008, p. 258) warned against use of "crude measures of performativity" which "saps rather than builds morale." Others took the opposing view that employers

Table 8
Implications for teacher education courses.

Implication	Number of papers
Support from staff during pre-service, practicum placements and early years	8
Strategies for developing personal philosophies and skills	7
Creating a supportive climate	5
Strategies for teaching and classroom management skills	5
Professional workplace issues and work-life balance	4
Support from fellow students	3

Table 9
Implications for employers.

Implication	Number of papers
Facilitation of supportive structures	9
Supportive induction	8
Specific ideas for principals	7
Differentiated pay	6
Differentiated PD	5
Support for casual teachers	4

could consider merit pay and differentiated jobs (Margolis, 2008). Similarly, employing bodies needed to realise that not all beginning teachers were planning a lifelong career in the profession and providing opportunities for challenges and leadership with appropriate rewards might extend their time in the profession (Watt & Richardson, 2008).

4. Discussion

4.1. Issues and challenges emerging from this review

The aim of this paper was to provide an overview of research relating to teacher resilience from the past decade, with particular attention to methods used to investigate teacher resilience, the ways resilience has been conceptualised, what is understood about risk and protective factors and the relationship between them, and implications for pre-service teacher education programmes and employers. The papers reviewed originated from different theoretical frameworks, yet the findings overall supported the notion of resilience as a complex, idiosyncratic and cyclical construct, involving dynamic processes of interaction over time between person and environment. In addition, resilience is evidenced by how individuals respond to challenging or adverse situations and the contexts in which they work have been shown to provide both protective and risk factors. In drawing this conclusion, the review has elucidated a number of issues and challenges related to the conceptualisation of resilience as multifaceted and complex, to the notion of resilience as being idiosyncratic and dynamic, to the nature of methodologies used to examine resilience, and to the need to consider the multiple contexts of resilience. These challenges point to areas for future examination and empirical research.

Conceptualising resilience as a multifaceted and complex construct, as is evidenced in the current literature, presents challenges for concise yet comprehensive definitions. Further clarity of definition is needed, with continuing contributions from multiple theoretical perspectives to add breadth and depth. Is it possible to create a single definition of resilience and how is it defined according to different perspectives? Not only are there multiple possible risk and protective factors that are at play, the relationship between these has been shown to be complex. For example, Sumsion's (2003, p. 152) study illustrated the "role of personal qualities, and contextual features, and the interplay between them." Flores (2006, p. 2048) reported that "... the process whereby teachers altered their attitudes toward, and their practices and views of, teaching was complex and dependent on the interplay between idiosyncratic and contextual factors." Personal lives and working conditions may change in unpredictable ways, and whether an individual will display resilience or be unable to manage these conditions "will vary depending on his/her scope of experience at the time of change, perceived competence and confidence in managing the emerging conditions, views on the meaning of engagement, and the availability of appropriate support within the context of change" (Sammons et al., 2007). Conceptualising such a multifaceted, complex construct is an ongoing challenge. The field could benefit from drawing comparisons with conceptual and experimental work relating to resilience in the workplace from the disciplines of organisational psychology and in other professions such as nursing.

As also indicated in the above examples, the literature revealed the notion of resilience as being dynamic and largely idiosyncratic. For example, in relation to important individual factors such as motivation and self-efficacy, as teachers experience success in their work, this builds their self-efficacy which then leads to greater persistence. "... the development of teachers' self-efficacy consistently interacts with the growth of their resilient qualities. It is by nature a dynamic, developmental process - the key characteristic of resilience" (Gu & Day 2007, p. 1312). Sinclair (2008) suggested that for pre-service and beginning teachers there is a constant testing out and reassessment of their "motivational expectations" as they experience their coursework and practicum placements. "The outcome of this process is a continuation of current levels of motivation and commitment; enhanced or reduced motivation and/or commitment; personal benefits such as enjoyment, satisfaction and confidence; and confirmed or changed career choice" (p. 98). The dynamic and idiosyncratic nature of resilience presents a challenge for researchers and practitioners. Studies reviewed where teachers' experiences have been systematically examined and compared over time at different career stages, and studies where teachers have been grouped into typologies provide a possible way forward in response to this challenge.

The review also revealed methodological challenges. Examining a construct with multiple dependent variables, that varies for individuals over time and contexts, and may only be visible in the face of adversity, presents challenges in how to examine or measure it. Most studies relied on participants self-reports in the form of in depth interviews to explore teachers' experiences and some developed surveys or used established measures of related constructs such as self-efficacy or burn out. Robust measures of teacher resilience have yet to be developed. Still in its early stages, research on teacher resilience could benefit from more longitudinal, mixed methods studies with large samples, to complement the smaller scale studies that have teased out characteristics associated with teacher resilience in specific contexts.

