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Contextual Factors in Early Career Teaching: A Systematic Review of International Research on Teacher Induction and Mentoring Programs

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Abstract

Early career teachers (ECTs) are situated in a dynamic contextual landscape that both influences their development and practice and dictates professional expectations for instruction and professional learning. This systematic review of international research literature sought to establish the understanding of teacher induction and mentoring program support of ECTs through the following research questions: 1) which nations and regions are represented in research literature that details formal or programmatic support of ECTs? 2) what international research evidence is there to describe various contextual factors that affect experiences of ECTs? and, 3) how do teacher induction and mentorship programs respond to the various contextual factors affecting ECTs? Upon detailing our review method and sampling procedures, we synthesize the convergences and divergences of the findings within each of the contextual factors. The conceptualization of contextual factors in this review included social, political, cultural, organizational, and personal forces that influence the professional practices of ECTs. Finally, we summarize the review findings in a heuristic model that offers a visual representation of the implications of our findings, and discuss the implications for policy, practice, and future research.

Keywords: beginning teacher, newly qualified teacher, induction, mentorship, professional learning

Introduction

Researchers and policy makers are rightfully concerned that, despite significant investments to establish teaching careers, many teachers quit the profession within the first two to five years, and in some extreme cases, even before the end of their first year (Black, 2001). The issue of teacher attrition has been found to span international boundaries: including the United Kingdom (Smithers & Robinson, 2003), Australia (Stoel & Thant, 2002), the United States (Darling-Hammond, 2001; Ingersoll & Smith, 2003; Smith & Ingersoll, 2004), and other countries including Austria; Belgium (Flemish community); Belgium (French community); Chile; Denmark; Finland; France; Germany; Greece; Hungary; Ireland; Israel; Italy; Japan; Korea; Mexico; the Netherlands; Norway; the Slovak Republic; Spain; Sweden; and Switzerland (Organisation for Economic Co-Operation and

Development [OECD], 2005). Therefore, internationally, the argument to reduce attrition is to view the first three to four years after initial teacher training as the most crucial for a teacher's decisions as to quit or remain in the profession (Jones, 2003). The development of novice teachers is important because teachers' qualities and abilities represent the most significant school-based factors contributing to student achievement and educational improvement (Cochran-Smith, 2006; Darling-Hammond, 2006; Rivkin, Hanushek, & Kain, 2005). Research literature acknowledges the value of some kind of support for beginning teachers (Hobson, Ashby, Malderez, & Tomlinson, 2009) to help mitigate attrition-contributing factors. Most often, induction serves as an overarching support mechanism for new teachers (Serpell, 2000), with effective mentorship seen as one of the most crucial components to support individual ECTs' needs (Doerger, 2003; Ingersoll & Strong, 2011).

Through our own extensive research on early career teachers (ECTs), we have come to understand these young professionals are situated in a dynamic contextual landscape which both influences their development and practice and dictates professional expectations to prepare students to enter increasingly demanding further education and work destinations. Therefore, we set out to conduct an international systematic review, the purpose of which was to explore the implementation of induction programs within widely different contexts and to identify how successful induction programs have responded to the contextual challenges affecting ECTs worldwide. In particular, we conducted an overview of international (English language) empirical research literature using the following research questions:

1. Which nations and regions are represented in English-language research literature which details formal or programmatic support of ECTs?
2. What international research evidence is there to describe various contextual factors which affect experiences of ECTs?
3. How do teacher induction and mentorship programs respond to the various contextual factors affecting ECTs?

For the purposes of this review, the conceptualization of contextual factors included various societal (e.g., cultural, social, and political), organizational, and personal forces which influence the professional practices of ECTs. The term ECT was chosen to denote an educator who had completed a program of teacher education, who held a valid teaching certificate, and who was within the first five years of employment in a school. Upon detailing the review method and sampling procedures, we synthesized the convergences and divergences of the findings within each of the contextual factors. Finally, we summarize the state of induction research in a heuristic model which offers a visual representation of the implications of our findings, and discuss the implications for policy, practice, and future research.

Systematic Review Methods

Guided by the systematic review methodology approach (Gough, Oliver, & Thomas, 2012; Thomas & Harden, 2008), our review employed the EPPI-Reviewer software from the Evidence for Policy and Practice Information and Co-ordinating Centre, at the Institute of Education, London to analyze and interrogate empirical research entries. Our research group initially defined the terms of reference and identified the critical focus of the review based upon the research questions. The search strategy for the review involved rigorous electronic and hand searching of

key electronic databases and relevant journals, for which titles and abstracts were screened for relevance to the research questions, as defined by our inclusion criteria. Databases we searched included ERIC, Academic Search Complete, ProQuest, and Education Source. Search terms included: beginning teachers, new teacher support, beginning teacher support, teacher retention, new teacher retention, beginning teacher retention, teacher attrition, teacher mentoring, mentoring new teachers, mentoring beginning teachers, teacher mentorship, teacher induction, new teacher induction, beginning teacher induction, new teacher transition, beginning teacher transitions, new teacher development, beginning teacher development, new teacher support, beginning teacher support, NQT, NQT “and” development, NQT “and” support, NQT “and” induction, NQT “and” mentorship, NQT “and” retention, NQT “and” attrition, early career teachers, early career teacher mentorship, early career teacher induction, early career teacher retention, early career teacher support, and early career teacher development. The citations we uncovered using the search strategies were stored on appropriate document referencing software; and titles and abstracts were screened against the criteria. Full texts of those articles which met the inclusion criteria were obtained for further screening. All items which satisfied the final stage of screening were then key-worded and included in the systematic map. The systematic map process is outlined in Figure 1.

Review Sample

Our initial electronic database searches revealed 16479 sources, and hand searching the journals uncovered further 24 entries for potential inclusion. Duplications of electronic searches were removed, which reduced the total number of entries to 6538. Our second step was to screen titles and abstracts of the citations found by electronic means against the following inclusion criteria: to have been published between 2004-2014; to have relevance to the research questions; to include empirical data; to be set in early years, primary, secondary or compulsory education (K-12); and to be in English. Empirical studies are reports of original research, including secondary analyses which test hypotheses through novel analysis of data which have not been previously addressed (American Psychological Association, 2010). A total of 4768 were excluded: 1696 for not being focussed on the study context; 2775 not focussed on our research questions; 315 were not empirical research; 44 not in English and, 29 for being outside our date parameter. Following further exclusions of reports which proved to be unobtainable ($N = 11$), the full texts of 734 studies were further screened against the inclusion criteria.

Our third step was to undertake full article screening of the 734 articles in our sample. The research group applied the same exclusion criteria, as the first screening; this time to the full-text articles which were not excluded from the first screening ($n = 734$). Of these, 113 were selected for inclusion in our systematic map. For the full in-depth review, only those studies key-worded as focusing on social, cultural, political, and organizational contexts, with a population focus of compulsory education in the K-12 sector (students aged four to 18) and featuring new and beginning teacher induction and mentorship programs, were included. The full screening process is further outlined in Figure 2.