The need to consider multiple contexts that may influence teacher resilience also presents challenges as well as opportunities for future research. For example, the potential support group of family and friends outside teaching was surprisingly rarely mentioned in the papers reviewed considering their well-documented importance in various aspects of life, including career choice (e.g. Beltman & Volet, 2007; Beltman & Wosnitza, 2008). Kaldi (2009) reported that people around student teachers such as friends, family, mentor or pupils in schools were not rated as strong sources of emotional and intellectual support. However, Yates, Pelphrey, and Smith (2008) found that parents and siblings were influential in the success of graduating teachers. In the VITAE study, for two-thirds of the teachers who expressed a positive sense of agency, resilience and commitment, personal support from family was the most common factor (95%) affecting this (Day, 2008). All the

experienced, resilient teachers interviewed by Howard and Johnson (2004) had strong support groups that included a diverse network of caring friends and family – not generally connected with teaching. How best to harness this support and understand the role it may play in development of teacher resilience remains a challenge.

A final challenge is perhaps an ethical one. If resilience could be clearly defined and measured, should there be selection processes in place in pre-service programmes to identify those who exhibit more individual protective factors, or programmes to develop such factors in practising teachers as teaching is known to be a challenging profession? In fact some authors expressed frustration that the challenges teachers have experienced for years still remain. Goddard and Foster (2001) identified challenges associated with early career teaching that reflected the same problems cited in a study nearly 20 years earlier. However, from an ethical standpoint, while individuals may be able to develop aspects of resilience this does not obviate employers from their responsibility to improve the conditions of teachers' work and day to day working practices. Implications for employers drawn from this review pointed to providing support mechanisms for beginning teachers including mentors, comprehensive and ongoing induction programmes and 'reasonable' teaching assignments. In general, more substantial links between preparation programmes, employing authorities and individual schools are recommended, so new teachers are able to access support from a variety of sources according to their needs (e.g. Manuel, 2003).

4.2. Further research

Perhaps reflecting the early stages of research on teacher resilience, a key omission noted in this review was of intervention studies. No work was located where researchers intentionally modified pre-service or early career experiences then systematically examined and compared the impact of different strategies. The majority of studies described characteristics and perceptions of teachers at certain career stages. Further research is needed to understand the role of pre-service programmes and of teachers themselves in developing resilience. It was surprising that none of the selected papers asked teachers directly what they thought resilience was. A few papers suggested how self-efficacy or coping skills might be developed and this area requires further investigation.

Freedman and Appleman (2008) raised some interesting questions about the role and responsibilities of pre-service programmes in relation to teacher education programmes – particularly those preparing teachers for difficult teaching assignments. How long can a teacher education or induction programme support and sustain new teachers? They suggested that although they can strengthen a new teacher's knowledge base, they cannot ward off the difficulties they will face: "The challenges of many high-need, urban schools and the current bleakness of the educational landscape can press cruelly against even the strongest programs" (p. 124). Rather alarmingly, Sinclair (2008) found that first year teacher education students did not report any impact of their pre-service coursework on their motivation or commitment as teachers. The students were in a 4 year programme so this could change. However, many programmes are 1 year and there is a potential difficulty for short programmes to have any impact on student teacher beliefs and practices compared with their previous 12 years of experiences as a school student. Further research is needed to address such questions.

Mentor programmes for early career teachers were frequently reported in the literature as sources of support. Sumsion (2003) raised some interesting questions regarding mentoring, such as why some staff avail themselves of mentors and others do not, or how other staff who do not have mentors might feel about the relationship when the mentor is a senior employee, or how to implement effective mentoring when resources are limited. Should mentoring relationships focus on providing support, or should they aim to challenge and provide opportunities for critical reflection? Sumsion cautioned against assuming that mentoring and professional development would automatically provide a panacea to attrition and questions such as these could be topics for future research.

Finally, it would also be useful to examine resilience from a cross cultural perspective. Interestingly, the majority of studies identified in this review were from predominantly western cultures. On the one hand this may in part be a response to issues of teacher attrition and retention evident in those countries; however, it does raise the question of whether teacher resilience may be understood differently in countries and cultures where the teaching workforce is more stable. Cross cultural perspectives could offer further insights about the nature of teacher resilience and the role of contexts in building resilient teachers.

4.3. Conclusion

In conclusion, the area of teacher resilience is an emerging one. A limited number of studies have directly examined resilience but empirical work has shed light on the many risk and protective factors that relate to teacher resilience. In particular, in the studies reviewed, self-efficacy and intrinsic motivation were seen as key individual protective factors. Contextual protective factors such as formal mentor programmes and collegial support provided in the workplace additionally contributed to teacher resilience. The relationships between risk and protective factors played out in complex ways in different settings, over time and for different individuals. What might be a challenge for one individual in a particular context may not be so for another person. Further research to disentangle the key factors and to provide exemplars of how they play out in different settings, as well as interventions to determine the relative impact of and how to enhance the identified factors is needed. Such research will build on the studies reviewed in this paper and may serve to reduce high attrition rates but also ensure that those who stay in the profession do not just survive, but thrive as confident and healthy professionals.

Acknowledgements

Appendix A

Details of papers reviewed.