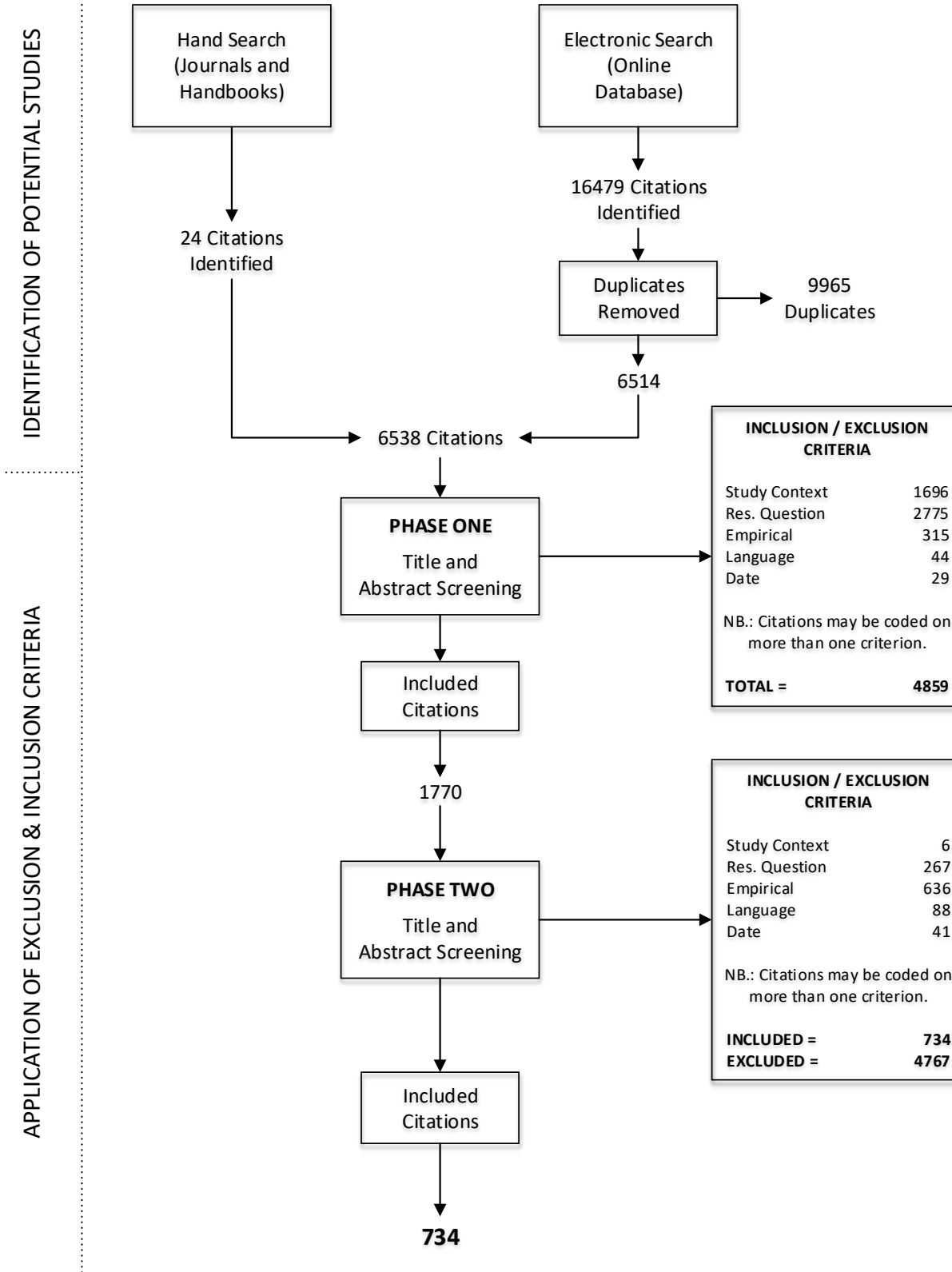


Figure 1. The systematic map of the search process from hand and electronic searches to included citations.

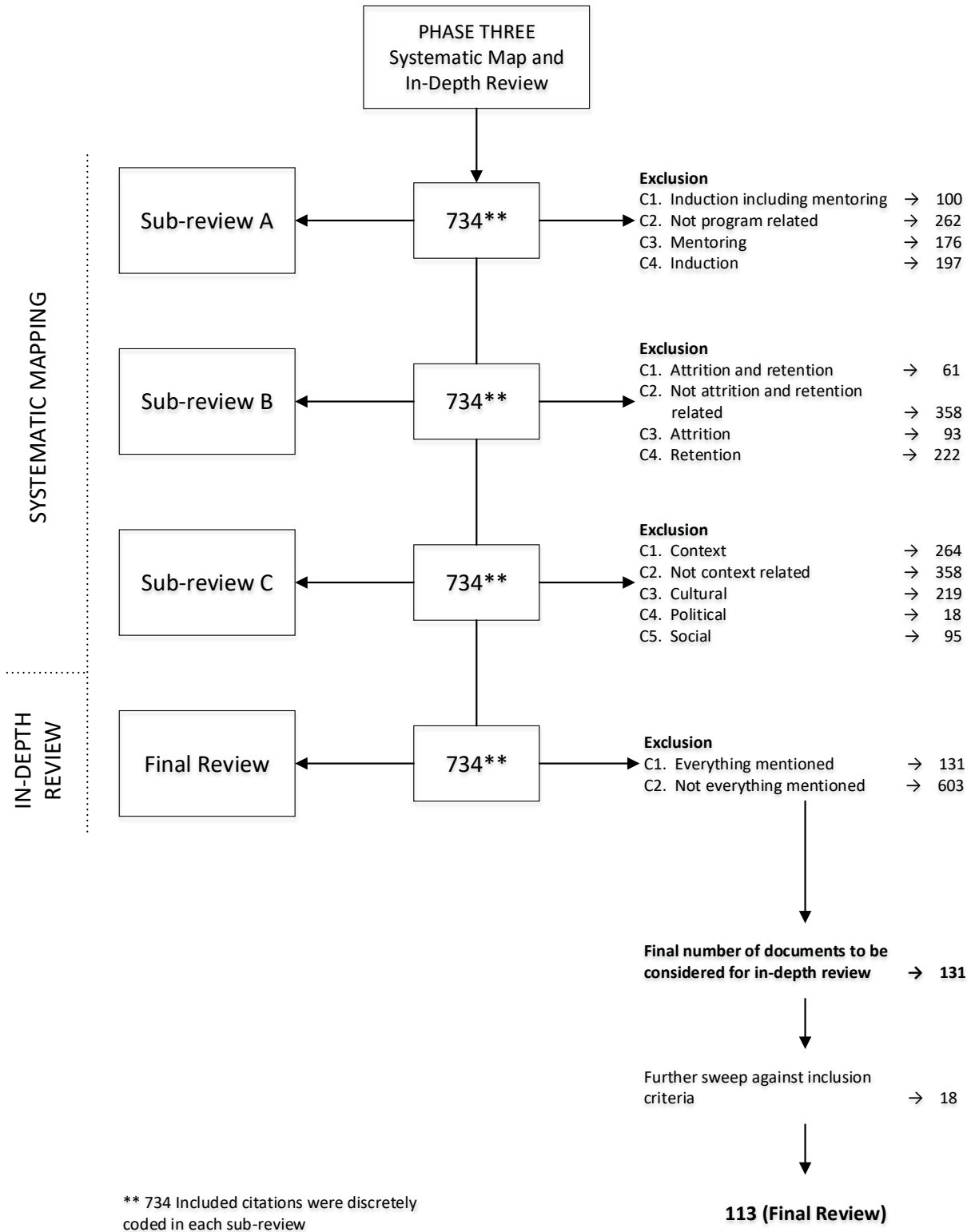


Figure 2. Full screening process including criteria for exclusion from review.

Coding and Analysis of Final Sample

Following the production of the systematic map, it was decided the in-depth review should include studies key-worded as focusing on teacher retention, teacher attrition, new and beginning teacher support, induction, and mentorship, and the population focus should be K-12 schools. Studies selected for the in-depth review were then rigorously analyzed based upon their overall suitability to respond to the research questions, and then used accordingly in our synthesis; the ultimate results were subsequently used to inform our conclusions. To extract data, we completed a three-stage coding process of the 113 articles. At stage one, we established a set of descriptive data for each of the articles, as shown in Table 1.

Table 1. Stage One Coding Process for Descriptive Analysis

Descriptive Analysis of Articles
<ul style="list-style-type: none"> • Geographic location of program featured in article • Context of program being researched (particular district/sample setting, i.e., suburban with high level of minority students in low SES) • Description (program goals and composition, i.e., two year includes mentoring and induction) • Purpose of research study/article • Method (Quantitative/Qualitative/Mixed Methods) • Main findings of article • Role of administration/principal featured (Y/N) • Instrument is detailed (Y/N)

At stage two, each article was coded based upon the deductive themes of social, cultural, political, organizational/structural, and individual contextual categories. These codes were drawn from an inductive analysis of literature on teacher attrition, induction and mentoring programs which was initially undertaken to frame the systematic review. As we coded the data through stage two, a further breakdown of organizational factors emerged, and these were subsequently separated into organizational structural and personal/individual factors, to reflect both dimensions of organizational activity. See Table 2 for the complete initial set of codes for stage two of the coding process.

Table 2. Stage Two Coding Based Upon Deductive Themes: Contextual Categories

Social (S)	Cultural (C)	Political (P)	Organizational/Structural (O)	Personal/Individual (I)
(S1) Peer relationships	(C1) Institutional culture (school, district, etc.)	(P1) Federal/national initiatives and/or strategies	(O1) Programmatic Components' Impact	(I1) Sense of personal efficacy (for beginning teacher)
(S2) Emotional intelligence	(C2) State, nation (ideology, international movement of people)	(P2) State/province, county/municipal level initiatives/strategies	(O2) Structural Conditions	(I2) Background prior to teaching
(S3) External community relationships (external to school)	(C3) Demographical diversity (religion, ethnicity, SES etc.)	(P3) Teachers' Unions/Federations	(O3) Administrator Leadership	(I3) Personal initiative
		(P4) District school level	(O4) Teacher Leadership	
		(P5) School level	(O5) Facility Conditions	
		(P6) Wider community		

At stage three of our coding process, we reviewed any emerging themes against the initial coding matrix (Table 2). Finally, we used a comparative analysis, drawing on key issues and themes that were identified from the sample, split or merged the coding categories and sub-themes where needed, and re-evaluated the evidence against our research questions to identify the final coding matrix of six categories of contextual factors presented in this article.

Identifying and Describing Studies: Quality-Assurance Results

Each full-text study included the in-depth review underwent data extraction by a member of our research team, including an assessment of the weight of evidence. Where there were discrepancies in coding the full-text articles, the research team discussed these until a common appreciation was achieved. For all studies in the in-depth review, full agreement regarding included key issues and themes were established before the studies were analyzed in-depth.

Geographic Representation of Articles

The geographic representation of the articles featured in our review was based on the *location* where the studies had been conducted (Table 3). In two articles, authors collected data from more than one geographic location, these are listed as *combined nations*.

Table 3. Geographic Location of Articles Included in Systematic Review

Geographic Region	Number of Studies Included
United States	64
United Kingdom	15
Canada	12
Europe (not including United Kingdom)	8
Australia/New Zealand	6
Middle East	6
Combined nations	2
Far East	1

In addition to highlighting the geographic regions we also identified, where reported, the locales within the regions where studies were conducted.

Systematic Review Results

The literature findings from our analysis were organized into the following six categories of contextual factors related to teacher induction and mentoring programs: (a) *social*, (b) *political*, (c) *cultural*, (d) *personal/individual*, (e) *organizational*, and (f) *administrative*. Each of these categories are defined and presented in the sections to follow.

Social Contextual Factors

For the purposes of this review, social context was defined as referring to the immediate physical and social setting in which people live or in which something happens or develops. It included the interpersonal interactions, social institutions, and people's behaviour and relations within broader society, communities of people, or other social structures. From the total of 113 articles examined, 42 articles contributed in various degrees to this theme. Two broad themes emerged within this category: (a) *peer relationships* and (b) *external community relationships*.

Peer Relationships

Peer relationships findings were categorized into four groups: (a) professional peer support, (b) social peer support, (c) emotional peer support, and (d) absence of peer support.

Professional peer support. A number of ways beginning teachers received professional peer support were mentioned across programs, including team-teaching (Fenwick, 2011; Lambeth & Lashley, 2012), the establishment of planning partners (Ado, 2013), sharing of teaching-related information (Clausen, 2007; Findlay, 2006; Lambeth & Lashley, 2012), examination of subject-specific issues (Ado, 2013; Bianchini & Brenner, 2009; Clausen, 2007; Harrison, Dymoke, & Pell, 2006), easily accessible network of supportive persons and resources (Gehrke & McCoy, 2007a), assistance with marking (Harrison et al., 2006), and informal chats about teaching (Clausen, 2007; Eisenschmidt, Oder, & Reiska, 2013; Fenwick, 2011; Forbes, 2004; Lambeth & Lashley, 2012). A number of programs also featured opportunities for beginning teachers to make observations of their peer's teaching (Fenwick, 2011; Forbes, 2004; Lambeth & Lashley, 2012).

Some beginning teachers positively noted a *give and take* relationship with formal and informal mentors, where a mutual sharing of ideas between peers was common, whereas beginning teachers often provided a spark and brought enthusiasm for more senior staff (Evans-Andris, Kyle, & Carini, 2006). It was also mentioned that both formal and informal mentors had success in using a method of support without direct instruction with their mentees (Lee & Feng, 2007; van Velzen, van der Klink, Swennen, & Yaffe, 2010). Davis and Higdon (2008) found beginning teachers most valued frequent *just-in-time* assistance provided by the experienced, on-site mentors. Overall, beginning teachers appreciated the freedom to pick and choose information from their mentors most appropriate to their needs, retaining the flexibility to be able to develop their own style of teaching.

Social peer support. In addition to the professional support beginning teachers received from their peers in a number of programs, many programs featured expectations that formal mentors and other teachers would support the social integration of beginning teachers into the teaching community. Mentors were often expected to help their mentees become effective teachers, be active members of staff within the school community, and contribute to the broader community of educators. Peers helped beginning teachers with socialization into the teaching profession (Achinstein, 2006; Burris, Kitchel, Greiman, & Torres, 2006; Fletcher & Barrett, 2004; Friedrichsen, Chval, & Teuscher, 2007; Nasser-Abu Alhija & Fresko, 2010; Tillman, 2005). The process of socialization included mentors acting as a guide for social interactions, role-modeling both as a teacher and staff member, and generally assisting ECTs to navigate the school within and beyond the school. Aside from formal mentors, a developmental culture across the school also supported the integration of beginning teachers into the teaching community (Grammatikopoulos, Tsigilis, Gregoriadis, & Bikos, 2013; Griffiths, 2011; Haigh & Anthony, 2012).

Emotional peer support. The emotional impact of having supportive peers, whether formal relationships as mentor and mentee or informal systems of support, was included in a number of programs. Beginning teachers mentioned trust as the most important feature of a supportive relationship between peers (Dempsey & Christenson-Foggett, 2011; Donne & Lin, 2013). Trust building took time, but allowed beginning teachers to feel confident in asking their peers anything without fearing the repercussions (Gardiner, 2012). The emotional support beginning teachers received from their peers was cited as an important factor in helping them through tough times in

their new role (Clark & Byrnes, 2012; Dempsey & Christenson-Foggett, 2011; Fox, Deaney, & Wilson, 2010; Friedrichsen et al., 2007; Gellert & Gonzalez, 2011).

Beginning teachers also pointed to the importance of respect in the relationship with their peers (Fenwick, 2011). It was important for beginning teachers to respect their peers, and it was equally important for them to feel respected and needed for mutual emotional support. Other beginning teachers felt a strong mentor-mentee relationship had to also feel like a friendship (Achinstein & Barrett, 2004; Burris et al., 2006; Lee & Feng, 2007). However, as one mentor suggested, at times it was difficult to strike a healthy balance between providing advice and feedback to help the mentee grow as a teacher, along with providing the emotional support of being a friend (Achinstein & Barrett, 2004).

Absence of peer support. There was also value in examining the conditions of programs which led to a lack of support for beginning teachers. Where beginning teachers did not have formal mentors, they felt isolated (Brindley & Parker, 2010; Cherubini, Kitchen, & Hodson, 2008). Beginning teachers stressed the negative impacts associated with a lack of mutual respect between mentor and mentee when these relationships first began. Beginning teachers described entrances into the network of practicing teachers as hard, intimidating, and judgmental (Bieler & Burns Thomas, 2009). From the studies contributing to this section, it was evident peers provided beginning teachers with different types of support which helped them grow as teachers, become active members of the teaching community, and feel emotionally comfortable in their new roles. It was also clear a lack of support could have a negative impact on ECTs, and that implementation of certain organizational features to provide support to beginning teachers had rather negative impacts.

External Community Relationships

External Community Relationships sub-categories included: (a) formal professional relationships, (b) non-formal professional relationships, and (c) non-professional relationships.

Formal professional relationships. The formal professional group included individuals who were working in education and who were formally affiliated with ECTs in the profession. ECTs reported multiple formal professional sources of feedback directly related to their profession. School psychologists, curriculum facilitators, and induction coaches were all cited as sources of some form of feedback (Gardiner, 2012; Gehrke & McCoy, 2007b; Gellert & Gonzalez, 2011; Lambeth & Lashley, 2012). One new teacher shared her experience of her professional relationship with her special education director: “[The Director] came to visit my department as a result of our discussions on the wiki. She was able to help me with a student I was struggling with this school year” (Taranto, 2011, p. 13).

Non-formal professional relationships. The non-formal professional group included individuals who were working in education, but who were not formally affiliated with ECTs in professional relationships. New teachers reported their own use of online learning communities and social networking with other educators external to their school (Brock & Chatlain, 2008). Wiki pages were also cited as being used for support from the external community (Donne & Lin, 2013), as were former faculty members from schools ECTs had initially received training from in teacher education programs (Achinstein & Ogawa, 2011; Donne & Lin, 2013).

Non-professional relationships. The non-professional group includes individuals who were not working in education, but nonetheless had relationships with new teachers. ECTs identified community members (Brindley & Parker, 2010), including parents of their students (Castro, Kelly, & Shih, 2010; Perry & Hayes, 2011) as important non-professional relations. Earning the trust of the community members was cited as the most important factor determining the quality of the relationship with the external non-professional community, especially in forming a relationship with members of the community as an outsider coming from a different community (Burton & Johnson, 2010). Personal networks were also cited as a source of support for ECTs: “A small number in each case referred to friends (especially those who were teachers) and relatives as sources of support” (Abbott, Moran, & Clarke, 2009, p. 104).

Political Contextual Factors

For the purposes of this research, political context was defined in a broader sense as referring to the arenas where policymaking in various civil, national, and public environments led to action. This broad definition included such organizing aspects as structure, order, and behaviour at the government and local levels, the distribution of power, the range and interests of involved organizations, and the formal and informal rules which govern the interactions among different stakeholders. From the total of 113 articles examined, over 50 sources contributed in various degrees to these themes. We categorized findings according to the levels at which policies, initiatives, and strategies were represented: (a) *national or federal*, (b) *state/province or county/municipality*, (c) *district school board*, (d) *school*, and (e) *community*.