Reference	Focus	Setting, participants (ECT = early career teachers)	Method, data sources	Categories of risk factors or challenges	Categories of protective factors or supports
Anderson and Olsen (2006)	Teachers' perspectives on their professional development	USA; urban; ECT; *N* = 15	Qualitative; semi-structured interviews; classroom observations	Challenge as positive	Stages of professional life; school/ administrative support; support of peers and colleagues
Bobek (2002)	Resilience conceptualised; resources important in development of resilience	USA; urban/rural; ECT; *N* = 12 young adults who had experienced adversity	Qualitative; interviews		Personal attributes; self efficacy; teaching skills; professional reflection and growth; self care; school/ administrative support
Brunetti (2006)	Resilience conceptualised; what motivated teachers to remain challenging teaching positions	USA; urban - inner city high school; experienced; *N* = 9	Mixed methods; scales: Experienced Teacher Survey (ETS); interviews	Challenge as positive; classroom/school context;	Personal attributes; self-efficacy; school/ administrative support; support of peers and colleagues
Castro et al. (2009)	Resilience conceptualised; challenges/concerns faced during first year of teaching and strategies employed to overcome obstacles	USA; ECT; high needs areas: rural, urban, special needs; *N* = 15	Qualitative; semi-structured interviews	Professional work challenges; classroom/school context challenges	Personal attributes; coping skills; high levels of interpersonal skills, strong networks; self-care; mentor support
Chan (2008)	Roles of emotional intelligence and self-efficacy in coping with teacher stress	Hong Kong; urban prospective and in-service Chinese teachers; *N* = 273	Quantitative; scales: Emotional Intelligence Scale, General teacher self-efficacy scale) and Chinese ways of coping questionnaire		Personal attributes; self-efficacy; coping skills
Chong and Low (2009)	Perceptions of student teachers at different points as	Singapore; urban; *n* = 605 on entry to programme;	Quantitative; questionnaire; Scales;		Personal attributes;

Appendix A (continued)

Reference	Focus	Setting, participants (ECT = early career teachers)	Method, data sources	Categories of risk factors or challenges	Categories of protective factors or supports
	they socialised to become teachers.	$n = 425$ on exit; $n = 116$ at end of 1st year of teaching	longitudinal: 3 time points over 2 years		
Day (2008)	Resilience conceptualised; variations over time in teacher effectiveness, and contributing factors; teacher professional identities and life phases	UK; mixed settings; variety of experience; $N = 300$ teachers from 100 schools	Qualitative; interviews; longitudinal: twice a year over 4 years	Challenge as positive; personal challenges; professional work challenges; classroom/school context challenges	Stages of professional life; self-efficacy; support of peers and colleagues
Day and Gu (2007)	Resilience conceptualised; personal, situated and policy-related circumstances which affect teachers' resilience and quality retention; teacher professional identities and life phases	UK; mixed settings; experienced (24+ years of service); $N = 2$	Qualitative; interviews longitudinal: twice a year over 4 years		Personal attributes; self-efficacy; internal locus of control; professional reflection and growth; importance of students; school/administrative support; support of peers and colleagues
Demetriou et al. (2009)	Emotional responses of new teachers to adversity and challenge in classroom, strategies used, consequences for teacher retention and implications for teacher training	UK; mixed settings; variety of experience; $N = 305$ secondary school science; $N = 512$ ECT; $n = 11$ newly qualified and recently qualified teachers	Mixed methods; 2 surveys; interviews	Classroom/school context challenges	Personal attributes; importance of the students; support of peers and colleagues
Fantilli and McDougall (2009)	Major challenges new teachers faced in first years of teaching, existing and possible supports available, induction and mentorship	Canada; mixed settings; ECT; $N = 54$	Mixed methods; on-line survey; interviews	Personal challenges; professional work challenges; classroom/school context challenges	Mentor support; school/administrative support; support of peers and colleagues
Fleet et al. (2007)	Factors that supported and constrained Aboriginal and Torres Strait Islanders gaining university	Australia; $N = 25$ enrolled in a 3 year pre-service intensive block programme for Indigenous students	Qualitative; participatory research paradigm: oral narratives, ethno case study, yarning sessions	Personal challenges; characteristics of pre-service programme	Personal attributes; self-efficacy; professionally proactive; mentor support; support of peers and

Appendix A (*continued*)

Reference	Focus	Setting, participants (ECT = early career teachers)	Method, data sources	Categories of risk factors or challenges	Categories of protective factors or supports
	qualifications to become teachers				colleagues
Flores (2006)	Participants' perceptions of their experiences as 1st and 2nd year teachers	Portugal; urban/ rural; ECT; *N* = 14 teachers from 2 different schools	Qualitative; semi-structured interviews; documents; longitudinal: twice a year for 2 years	Personal challenges; professional work challenges; classroom/school context challenges	Personal attributes; self-efficacy; teaching skills; importance of the students; school/ administrative support
Freedman and Appleman (2008)	Tracked the identities of graduates from a programme preparing teachers for disadvantaged urban school	USA; ECT; larger cohort of *N* = 26; *n* = 3	Qualitative; case study; observations; documents, e-mail, conversations, personal meetings, interviews questionnaire; longitudinal over 5 years	Support of peers and colleagues	
Goddard and Foster (2001)	Extent new teachers considered themselves prepared for the 'real world' of schools	Canada; mixed settings; ECT; *N* = 9	Qualitative; interviews; documents	Professional work challenges; classroom/school context challenges	Stages of professional life; high levels of interpersonal skills; professional reflection and growth; school/ administrative support; support of peers and colleagues
Goddard and O'Brien (2004)	Whether differing rates of burnout arise in beginning teachers with different pre-service backgrounds	Australia; mixed settings; ECT; *N* = 123	Quantitative; survey: Educators Survey version of the Maslach Burnout Inventory MBI; longitudinal: 2 time points over 6 months	Type of qualifications: additional qualifications associated with higher burn out than single teaching qualification	
Gu and Day (2007)	Resilience conceptualised; range of internal and external protective factors impacting on teachers' lives and positive role resilience plays	UK; mixed settings; early, middle and late career; *N* = 3; Part of a larger (VITAE) study of *N* = 300 teachers	Mixed methods; semi structured interviews; student achievement data; based on large study data – 5 yr project		Personal attributes; self-efficacy; professional reflection and growth; importance of the students; school/ administrative support; support of peers and colleagues