National or Federal Political Factors

Within this category, three themes emerged: (a) program compliance with government mandates, (b) awareness of policies and administrative duties, and (c) need for customized support for ECTs.

Program compliance with government mandates. A number of studies highlighted the establishment of induction and/or mentoring programs and their elements as a result of national/federal mandates and policies. In China, ECTs have benefitted from induction initiatives since 1994 as outlined by the State Education Commission including support with lesson preparation and implementation and mentoring at both the primary and secondary school levels (Lee & Feng, 2007). In New Zealand, ECTs were supported by state-funded reduced teaching commitments for the first two years, as well as initiatives like reflective writing, observations of colleagues’ teaching, networking with ECTs in the school, and targeted professional development opportunities (Anthony, Haigh, & Kane, 2011; Haigh & Anthony, 2012). Within the England and Wales context, the government mandated tutors to provide constructive feedback to new teachers throughout the year (Parkinson & Pritchard, 2005). Several studies identified the discrepancies between the program mandates and the actual programs. For example, Anthony et al. (2011, p. 861) noted the “federal (official) induction is robust and well supported as seen from the outside, though not as evident from the inside due to great variation in schools.” Similarly, in the Israeli context, discrepancies were found between the mandates and outcomes (Lazovsky & Reichenberg, 2006) and a partial implementation (Fresko & Nasser-Abu Alhija, 2009) of a national mandatory induction program for beginning teachers. Fresko and Nasser-Abu Alhija (2009) noted a significant gap between program directives, which embodied the policy of the Ministry of Education, and the actual manner in which the program was implemented, mainly due to program directives’ assumption of an ideal situation for implementation.

Beginning teachers' awareness of federal/national policies and administrative duties. Several studies outlined the role beginning teacher induction programs in fostering understanding of national/federal policies and procedures. Perry and Hayes (2011, p. 10) found test results showed beginning teachers' "ability to understand local, state, and federal policies and procedures" was significantly improved after three years of teaching in comparison to their first year. In Greece, the Ministry of Education 100-hour induction program provided beginning teachers with specific training focusing on duties, legal rights, and obligations; this was a rare opportunity for many Greek teachers (Grammatikopoulos et al., 2013).

Need for customized support for ECTs. Several studies noted the importance of national/federal initiatives and strategies being flexible and applicable to best support beginning teacher needs. One area included cultural aspects within the program requirements, recognizing them as essential for beginning teacher and student success; where their absence contributed to low "levels of confidence immediately following training programs" (Cajkler & Hall, 2012, p. 225). Buckley, Schneider, and Shang (2004) highlighted the value placed on the physical space of the school by beginning teachers, positing the benefits of facility improvement for teacher retention were equal or above pay increase value while also being cost-effective over the long term.

State or Provincial Political Factors

Within the category of state/province/county/municipal level initiatives and strategies, two types of programs were noted as offered by: (a) province and (b) state. Although initiatives and/or strategies from jurisdictions in other countries were included in the systematic review, they were mostly at the national or other levels.

State. In the USA, several state level initiatives were evident in California as a part of the mandatory Beginning Teacher Support and Assessment (BTSA) program (Achinstein, 2006; Achinstein & Davis, 2014; Bianchini & Brenner, 2009; Bianchini & Cavazos, 2007; Fletcher & Barrett, 2004), including intensive individualized support and assistance for ECTs and a mentoring initiative pairing novice and expert teachers with opportunities for co-planning, inquiry, and observations. In Pennsylvania, a University paired with statewide induction initiatives to provide links on a wiki page to state education association videos to support new teachers (Donne & Lin, 2013). In Connecticut, all second-year teachers were required to complete portfolios and beginning teachers were supplied with mentors as a part of the Beginning Educator Support and Training (BEST) program (Youngs, Holdgreve-Resendez, & Qian, 2011).

Province. Within Canada, several studies (Cherubini, 2009; Cherubini, McGean, & Kitchen, 2011; Cherubini, Niemczyk, Hodson, & McGean, 2010) detailed the New Teacher Induction Program (NTIP) in the province of Ontario. Cherubini (2009) found ECTs who benefited most were those whose perceptions of induction as a sound investment to improve teaching and learning were complemented by school cultures which integrated their professional development in holistic and communal endeavors. On the other hand, Hinds and Berger (2010) noted the politics and conflict between the Ontario College of Teachers (the governing body of the teaching profession in the province) and the teacher federations detrimentally affected beginning teachers' identity by preventing many ECTs from receiving the guidance they needed from these organizations within the program.

District Level Political Factors

Several studies outlined school district responsibilities in the organization of teacher induction and mentoring programs, namely: hiring and assigning instructional facilitators as full-time mentors for a group of beginning teachers (Kamman & Long, 2010), district evaluations conducted by superintendents as a source of support for beginning teachers (Chatlain & Noonan, 2005), and district administrators working directly with mentors who advocated for novice teachers' needs (Achinstein, 2006). Various delivery formats were mentioned, with professional development being the most widely used format. Lambeth and Lashley (2012) noted professional development was a significant determining factor within the support system, helping ECTs "through the new teacher seminars with the induction coordinator and the induction coach, and . . . one-on-one meetings with the induction coach" (p. 44). One district in Missouri, USA offered an intense induction program designed for special education teachers and geared towards developing teaching quality and increasing teacher retention (Kamman & Long, 2010). It assigned instructional facilitators, who focused on instructional needs (i.e., improving classroom practice to increase student achievement) to work alongside with mentors, who offered support on school-based needs (e.g., paperwork, immediate classroom dilemmas, school policies and procedures, and collegiality). Taranto (2011) described an alternative format to the face-to-face meeting whereas the online learning community was embedded into a broader program of support allowing central office administrators to interact and successfully support ECTs through wiki.

Further analysis revealed such political contextual factors as district size, policies, and funding either promoted or hindered the effectiveness of beginning teacher support at the district level. In one study, the small district size was perceived by teachers as friendly, engendering the sense of community, and conducive to curricular freedom and tight-knit professional network, whereas the large district could potentially lead novices to "get lost and swallowed up" (Anderson & Olsen, 2006, p. 367). Adequate district funding for facilities and resources needed for ECTs to effectively do their job was deemed an essential positive factor (Wynn, Carboni, & Patall, 2007). Negative factors which hindered effective program impact were lack of encouragement and support at the school district level and insufficient time for beginning teachers to observe their mentors teaching (Certo, 2005), inconsistencies in district policy involving mentor selection and assignment (Youngs, 2007), lack of responsiveness by district staff for requests for assistance in accessing specific services and background information on the characteristics and needs of students (Dempsey & Christenson-Foggett, 2011), and pre-set curriculum which the district expected them to teach (Black, Neel, & Benson, 2008).

School Level Political Factors

At the school level, political factors mostly related to micropolitics, or the overt and covert (formal and informal) processes to acquire and exercise power in order to promote or protect interests within an organization (Yendol-Hoppey, Jacobs, & Dana, 2009). Novice teachers often had to negotiate complex organizational contexts, including considerable variability in access to resources appropriate to the needs of individual teachers (Anthony et al., 2011), political agendas of school administrators (Grudnoff, 2012), policy limitations (Sabar, 2004; Youngs, 2007), workload issues and poor relationships among staff (Sabar, 2004), social justice issues (Yendol-Hoppey et al., 2009), and dealing with school achievement goals which may necessitate that ECTs are more effective than their more experienced colleagues (Fletcher & Barrett, 2004) or carry out same regular and additional tasks as experienced teachers (Gaikhorst, Beishuizen, Korstjens, & Volman, 2014).

ECTs needed to develop not only “the ‘knowledge of teaching’ but also ‘knowledge of the micropolitics of urban schools’ that might enable them to survive” (Yendol-Hoppey et al., 2009, p. 35). Similarly, as Achinstein (2006) posited, mentors need to not only read the organizational and political system, which includes knowledge and understanding of cultures and systems, key players, and political processes in the school and the district, but also have the responsibility to assist with developing political lenses in the novices as well. Castro et al. (2010) advocated for the need for beginning teachers to affirm their agency and develop resilience strategies to navigate and overcome pressures from the social context and to transform negative aspects in their school environment, whereas Grammatikopoulos et al. (2013) suggested learning about legal duties and rights.

In relation to leadership, Achinstein and Ogawa (2011) asserted educational leaders and policymakers need to reconsider any inequitable organizational contexts which may limit the opportunities of ECTs of color to learn and develop as professionals. Gaikhorst et al. (2014) found a lack of clearly formulated and documented goals and expectations contributed to negative perceptions of school support practices. Others argued for establishing common learning goals and instructional strategies (Youngs et al., 2011), structured learning opportunities for interaction (Ado, 2013) and relationship building strategies (Yendol-Hoppey et al., 2009) between early-career and more experienced colleagues and mentors to increase the novices’ ability to negotiate school micropolitics.