Appendix A (*continued*)

Reference	Focus	Setting, participants (ECT = early career teachers)	Method, data sources	Categories of risk factors or challenges	Categories of protective factors or supports
Hirschkorn (2009)	Journey through teacher education and into first year of teaching of one teacher; focus on the role played by student-teacher relationships	Canada; urban; pre-service to ECT; *N* = 1 male	Qualitative; individual and group interviews; reflective journals; school observations; informal conversations; longitudinal over 3 years	Professional work challenges; classroom/school context challenges	Stages of professional life; importance of the students; mentor support; school/administrative support; support of peers and colleagues
Howard and Johnson (2004)	Resilience conceptualised; experiences of teachers who were coping very well under highly stressful conditions	Australia; 3 urban disadvantaged schools; experienced; *N* = 10	Qualitative; interviews	Challenge as positive; classroom/school context challenges	Personal attributes; self-efficacy; coping skills; high levels of interpersonal skills, strong networks; importance of the students; school/administrative support; support of peers and colleagues; support of family and friends
Jarzabkowski (2002)	Perceptions of social benefits of teacher collegiality for teachers themselves; individual and organisational benefits of social interaction	Australia; urban; variety of experience; *N* = 22 – single primary school	Qualitative; ethnographic case study; participant observation; interviews; longitudinal: over 1 year		Personal attributes; school/administrative support; support of peers and colleagues
Jenkins et al. (2009)	Challenges of early career teachers engaged in casual work	Australia; ECT; casual teachers; *N* = not specified	Qualitative; online discussion forum posts	Personal challenges; professional; classroom/school context challenges	School/administrative support; support of peers and colleagues
Kaldi (2009)	Prospective teachers' perceptions of self-competence in teaching and relationship between personal well-being, emotions and stress about teaching and teaching competencies during teaching	Greece; pre-service; *N* = 170	Quantitative; scales: sources of stress in teaching; questionnaires	Professional work challenges; classroom/school context challenges	Teaching skills

Appendix A (*continued*)

Reference	Focus	Setting, participants (ECT = early career teachers)	Method, data sources	Categories of risk factors or challenges	Categories of protective factors or supports
	practicum				
Kitching, Morgan and O'Leary (2009)	How routine everyday positive and negative experiences impacted on teachers' motivation to teach	Ireland; mixed settings; variety of experience; $N = 56$; ($n = 17$ in study 1; different $n = 39$ in study 2).	Mixed methods; diary of incidents; scales: self-efficacy, self esteem; longitudinal over 2 months	Personal challenges; professional work challenges; classroom/school context challenges; importance of the students	Stages of professional life; personal attributes; self-efficacy
Klusmann et al., 2008	Whether differences in occupational well-being (level of emotional exhaustion and job satisfaction) and instructional performance can be explained by teachers' self-regulatory patterns (occupational engagement and resilience)	Germany; mixed settings; experienced mathematics teachers; Phase 1 $N = 1789$ Phase 2 $N = 318$ (sub-sample)	Quantitative; scales: Occupational Stress and Coping Inventory; adaptation of Maslach Burnout Inventory; German version of Work Satisfaction Scale of Job Diagnostic Survey; student ratings of teacher instructional behaviour		Personal attributes; self-efficacy; coping skills; teaching skills; importance of the students
Le Cornu (2009)	Role that initial teacher education, particularly practicum experiences, can play in developing resilience in prospective teachers	Australia; pre-service; $N =$ not specified (2 cohorts)	Qualitative; open-ended questionnaires; feedback re practicum experiences including Learning Circles		Personal attributes; self-efficacy; professional reflection and growth; mentor support; support of peers and colleagues
Malloy and Allen (2007)	Resilience conceptualised; extent to which K-8 rural school has developed resiliency building culture	USA; rural school; variety of experience; $N = 28t$	Mixed methods; case study; survey; observations; interviews; documents		School/ administrative support
Manuel (2003)	Ways beginning teachers negotiate transition from student to professional; explore the dimensions of early career teachers' decisions to continue in the profession, and	Australia; urban disadvantaged; ECT; $N = 6$	Qualitative; case studies; journals; surveys; interviews; longitudinal: 7 time points from end of pre-service to end of 5th year	Professional work challenges; classroom/school context challenges	Personal attributes; professional reflection and growth; self-care; characteristics of pre-service programmes; support of peers and colleagues