Community Political Factors

The least frequently mentioned, albeit also deemed important, were the political factors related to beginning teachers’ and schools’ interactions and involvement in the broader community. It was noted ECTs’ integration into community and lifestyle of community was important (Kono, 2012) due to the fact that distributed support for new teachers often included support from outside the school environment and from home (Anthony et al., 2011). Some researchers argued that through collaboration, ECTs and all stakeholders in urban education—teachers and family members, school administrators, and community leaders—would be better able to push back against the ideologies, beliefs, and practices that perpetuate the educational inequalities in school systems (Alkins, Banks-Santilli, Elliott, Guttenberg, & Kamii, 2006).

Cultural Contextual Factors

Cultural context was defined in a broader sense as referring to the eclectic environment wherein humans learn to organise their thoughts, emotions, and behaviors based on shared norms, beliefs, values, customs, and traditions that are common to a group of people. Culture is a way of life which is defined by race, gender, ethnicity, age, and other broad geographical and demographical contributing factors. Cultural contexts can also be constrained to institutional and organizational frameworks within which individuals’ social interactions occur. From the total of 113 articles examined, 65 sources contributed in various degrees to this theme. This category included two themes: (a) *socio-cultural factors* and (b) *institutional culture factors*.

Socio-Cultural Factors

Socio-cultural contextual factors findings were categorized into two groups: (a) school demographics and (b) cultural diversity.

School demographics. Several studies reported demographics of a school or school district were important to consider in terms of their potential impact upon the culture of novice teachers. In several studies (Hagger, Mutton, & Burn, 2011; Hall & Cajkler, 2008), researchers noticed novices' realization of importance to consider the demographics of their students. Several studies explored how cultural difference could cause tension in the relationships between novice teachers and their students. Achinstein and Aguirre (2008) noted although it was assumed in the literature that teachers of color would experience a cultural match with their students of color and thus have better connections and be more effective, their study findings showed that 93% (14/15) of the novice teachers reported challenges about their sociocultural identifications from their students of color, viewing them as "culturally suspect, calling into question their sociocultural identifications and authenticity" (p. 1513). They suggested that beyond pre-service, induction programs and schools need to focus on developing and supporting multicultural capital among novices of color, engaging students in meaningful exploration of sociocultural issues and need to help ECTs of color to negotiate the complexities of being a cultural match and a cultural suspect in their own classrooms. Furthermore, mentors were found to be a mitigating factor for novice teachers who needed help in learning about curriculum and students in order to be effective instructional leaders in Californian schools (Fletcher & Barrett, 2004), whereas "most new teachers (95.7%) believed the mentors helped them to work effectively with students from diverse backgrounds" (p. 327). However, a study of the influences upon induction of novice teachers in Chicago public schools noted "most school demographics, including poverty, did not appear to influence novices' experience or future teaching intentions in our analysis" (Kapadia, Coca, & Easton, 2007, p. 18).

Cultural diversity. Overall, novice teachers, who participated in an assortment of the research studies contributing to this theme, reported exposure to cultural diversity contributed to their cultural proficiency in classrooms and ongoing professional development. In a study in England, teachers admitted not anticipating the importance of understanding of students' family and cultural backgrounds and being taken aback at the extent of their experienced colleagues' knowledge of individual students (Hagger et al., 2011). In another study in England which explored the needs of beginning teachers who were teaching students with English as an additional language, researchers highlighted novice teachers' students had helped them to overcome the challenges of teaching in culturally diverse environment (Hall & Cajkler, 2008). Researchers described challenges as the need to learn about different languages and cultures, especially among monolingual new teachers, predicting the country of origin and native language of the English Language Learner (ELL) student; feeling ill-prepared to teach ELL students; requiring more background knowledge on European (Portuguese and Polish), Asian, and African languages (Somali, Shona). In a Dutch study, researchers found that

addressing language differences was experienced as difficult by several teachers . . . two teachers stated that it was more difficult to create a safe atmosphere in the classroom in a large city because so many children with different backgrounds and stories are placed together. (Gaikhorst et al., 2014, p. 31)

However, the researchers clarified this environment did not present overwhelmingly difficult *problems* for beginning teachers, as they perceived these as challenges rather than real problems, because they had received adequate support as they worked through these issues.

Authenticity was also important in a study of Aboriginal novice teachers' experiences in Canada. One study emphasized the criticality of new teacher induction being adapted to the needs of Aboriginal educators in order to preserve Aboriginal languages and cultures and to enhance the future success of Aboriginal students (Cherubini, 2008), stating induction programs which

heighten beginning teachers' sensitivity toward Aboriginal students' culture, language, and worldview furthered novice teachers' professional competence. A further study highlighted implications for Aboriginal novice teachers' given Aboriginal knowledge is vastly underrepresented in Ontario schools. Researchers stressed their participants indicated a disciplined commitment to self-identify as Aboriginal peoples first, and then as new Aboriginal teachers, strove to establish their identity in order to better cultivate their students' identity formation as Aboriginal peoples, collectively spoke of their spirituality and how it was connected to the land, and how from this relationship their traditional values, belief, and epistemology emerged (Cherubini et al., 2010).

Institutional Culture Factors

Institutional culture contextual factors findings were categorized into five groups: (a) teaching philosophies and ethos, (b) socialization process, (c) culture of mentorship, and (d) career and professional development.

Teaching philosophies and ethos. A common theme discussed throughout several of the articles was a lack of alignment or mismatch between the philosophy held by the novice teacher and the school culture where they taught. For example, a novice Ontario-based teacher described a school culture, which contradicted his philosophy of education and ideal vision of the profession at the root of his new teacher experience, as “the ugly side of teaching” (Fantilli & McDougall, 2009, p. 821). In a different study, on the ethos of a department within the school, a participant noted: “there is a poor ethos in our department and I have no faith that my work is appreciated. At the moment I’m struggling to be a teacher” (Fenwick, 2011, p. 332). In a study of five newly qualified teachers in one school in England, researchers reported a philosophical mismatch between novice teachers and the school or school district, with one novice teacher stating, “I don’t necessarily think we’re all going in the same direction” (Findlay, 2006, p. 542). Another study reported in one school district in the United States the differences in philosophy between different staff members within a school caused significant levels of tension, whereas novice teachers spoke of a “sometimes acrimonious divide among staff” and outlined the need for “coalition-building support” (Anderson & Olsen, 2006, p. 367). In addition, a tension was seen between the philosophy of novice teachers and their mentors in one study of new teacher/mentor pairs in California, where the mentor struggled to find a way which respected the new teacher’s values, while introducing some of her concerns and realized her critical approaches might have brought the new teacher into conflict with her school culture (Achinstein & Barrett, 2004).

The aspect of *fitting in* occurred for novice teachers in New Zealand who found themselves in schools with a strong *craft knowledge* culture, where “the more ambitious pedagogies advocated in ITE [initial teacher education] were discouraged in favour of traditional safe approaches to teaching” whereas newly qualified teachers experienced “the pull (and sometimes push) to abandon their initially desired practices for safer, less complex activities or actions” (Anthony et al., 2011, p. 866). Reporting on a partnership between seven colleges and universities, and three urban school districts which were part of the Massachusetts Coalition for Teacher Quality and Student Achievement, researchers summarized how

the process of developing a teaching philosophy requires a beginning teacher to identify firmly held beliefs about learning and examine them critically. Some beginning teachers come to the profession with a universalistic perspective of learning, and some teacher preparation programs even reinforce such a position. (Alkins et al., 2006, p. 68)

In a study focused on novice teachers in a western Canadian Catholic school district, emphasis was given to examining the impact of the induction process in a religious school (Chatlain & Noonan, 2005), where all teachers either shared Catholic beliefs or were at least not hostile to them, and assumed they had an understanding of and empathy for the core values and religious beliefs which guide Catholic education. However, the researchers also highlighted potential differences in learning how the beliefs and values of the faith apply in a classroom setting by ECTs whose philosophies of education may have been greatly influenced by the secular undergraduate preparation, noting “religious values must be internalized differently than social values, and these values cannot be simply handed on to new members” (p. 510).

Socialization process. In some studies, focus was given to the challenges presented by a cultural context which did *not* facilitate social interaction. For example, in a study of the induction of agricultural teachers in the United States, researchers noted those ECTs were not prepared for isolation and socialization issues which were often part of the organizational environment of schools (Greiman, Walker, & Birkenholz, 2005). In a study of 700 beginning mathematics teachers in Germany, researchers described the challenge of limited opportunities for ECTs to socialize with their peers, highlighting how many of their participants reported either lunch or break-time was the only opportunity for them to get together and talk with other teachers in their school (Alharbi & Kinchin, 2012). Mentors were found instrumental in helping protégés with their socialization needs, “as part of the socialization role, mentors identified needing knowledge of how to navigate school contexts and work within different systems to mentor effectively” (Achinstein & Davis, 2014, p. 112).

In a study of beginning teachers from three different education authorities in England, researchers asserted “it is evident that collaborative, collegial and supportive ways of working within groups of experienced teachers may compensate to some extent for any lack of formal structures for mentoring” (Harrison et al., 2006, p. 1062). The value of a culture of socialization and collegiality was seen in a New Zealand study of novice teachers who

appreciated ‘knowing that they were not alone’ in terms of receiving professional support and talked about the value of working in a school that ‘shares information, resources and ideas’ and where other teachers ‘talk openly about their teaching and what is going on in their programmes.’ (Grudnoff, 2012, p. 479)

Culture of mentorship. Several studies alluded to the need for the culture of mentorship and the key role of mentors in creating such culture for novice teachers at the institutional level. The notion that a culture of mentorship could be created within a school or district in order help retain ECTs in their jobs was put forward in a study teacher induction in Chicago, where researchers commented “teachers working in classrooms with a higher percentage of students with behaviour problems are much less likely than their peers to report a good teaching experience, to intend to continue teaching, and to plan to remain in the same school” (Kapadia et al., 2007, p. 18). Another study of mentoring new teachers in urban schools in the northeast United States, posited a mentor believed in responsibility to “contribute to creating a learning culture within his school in order to retain and develop novice teachers” (Yendol-Hoppey et al., 2009, p. 37). In another United States based study, the focus was on examining teacher retention through a professional learning communities framework. Researchers noted a significant positive correlation between school climate and teacher’s decision to remain in the school district, suggesting the improvement of working conditions, a component of school climate, positively affected teachers’ predisposition to plan to remain in the school (Wynn et al., 2007).

Focussing on the knowledge and practice base of mentoring in programs in California, a study pointed to the need of a culture of training and support. Whereas it is often assumed a good teacher will naturally be a good mentor regardless of subject matter, this study “revealed the complex mentor knowledge/practice base needed to support novices’ content teaching, which current mentor development approaches may lack” (Achinstein & Davis, 2014, p. 123). Citing the success of the programs in their case study, Achinstein and Davis reported how the participant mentors not only had a strong content and teaching background in their disciplines, but were also matched with mentees in their same subject area, and engaged in ongoing professional development focused on content mentoring. Moreover, another study illustrated mentors “contribute to the maintenance of a positive climate and help the new teachers to feel members of the school family, when they see all the teachers equally and democratically, without any discrimination” (Iordanides & Vryoni, 2013, p. 81). Yet, in spite of overwhelming understanding that the role of mentors is critical in creating positive collaborative learning cultures for novice teachers, another study that focused on novice teachers in a rural school in Australia, found most mentors “continued to see themselves as the ‘expert’ teachers and their mentees as ‘novice’ teachers; failing to take into consideration the valuable skills and knowledge early career teachers’ bring to the relationship” (Beutel & Spooner-Lane, 2009, p. 357).

Career and professional development. Although evidenced in a small sample of the articles examined, the potential for ongoing impact upon the novice teacher legitimates the significance and worth of reporting on this theme. In two of the articles, mentoring and induction activities in teachers in California were seen to directly impact the ongoing career and professional development of the novice teacher. In one study, focused on new teacher and mentor political literacy, both seen as essential skills for teachers, the author identified three critical domains of participant mentors’ knowledge of political contexts: reading, navigating and advocating. In each domain, the researcher’s respondents reported, “that mentors need knowledge, skills and commitment themselves and the ability to foster these in new teachers” (Achinstein, 2006, p. 126). In a study focused on new Israeli teachers’ satisfaction with their first year of teaching, researchers presented empirical evidence that “schools which do not assume that good teaching is an innate talent, purposefully and continuously engage new teachers in the culture and practices of the school” (Nasser-Abu Alhija & Fresko, 2010, p. 1596). Exploring whether induction mattered, the authors asserted that school staffs who show a professional interest in their ECTs and help them deal with difficulties in teaching thus send implicit messages that novices are not alone and their success in teaching is a shared effort.

Personal and Individual Contextual Factors

For the purposes of this research, personal/individual context was defined as referring to the set of current factors which matters and were unique to an individual based on his/her circumstances, interests, characteristics, and experiences. From the total of 113 articles examined, 65 sources contributed in various degrees to this theme. Three overarching themes were seen within personal and individual aspects of induction and mentoring programs: (a) *personal efficacy*, (b) *prior background*, and (c) *mentorship experience*.

Personal Efficacy

Personal efficacy factors findings were categorized into three groups: (a) professional competence, (b) taking initiative, and (c) emotional intelligence.

Professional competence. Many empirical studies detailed novice teachers reporting a satisfactory or unsatisfactory feeling about their developing professional competence as a teacher. Novice teachers felt pressured to prove their competence to colleagues or administrators in their schools in a study of novice teachers in Ontario, Canada, where one teacher reported “she felt she had to prove herself by taking on the more challenging teaching assignment without expressing reservations” (Fantilli & McDougall, 2009, p. 822). Another study of new teachers in urban schools in high needs areas in Atlanta, Georgia, USA confirmed second-career teachers faced some tension between what they believed they should do as teachers and the practical decisions they had to make on a daily basis (Black et al., 2008). Beginning to move beyond the initial feelings of incompetence was seen in research examining the role of peer mentoring in the development of beginning secondary science teachers in the USA Midwest, where novice teachers noted “participating in peer mentoring served as a confidence-building mechanism and . . . allowed them to seek out constructive ways to deal with classroom management issues in a supportive, collaborative environment” (Forbes, 2004, p. 232). Grudnoff (2012) found emotional support from tutor teacher helped the novice teacher to become much more professionally confident.

In a study focused on the perceptions of alternatively prepared first-year teachers in an urban high school (Lambeth & Lashley, 2012), authors found the support of on-site administrators could facilitate effective teacher development across a school, as a result of which researchers highlighted progress in the development of one novice teacher who “alluded to her tenacity, her emerging sense of happiness in her work, and her growth as a teacher, which they witnessed” (p. 45). Similar descriptions of how being validated by colleagues instigated growth in competence were seen in empirical evidence from a study of 30 beginning teachers in Ontario, Canada (Cherubini, 2009). Author cited numerous occasions when beginning teachers indicated increased confidence because their “professional competence in the classroom and in the school community were validated not only by the autonomy afforded to make their own decisions, but by the fact that such decisions were respected by their colleagues” (p. 190). In the instances when new teacher efficacy and agency were self-reported to be the highest, they credited the nonjudgmental support they received from mentors, school administrators, and induction providers in alleviating some of the challenges.

Taking initiative. Several of the 65 studies reported taking of initiative by novice teachers and linked it to their developing self-efficacy. In a study which looked at the learning of newly qualified teachers in their first year of teaching in England (Haggarty, Postlethwaite, Diment, & Ellins, 2011), authors reported the benefits for the novice teachers to take initiative. One teacher explained initiating a new seating plan with struggling students “enabled him to work specifically with that group whilst the rest of the class got on with something else” (p. 945) and he was able to solve the problem. The novice teacher recalled talking to colleagues about ways to solve this problem, but eventually the teacher relied on personal decision-making initiative. In other cases, the opportunity for novice teachers to take initiative came about because of the context or particular circumstances of their school. For example, for novice teachers in England who were career changers, the author discovered the newly qualified teacher (NQT) year was not the same as a ‘normal’ NQT year (Griffiths, 2011). From the start, they already worked in teams, established class management, and developed planned schemes of work. Hence, these teachers had a strong sense of confidence and self-agency for those early in their careers and were moving quickly to full participation in the life of the school. In other instances, novice teachers described examples of their self-efficacy, motivation, and taking initiative in spite of difficult circumstances in their schools. In one study in Ontario, a novice teacher in her second year realized “this was not the

teaching experience she had envisioned but was partly motivated by her drive to succeed and the intrinsic reward of making a difference for many students” (Fantilli & McDougall, 2009, p. 822). The teacher clarified how she felt some pressure to push herself without revealing any anxiety to her colleagues and to prove herself by taking on the more challenging teaching assignment without expressing reservations.

Furthermore, novice teachers were seen to be taking their own initiative in a slightly more unintentional way. In a study of five first-year special educational needs teachers in the south-western United States (Gehrke & McCoy, 2007b), the authors reported how “perhaps unknowingly, each participant in this study provided examples of taking the initiative and using their own creativity to tackle the variety of problems related to acquiring appropriate materials and following special education procedures accurately in each of their settings” (p. 495). Gehrke and McCoy provided another example initiative, whereas a teacher accessed the Internet for instructional materials, borrowed curriculum and materials from the general education setting, and signed up for relevant district professional development opportunities.