Appendix A (*continued*)

Reference	Focus	Setting, participants (ECT = early career teachers)	Method, data sources	Categories of risk factors or challenges	Categories of protective factors or supports
	illuminate the factors that influence their decision to leave				
Margolis (2008)	Career satisfaction and motivation of teachers with 4–6 years of experience; partnerships between universities and schools	USA; urban; experienced (4–6 yrs); N = 7	Qualitative; discussion board; field notes; e-mails interviews; longitudinal: interviewed start and end of year	Challenge as positive	Professionally proactive; support of peers and colleagues
McCormack and Gore (2008)	Teacher socialisation (outside of the classroom) and its effects on early career teacher induction, professional growth and retention; applies Foucault's conception of power relations	Australia; mixed settings; ECT; N = 27.	Mixed methods; interviews	Personal challenges; professional work challenges; classroom/school context challenges	
McCormack and Thomas (2005)	Casual teachers' motivations, induction programmes, problems, job satisfaction and workplace transition	Australia; rural; ECT; NSW DET staff and uni reps; N = 73	Qualitative; questionnaires; focus groups; interviews	Classroom/school context challenges	Mentor support; professional learning; support of peers and colleagues
Morgan, Ludlow, Kitching, O'Leary, and Clarke (2010)	Relative importance of positive versus negative events for early career primary teachers; whether they are proximal or distal, frequency versus intensity and how they sustain, motivate or create obstacles	Ireland; mixed settings; ECT; N = 700	Quantitative; scales: affective significance of recurring events, commitment to teaching, teacher efficacy		Stages of professional life; personal attributes; self-efficacy; importance of the students
Olsen and Anderson (2007)	Why early career teachers stay in, shift from, or consider leaving the urban schools in which they teach	USA; urban; ECT; N = 15	Qualitative; 3 interviews; observations; longitudinal over 1 academic year	Personal challenges	Typologies; mentor support; school/administrative support; support of peers and colleagues
O'Sullivan (2006)	How veteran physical education teachers have	Ireland; mixed settings; experienced	Qualitative; questionnaires; interviews; life		Coping skills; school/administrative

Appendix A (*continued*)

Reference	Focus	Setting, participants (ECT = early career teachers)	Method, data sources	Categories of risk factors or challenges	Categories of protective factors or supports
	negotiated their lives as teachers within the cultural norms and expectations Irish educational system and the role of PD experiences over course of their teaching lives	physical education secondary teachers; *N* = 66	history approach		support; support of peers and colleagues
Oswald, Johnson, and Howard (2003)	Teacher beliefs about the key factors in development of children's resilience; teacher efficacy and related strategies to foster resilience	Australia; urban; experienced; *N* = 1180	Quantitative; scales	Not risk factor as such but teachers undervalued their own role in developing student resilience	Importance of the students
Patterson et al. (2004)	Strategies used by urban teachers and teacher leaders to build their personal resilience	USA; urban schools with high student achievement scores despite adversity; experienced; *n* = 8 teachers; *n* = 8 leaders	Qualitative; interviews; documents; observations		Personal attributes; coping skills; teaching skills; professional reflection and growth; self care; school/ administrative support
Prosser (2008)	Emotional labour associated with maintaining teacher-student relationships in difficult environments and how teachers sustain themselves	Australia; urban; experienced; *N* = 3	Qualitative; interviews		Support of peers and colleagues
Sammons et al. (2007)	Influences on teachers' professional and personal lives, their identities and effectiveness; connections with school contexts	UK; mixed settings; experienced; *N* = 300	Mixed methods; interviews; surveys; assessment data on pupils' attainments in English and mathematics; longitudinal over 3 academic years	Not a risk factor as such but teachers matter more in accounting for differences in pupil progress than schools	Professional life phases; support of peers and colleagues; also see Day (2008), Day and Gu (2007); Gu and Day (2007)
Schlichte et al. (2005)	Perceptions of extent of collegial and administrative support and related stress factors of first year special	USA; special education settings; ECT; *N* = 5	Qualitative; interviews		Mentor support; school/ administrative support; support of peers and colleagues

Appendix A (*continued*)