Emotional intelligence. A number of studies described the significant role of emotional intelligence among novice teachers, as manifested through self-reflection, reading of others, and recognition and management of stress. Self-reflection was prompted by different sources both across and within programs and varied both across and within programs. ECTs engaged in self-reflective practice which was brought on by their experiences with the assigned mentors (Achinstejn, 2006; Irinaga-Bistolos, Schalock, Marvin, & Beck, 2007). Mentors assisted new teachers in reflecting on experiences they had in order to identify strengths and next steps. In other cases, professional development sessions within schools gave all staff members, including new teachers, an opportunity to self-reflect (Angelides & Mylordou, 2011; Forbes, 2004; Irinaga-Bistolos et al., 2007; Rhodes, Nevill, & Allen, 2005). Wiki pages were also cited by ECTs as a forum which encouraged their self-reflection and stimulated their development as educators (Donne & Lin, 2013).

ECTs engaged in self-reflection which was focused on their practice as educators (Cherubini, Kitchen, & Trudeau, 2009; Donne & Lin, 2013; Irinaga-Bistolos et al., 2007; Yendol-Hoppey et al., 2009). This helped them to identify what had gone well and what areas needed to be rethought for future lessons. Self-reflection was also focused on relationships (Yendol-Hoppey et al., 2009). In this sense, it sometimes involved “one monthly seminar devoted to peer collaboration and reflection allowed [the new teacher] to identify ways in which her behaviour may have facilitated the tense relationship with her administrator and effective strategies to elicit the type of support she expected.” (Forbes, 2004, p. 226). Self-reflection, prompted by various sources, at times also focused on ECTs’ core values and expectations of the profession, where new teachers found themselves wondering about whether or not teaching was the right path for them to take as a career (Achinstejn, 2006; Angelides & Mylordou, 2011).

In several cases which reported *reading others*, strong mentoring relationships with new and experienced teachers involved partners who were similar to each other, and especially with mentors who could read the feelings of the mentees (Achinstejn & Barrett, 2004; Achinstejn & Davis, 2014; Fenwick, 2011). In partnerships which featured dissimilar individuals, more negative experiences were reported (Burriss et al., 2006). Similar partners likely had an easier time reading each other as they could more easily understand how they were feeling without being told explicitly. Mentoring programs prompted feelings of empathy from mentors for mentees about their own experiences as new teachers. One mentor’s experience was:

focused more on empathy of what a new teacher feels by recalling that [the mentor] was once a brand new teacher. At the time, she started mentoring she had only completed two full academic calendars in her teaching career. It makes sense that she would remember her first year and have the ability to empathize with the new teachers she mentored in her third year of teaching. (Catapano & Huisman, 2013, p. 268)

In a number of cases, mentors shared their experience of judging mentees' levels of readiness, which helped determine the appropriate level of challenge and/or support mentors could provide mentees (Achinstein & Barrett, 2004; Achinstein & Davis, 2014; Fenwick, 2011). The following examples were provided by Achinstein and Barrett (2004): "Laura had to carefully read Tina's readiness to receive feedback and new ideas" (p. 737) and "this mentor struggled with holding back comments when she perceived the new teacher needed to 'vent'" (p. 740). Use of vignettes and role-playing were cited as suggestions for methods of training mentors in judging mentees' levels of readiness (Achinstein & Barrett, 2004).

In many studies, ECTs acknowledged feelings of stress (Achinstein & Davis, 2014; Beutel & Spooner-Lane, 2009; Dempsey & Christenson-Foggett, 2011; Fantilli & McDougall, 2009; Helms-Lorenz, Slof, & van de Grift, 2012), isolation and anxiety (Fantilli & McDougall, 2009), and some form of a tense relationship (Forbes, 2004; Grudnoff, 2012; Helms-Lorenz et al., 2012). As a method of supporting ECTs' growth, mentors noted the importance of: "recognizing the stresses that first and second year teachers experience" and "giving [a] new teacher the encouragement and support to grow beyond what he/she is doing well to learning how to do some things differently" (Achinstein & Davis, 2014, p. 112). Professional development sessions (Helms-Lorenz et al., 2012) were implemented in different cases in order to help ECTs recognize the negative emotions which can be associated with entry into the profession, and to identify ways to support new teachers in overcoming the negative emotions.

Personal Background

Personal background factors findings were categorized into two groups: (a) prior skills and experience and (b) professional identity formation.

Prior skills and experience. An examination influences of induction programs upon retaining novice teachers in public schools in Chicago "showed that factors relating to teacher background and preparation particularly matter to novices working in elementary schools" (Kapadia et al., 2007, p. 16). They found novice teachers with prior work experience in a field other than teaching were more likely to report a good teaching experience, intend to continue teaching, and plan to remain in the same school. A study which examined the perceptions of alternatively prepared first-year teachers in urban high schools in a state within the USA (Lambeth & Lashley, 2012) reported participants brought a wide range of life and career experiences to the teaching profession, yet noted that even though many of the teachers were also parents and were used to dealing with children, they faced having to deal with "situations they were not prepared or indeed trained for" (p. 47).

In an exploration of the school contexts and cultural/professional roles of ECTs of Mexican descent (Achinstein & Ogawa, 2011), authors revealed the novice teachers' commitments were fuelled by early personal and professional experiences and "inspired by teachers who served as role models and motivated them to do the same for their students" (p. 2536). The authors acknowledged how both novice teachers had graduated from their teacher education programs with strong social justice orientations and coursework which encouraged and supported culturally and linguistically responsive teaching. In a New Zealand study (Anthony et al., 2011), researchers

related participants' belief that the prior occupational experiences and skills (e.g., familiarity with ICT, administration, working with teams, and presentation skills) affected issues of fit within their schools. In particular, "being able to draw on prior work experiences and expertise affirmed their identity and sense of worth as [newly qualified teachers]" (p. 865). Finally, a study of the Graduate Teacher Program (GTP) in England [a school-based initial teacher training program] (Griffiths, 2011), reinforced that previous work experience impacted upon 45 novice teachers in the initial stages of their career, stating that the ability to transfer existing skills to a new context, which is vital for work-based learning, may be "particularly important for pre-service teachers on an employment-based route" (p. 24).

Professional identity formation. In a study situated in a small urban high school in and East Coast urban areas of the United States (Ado, 2013), the researcher noted

the intersection between the school context and early career teachers' expectations about teaching were highly influential to the experiences that they had over their first few years in the classroom and that these intersections shaped their future career intentions differently, even in this successful urban school. (pp. 147-148)

In their national longitudinal study of newly qualified teachers accounts of induction in New Zealand, Anthony et al. (2011) similarly found that "the ability to 'fit' into the new context is an important consideration in terms of identity formation, and job satisfaction" (p. 865). For these novice teachers, issues of fit were mediated by their dispositions to learning, partly related to their histories and lived experience, and partly related to differences in the nature of work determined by the workplace environment and learning opportunities. In a Scottish context, Shanks, Robson, and Gray (2012) argued that, rather than fitting the new teacher into existing arrangements, schools must tailor induction year experiences by recognizing the ECTs' individual learning dispositions, namely their learning biography and attitude towards, and engagement with, learning opportunities.

Mentorship Experiences

Mentorship experience factors were categorized into two groups: (a) quality and structure of mentorship and (b) mentors' preparation.

Quality and structure of mentorship. Many studies alluded to the impact of the quality and structure of mentorship upon novice teachers' experiences. For example, some studies (Birkeland & Feiman-Nemser, 2009; Forbes, 2004; Griffiths, 2011; Nasser-Abu Alhija & Fresko, 2010) reported the impact (either positive or negative) of the availability of willing and experienced mentors. Further studies considered the impact of interactions with mentors on the novice teachers (Abbott et al., 2009; Ado, 2013; Bianchini & Cavazos, 2007; Bickmore, Bickmore, & Hart, 2005; Certo, 2005; Grudnoff, 2012; Hagger et al., 2011; Richter et al., 2013). The impact of mentors' prior experience upon the type of support they provided for ECTs was also mentioned (Abu Rass, 2010; Anderson & Olsen, 2006; Gardiner, 2011). Finally, evidence was seen of the discrepancy between the support provided by the mentor and the support valued or needed by the novice teacher (Andrews & Akerson, 2012; Lambeth & Lashley, 2012; Youngs, 2007). In a study of the perceptions of 30 new teachers towards their induction program in Ontario, Canada, Cherubini (2009) found that in "those instances when new teacher efficacy and agency were self-reported to be the highest, they credited the nonjudgmental support they received from mentors, school administrators, and induction providers in alleviating some of the challenges" (p. 193). In addition to the appeared benefits of non-judgemental support, a study of the experiences of 12 beginning

teachers in New Zealand (Grudnoff, 2012) reported the more emotional support and encouragement the new teachers received from their mentors, the more the novice teachers grew in confidence as teachers.