Reference	Focus	Setting, participants (ECT = early career teachers)	Method, data sources	Categories of risk factors or challenges	Categories of protective factors or supports
Shank (2005)	education teachers How a Collaborative Inquiry Group (CIG) approach to mentoring can support new and experienced teachers	USA; setting not stated; variety of experience; $N = 7$	Qualitative; interviews; observations; field notes; longitudinal over 1.5 years		Mentor support
Sinclair (2008)	Pre-service teacher motivation, commitment, and retention over time	Australia; 4 year course in 1 secular and 1 religious university; pre-service; $N = 211$	Mixed methods; scales Motivational Orientations to Teach Survey (MOT-S); questionnaires; longitudinal: start and end of 1st semester	Pre-service programme challenges	Personal attributes; professional reflection and growth; importance of the students; characteristics of pre-service programme
Smethem (2007)	Beginning teachers' views on work, issues of motivation, coping with change, impact of induction and intentions for career development	UK; ECT; $N = 18$ new teachers of modern languages	Qualitative; survey; interviews; journals; longitudinal: representatives of cohorts over 4 years	Personal challenges; professional work challenges; classroom/school context challenges	Typologies; support of peers and colleagues
Smith and Ingersoll (2004)	Impact of induction and mentoring programmes on retention of beginning teachers	USA; mixed settings; ECT; $N = 3, 235$	Quantitative; mixed settings; surveys: SASS (Schools and Staffing Survey) and TFS (Teacher Follow up Survey); longitudinal: start and end of school year		Typologies; mentor support; support of peers and colleagues
Sumsion (2003)	What accounts for resilience some children's services staff to adverse structural factors	Australia; child care; experienced; $N = 1$	Qualitative; interviews; documents		Personal attributes; coping skills; professional reflection and growth; self-care; mentor support; support of peers and colleagues
Sumsion (2004)	Teachers in full day care constructions of resilience and thriving	Australia; child care; experienced; $N = 7$	Qualitative; interviews; drawings	Professional work challenges; classroom/school context challenges; challenge as positive	Personal attributes; professional reflection and growth; school/ administrative support; support of peers and colleagues

Appendix A (*continued*)

Reference	Focus	Setting, participants (ECT = early career teachers)	Method, data sources	Categories of risk factors or challenges	Categories of protective factors or supports
Tait (2008)	Impact of resilience, personal efficacy and emotional competence on first-year teachers' sense of success, confidence, and commitment to the profession.	Canada; urban; ECT; *N* = 22	Scales: Stress Resilience Test (SRT); interviews; written metaphors		Personal attributes; self-efficacy; coping skills; high levels of interpersonal skills; self-care
Tschannen-Moran and Woolfolk Hoy (2007)	Self-efficacy beliefs of novice and more experienced teachers about their capabilities in teaching	USA; mixed settings; variety of experience; *N* = 255	Quantitative; scales: Teachers Sense of Efficacy Scale (TSES) (Tschannen-Moran and Woolfolk Hoy, 2001); questionnaire		Stages of professional life; self-efficacy; school/administrative support for new teachers; support of peers and colleagues
Tsouloupas et al. (2010)	Links between burnout and emotional exhaustion, teacher efficacy in handling student misbehaviour, and attrition + migration	USA; mixed settings; variety of experience; *N* = 610	Quantitative; questionnaires; scales: (Perceived Self-Efficacy in Classroom Management (PSECM), Emotional Regulation Questionnaire; emotional exhaustion subscale from the Maslach Burnout Inventory–Educators Survey		Importance of the students
Watt and Richardson (2008)	Types of beginning teachers and differences on constructs of motivations, perceptions and aspirations	Australia; pre-service; *N* = 510	Quantitative; scales: Factors Influencing Teaching Choice Scale (FIT-Choice Scale)		

Typologies

Reference	Focus	Setting, participants (ECT = early career teachers)	Method, data sources	Categories of risk factors or challenges	Categories of protective factors or supports
Woolfolk Hoy and Burke Spero (2005)	Changes in teacher efficacy during early years of teaching and common factors emerged that might be related to these	USA; mixed settings; pre-service and ECT; longitudinal over two years; *N* = 53 prospective teachers (year 1) and *N* = 29 practicing teachers (year 2)	quantitative; questionnaires; scales: Teacher Efficacy Scale, Bandura Teacher Self-Efficacy Scale, OSUTeaching Confidence Scale	reduced self-efficacy/confidence; professional work challenges; classroom/school context challenges	self-efficacy; teaching skills; school/administrative support; support of peers and colleagues

Appendix A (*continued*)

Reference	Focus	Setting, participants (ECT = early career teachers)	Method, data sources	Categories of risk factors or challenges	Categories of protective factors or supports
Yates et al. (2008)	Factors that contributed to the persistence of eight male African American pre-service teachers in their studies	USA; pre-service; N = 8 African Americans	Qualitative; interviews, observations; documents		Personal attributes; characteristics of pre-service programme; mentor support; support of family and friends
Yost (2006)	Major obstacles successful novice teachers faced during first year of teaching; what teacher education or other factors shaped their current views and successes; use of critical reflection as a problem-solving tool	USA; mixed settings; ECT; N = 10	Qualitative; interviews; observations; questionnaire; longitudinal in 2nd and 5th year of teaching	Classroom/school context challenges	Personal attributes; coping skills; high levels of interpersonal skills; teaching skills; professionally proactive; characteristics of pre-service programme; mentor support

References

Anderson, L., & Olsen, B. (2006). Investigating early career urban teachers' perspectives on and experiences in professional development. *Journal of Teacher Education, 57*(4), 359–377.

Beltman, S., & Volet, S. E. (2007). Exploring the complex and dynamic nature of sustained motivation. *European Psychologist, 12*(4), 314–323.

Beltman, S., & Wosnitza, M. (2008). "You are getting too old, find a man and marry": Social aspects of motivation to choose teacher education. *Australian Journal of Educational and Developmental Psychology, 8*, 49–63.

Benard, B. (2004). *Resiliency: What have we learned?* San Francisco, CA: WestEd.

Bobek, B. L. (2002). Teacher resiliency: A key to career longevity. *Clearing House, 75*(4), 202–205.

Borman, G. D., & Dowling, N. M. (2008). Teacher attrition and retention: A meta-analytic and narrative review of the research. *Review of Educational Research, 78*(3), 367–409. doi:10.3102/0034654308321455.

Brunetti, G. J. (2006). Resilience under fire: Perspectives on the work of experienced, inner city high school teachers in the United States. *Teaching and Teacher Education, 22*(7), 812–825.

Buchanan, J. (2010). May I be excused? Why teachers leave the profession. *Asia Pacific Journal of Education, 30*(2), 199–211. doi:10.1080/02188791003721952.

Castro, A. J., Kelly, J., & Shih, M. (2009). Resilience strategies for new teachers in high-needs areas. *Teaching and Teacher Education, 26*(3), 622–629.

Chan, D. W. (2008). Emotional intelligence, self-efficacy, and coping among Chinese prospective and in-service teachers in Hong Kong. *Educational Psychology, 28*(4), 397–408.

Chong, S., & Low, E. (2009). Why I want to teach and how I feel about teaching: Formation of teacher identity from pre-service to the beginning teacher phase. *Educational Research for Policy and Practice, 8*(1), 59–72.

Day, C. (2008). Committed for life? Variations in teachers' work, lives and effectiveness. *Journal of Educational Change, 9*(3), 243–260.

Day, C., & Gu, Q. (2007). Variations in the conditions for teachers' professional learning and development: Sustaining commitment and effectiveness over a career. *Oxford Review of Education, 33*(4), 423–443.

Demetriou, H., Wilson, E., & Winterbottom, M. (2009). The role of emotion in teaching: Are there differences between male and female newly qualified teachers' approaches to teaching? *Educational Studies, 35*(4), 449–473.

Fantilli, R. D., & McDougall, D. E. (2009). A study of novice teachers: Challenges and supports in the first years. *Teaching and Teacher Education, 25*, 814–825.

Fleet, A., Kitson, R., Cassady, B., & Hughes, R. (2007). University-qualified Indigenous early childhood teachers: Voices of resilience. *Australian Journal of Early Childhood, 32*(3), 17–25.

Flores, M. A. (2006). Being a novice teacher in two different settings: Struggles, continuities, and discontinuities. *Teachers College Record, 108*(10), 2021–2052.

Freedman, S. W., & Appleman, D. (2008). "What else would I be doing?": Teacher identity and teacher retention in urban schools. *Teacher Education Quarterly, 35*(3), 109–126.

Garmezy, N. (1974). Children at risk: The search for antecedents of schizophrenia. 1. Conceptual models and research methods. *Schizophrenia Bulletin, 8*, 14–90.

Goddard, J., & Foster, R. (2001). The Experiences of neophyte teachers: A critical constructivist assessment. *Teaching and Teacher Education, 17*, 349–365.

Goddard, R., & O'Brien, P. (2004). Are beginning teachers with a second degree at a higher risk of early career burnout? *Australian Journal of Teacher Education, 29*(1), 31–40.

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

Guarino, C. M., Santibañez, L., & Daley, G. A. (2006). Teacher recruitment and retention: A review of the recent empirical literature. *Review of Educational Research, 76*(2), 173–208. doi:10.3102/00346543076002173.

Hirschkorn, M. (2009). Student-teacher relationships and teacher induction: Ben's story. *Teacher Development, 13*(3), 205–217.

Hong, J. Y. (2010). Pre-service and beginning teachers' professional identity and its relation to dropping out of the profession. *Teaching and Teacher Education, 26*(8), 1530–1543. doi:10.1016/j.tate.2010.06.003.

Howard, S., & Johnson, B. (2004). Resilient teachers: Resisting stress and burnout. *Social Psychology of Education, 7*(4), 399–420.

Jarzabkowski, L. M. (2002). The social dimensions of teacher collegiality. *Journal of Educational Enquiry, 3*(2), 1–20.

Jenkins, K., Smith, H., & Maxwell, T. (2009). Challenging experiences faced by beginning casual teachers: Here one day and gone the next! *Asia-Pacific Journal of Teacher Education, 37*(1), 63–78.

Kaldi, S. (2009). Student teachers' perceptions of self-competence in and emotions/stress about teaching in initial teacher education. *Educational Studies, 35*(3), 349–360.

Kitching, K., Morgan, M., & O'Leary, M. (2009). It's the little things: Exploring the importance of commonplace events for early-career teachers' motivation. *Teachers and Teaching: Theory and Practice, 15*(1), 43–58.

Klusmann, U., Kunter, M., Trautwein, U., Lüdtke, O., & Baumert, J. (2008). Teachers' occupational well-being and quality of instruction: The important role of self-regulatory patterns. *Journal of Educational Psychology, 100*(3), 702–715.

Le Cornu, R. (2009). Building resilience in pre-service teachers. *Teaching and Teacher Education, 25*(5), 717–723.

Macdonald, D. (1999). Teacher attrition: A review of literature. *Teaching and Teacher Education, 15*(8), 835–848.

Malloy, W. W., & Allen, T. (2007). Teacher retention in a teacher resiliency-building rural school. *Rural Educator, 28*(2), 19–27.

Manuel, J. (2003). 'Such are the ambitions of youth': Exploring issues of retention and attrition of early career teachers in New South Wales. *Asia-Pacific Journal of Teacher Education, 31*(2), 139–151.

Margolis, J. (2008). What will keep today's teachers teaching? Looking for a hook as a new career cycle emerges. *Teachers College Record, 110*(1), 160–194.

Masten, A., Best, K., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology, 2*, 425–444.

McCormack, A., & Gore, J. (2008, Nov-Dec). *"If only I could just teach": Early career teachers, their colleagues, and the operation of power.* Paper presented at the annual conference of the Australian Association for Research in Education, Brisbane.

McCormack, A., & Thomas, K. (2005). The reality of uncertainty: The plight of casual beginning teachers. *Change: Transformations in Education, 8*(1), 17–31.

Morgan, M., Ludlow, L., Kitching, K., O'Leary, M., & Clarke, A. (2010). What makes teachers tick? Sustaining events in new teachers' lives. *British Educational Research Association, 36*(2), 191–208.

Olsen, B., & Anderson, L. (2007). Courses of action: A qualitative investigation into urban teacher retention and career development. *Urban Education, 42*(1), 5–29.

O'Sullivan, M. (2006). Professional lives of Irish physical education teachers: Stories of resilience, respect and resignation. *Physical Education and Sport Pedagogy, 11*(3), 265–284.

Oswald, M., Johnson, B., & Howard, S. (2003). Quantifying and evaluating resilience-promoting factors: Teachers' beliefs and perceived roles. *Research in Education, 70*, 50–64.

Patterson, J. H., Collins, L., & Abbott, G. (2004). A study of teacher resilience in urban schools. *Journal of Instructional Psychology, 31*(1), 3–11.

Prosser, B. (2008). The role of the personal domain in middle years teachers' work. *Australian Journal of Middle Schooling, 8*(2), 11–16.

Sammons, P., Day, C., Kington, A., Gu, Q., Stobart, G., & Smees, R. (2007). Exploring variations in teachers' work, lives and their effects on pupils: Key findings and implications from a longitudinal mixed-method study. *British Educational Research Journal, 33*(5), 681–701.

Scheopner, A. J. (2010). Irreconcilable differences: Teacher attrition in public and catholic schools. *Educational Research Review, 5*(3), 261–277.

Schlichte, J., Yssel, N., & Merbler, J. (2005). Pathways to burnout: Case studies in teacher isolation and alienation. *Preventing School Failure, 50*(1), 35–40.

Shank, M. (2005). Mentoring among high school teachers: A dynamic and reciprocal group process. *Mentoring and Tutoring., 13*(1), 73–82.

Sinclair, C. (2008). Initial and changing student teacher motivation and commitment to teaching. *Asia-Pacific Journal of Teacher Education, 36*(2), 79–104.

Smethem, L. (2007). Retention and intention in teaching careers: Will the new generation stay? *Teachers and Teaching: Theory and Practice, 13*(5), 465–480.

Smith, T. M., & Ingersoll, R. M. (2004). What are the effects of induction and mentoring on beginning teacher turnover? *American Educational Research Journal, 41*(3), 681–714.

Sumsion, J. (2003). 'Bad days don't kill you: They just make you stronger': A case study of an early childhood educator's resilience. *International Journal of Early Years Education, 11*(2), 141–154.

Sumsion, J. (2004). Early childhood teachers' constructions of their resilience and thriving: A continuing investigation. *International Journal of Early Years Education, 12*(3), 275–290.

Tait, M. (2008). Resilience as a contributor to novice teacher success, commitment, and retention. *Teacher Education Quarterly, 35*(4), 57–75.

Tschannen-Moran, M., & Woolfolk Hoy, A. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education, 23*, 944–956.

Tsouloupas, C. N., Carson, R. L., Matthews, R., Grawitch, M. J., & Barber, L. K. (2010). Exploring the association between teachers' perceived student misbehaviour and emotional exhaustion: The importance of teacher efficacy beliefs and emotion regulation. *Educational Psychology, 30*(2), 173–189.

Watt, H. M. G., & Richardson, P. W. (2008). Motivations, perceptions, and aspirations concerning teaching as a career for different types of beginning teachers. *Learning and Instruction, 18*(5), 408–428.

Woolfolk Hoy, A., & Burke Spero, R. (2005). Changes in teacher efficacy during the early years of teaching: A comparison of four measures. *Teaching and Teacher Education, 21*, 343–356.

Yates, L., Pelphrey, B. A., & Smith, P. A. (2008). An exploratory phenomenological study of African American male pre-service teachers at a historical black university in the mid-south. *National Forum of Applied Educational Research Journal, 21*(3), 1–16.

Yost, D. S. (2006). Reflection and self-efficacy: Enhancing the retention of qualified teachers from a teacher education perspective. *Teacher Education Quarterly, 33*(4), 59–76.