In a study of 700 beginning teachers in Germany (Richter et al., 2013), researchers found “many mentor teachers evidently provide a learning environment that supports individual learning and development,” however, they clarified that the “mentors who supervise their mentees closely and convey their ideas of teaching to their mentee do not successfully foster beginning teachers’ competence and well-being” (p. 174). Conversely, in a study of schools in eight counties in a state within the United States (Andrews & Akerson, 2012), researchers reported one novice teacher forcefully declaring, “my mentor teacher has been no help” (p. 9), and concluded, “the value of having a mentor teacher depends greatly on the mentor,” and further explained how the “disparity between administrator responses and teacher responses may indicate a problem related to perceptions” (p. 10).

The discrepancy between the support provided by the mentor and the support valued or needed by the novice teacher, though not seen widely across the 65 articles, was somewhat problematic in the articles where it was mentioned. One study examined the variations in district policy and their association with differences in nature and quality of instructional assistance experienced by novice teachers in two urban high-poverty Connecticut schools districts (Youngs, 2007). The researcher found “the lack of close matches between these mentors and their mentees with regard to teaching assignment meant they [the mentors] had only partial knowledge of the curricula that [the novice teachers] were trying to teach” (p. 816). The researcher highlighted how for one particular novice teacher, [the mentor] “demonstrated little apparent understanding of the process by which new teachers learn to construct and apply pedagogical content knowledge” (p. 816). The approach taken by the mentor was reported to contribute to a very challenging and difficult experience for the novice teacher in his first year of teaching, whereby the novice teacher had started to actively seek teaching positions outside of this school district and eventually accepted a position in another school district. The researcher concluded from the data collected “differences in the quality of induction support seemed related to variations in district policy related to mentor selection and assignment, and mentors’, principals’ and other educators’ understandings of induction” (p. 817).

Mentors’ preparation. Gardiner (2012) examined how six first-year teachers experienced the support offered by their two induction mentors, and how such support contributed to the novice teachers’ professional learning and found ECTs believed coaches’ prior experiences in high-poverty urban schools and in similar grade levels meant they had a more nuanced lens for helping ECTs understand classroom experiences and provide contextually responsive instructional support. In a different study, Gardiner (2011) reported the experiences of eight new urban teachers in a metropolitan mid-west educational system in the USA, found that despite a belief that good teaching is good teaching, the mentors emphasized the importance of urban experience and contextual knowledge of students living in poverty, where a mentor stated, “If a coach has not worked in the city, it’s a big detriment” (p. 366).

Organizational Contextual Factors

For the purposes of this research, organizational context was defined as the dimensions represented in and shaped by the structure, size, functions, and nature of organization within which a group of people works together to achieve specific goals. Organizational context is also an operating environment determined by the internal characteristics of the organization and external

orientations of the organization. In total, 102 sources contributed to the topic of organizational contextual factors. Within this category, several themes captured aspects of induction and mentoring programs. These themes included: (a) structure of induction and mentoring programs, (b) mentoring as the most common program element (c) matching program elements to new teacher needs, and (d) indicators of program success.

Structure of Induction and Mentoring Programs

The literature revealed beginning teacher induction and mentoring programs are predominately composed of multiple elements:

Comprehensive induction programs included carefully selected and trained full-time mentors; a curriculum of intensive and structured support for beginning teachers; a focus on instructions, with opportunities for novice teachers to observe experienced teachers; formative assessment tools that permit evaluation of practice on an ongoing basis and require observations and constructive feedback; and outreach to district and school-based administrators to educate them about program goals and to garner their systemic support for the program. (Glazerman et al., 2008, p. 1)

The viability of the elements in relation to the specific context and needs of the beginning teachers was found to be dependent on consistency and conscientious undertaking of support activities for beginning teachers (Gaikhorst et al., 2014). The opportunity to observe fellow teachers was seen to be of significant value by beginning teachers whereas “observing the implementation of common curricular elements by other teachers, discussing aspects of the curriculum and using these interactions as a framework for reflection” provided ECTs with the opportunity to visualize new ways to structure their own courses (Forbes, 2004, p. 226). Another option for collaboration seen to be beneficial in supporting beginning teachers was through online mentoring, support through a website, a learning management system, or a wiki which involved asynchronous communication (Suk Hwang & Vrongistinos, 2012). As outlined by Bell-Robertson (2013), “[the wiki] was meant to serve as a place where [ECTs] could interact with one another and carry on virtual conversations between two or more community members” (p. 436). The virtual aspect of delivery facilitated induction supports for beginning teachers who were geographically distant from mentors and other teaching networks.

While multiple overarching programmatic elements were reported as effective, the breakdown of structures of programmatic elements revealed areas of possible ineffectiveness. More specifically, to have the support be perceived as beneficial, adequate structural supports were found to be crucial by Cherubini (2009, p. 192): “support systems and the induction program infrastructure itself needs to be well expressed and communicated to not only new teachers, but to mentors, administrators, board personnel, and school faculties in a high degree of clarity and specificity.” The lack of structure meant certain elements were not realized in the intended manner. Explicitly discussed, for instance, was the need for a person to be assigned to clearly communicate the structure and expectations to all participants, including beginning teachers, mentors, and staff. Birkeland and Feiman-Nemser (2009) described the importance of such role as:

the schools that made the most progress in developing comprehensive and school-wide systems of induction were those that assigned a skilled and well-respected faculty member to the role of induction leader . . . structural supports will fall flat unless embedded in a professional culture that values collegial collaboration. (p. 71)

The aggregate impact of program elements upon beginning teachers’ workload also contributed to the negative perceptions of program elements. Carter and Keiler (2009) noted, “part of the

teachers' responsibility became managing both the interactions with the multiple mentors and the time this required" (p. 450). On the contrary, another study found the naturally increased workload of a new teacher meant that they were spending more time at work and therefore, more time in an environment where they can ask questions to colleagues (Nasser-Abu Alhija & Fresko, 2010).

Mentoring as the Most Common Program Element

While various induction and mentoring program supports for beginning teachers were reported, the most frequently discussed element was mentoring. Mentoring involved engaging in a planned or informal relationship whereby a more experienced teacher supports the beginning teacher one-on-one. Implicitly and explicitly discussed was that the success of the mentoring relationship was driven by how involved, reliable, and accessible the mentor was to the new teacher. One participant in a study by Castro et al. (2010) described "seeing her mentor only once, when she came she told me everything like in ten minutes" (p. 624). In contrast, Gardiner (2011) found ECTs appreciating that "no matter how badly something 'flopped,' their coach was 'in their corner,' and ready to help them to not only feel better, but also analyze, interpret, and grow professionally from that experience" (p. 370). Ultimately, when novices received high levels of mentoring and high levels of support, the likelihood of their reporting a good teaching experience increased, as did the chances that they planned to remain in the same school (Kapadia et al., 2007). In addition, the high levels of mentoring strengthened the relationship through trust and the shared commitment and allowed for authentic learning and the ability "to gain insight into their own practice while helping someone else" (Catapano & Huisman, 2013, p. 269).

Matching Program Elements to New Teacher Needs

The biggest factor influencing the perceived outcomes of an induction and mentoring program was the how the program elements were matched to new teacher needs. This was particularly evident for alternatively certified teachers and teachers who were geographically distant from other teaching staff. Unruh and Holt (2010) argued that beginning teacher support programs should take into consideration the unique needs of alternative-entry teachers because of their previous experiences and expectations. Alkins et al. (2006) found ECTs explicitly required specific development based on their needs and subject matter; however, sufficient release time was not always allotted in a beginning teacher's schedule. Irinaga-Bistolas et al. (2007) described the full extent of the time and financial commitment needed to fully meet the needs of the beginning teachers; that includes not only time for beginning teachers and mentors to meet, but also time needed for observations and attending professional development seminars. Irinaga-Bistolas et al. discussed how, in order to counter these commonly-noted concerns, induction support was restructured to allow for smaller groups of beginning teacher and mentor meetings, the development of a website to support communication, and the completion of a needs assessment by beginning teachers to ensure applicability of the professional development and mentoring supports. Similarly, other studies have discussed the importance of streamlining teacher induction programs to meet the needs of beginning teachers in specific teaching areas like music (Bell-Robertson, 2013; Conway, 2006, 2012) and agriculture (Burriss & Keller, 2008; Burriss et al., 2006). A typical response beyond reconfiguring the induction support was for beginning teachers to create a network of just-in-time support and circle of individuals who serve as informal mentors or *adopted mentors* when an official mentor was lacking or not available. When selecting a program element to suit beginning teacher needs, several studies directly or indirectly noted the importance of the beginning teachers' willingness and perceived value in the learning to participate in the program elements. Gellert and Gonzalez (2011) highlighted that "throughout her second year, [one

novice teacher] regularly referred to her notes/lesson plans from the professional development” (p. 21) and some “beginning teachers expressed a desire to emulate those leading educators who furthered their own learning” (p. 7).

Indicators of Program Success

Finally, the success of program and mentoring elements were all contingent upon being situated within a supportive community which welcomed ECTs established a sense of belonging, provided sufficient time to focus on their needs, and offered longevity of support. For example, structures like grade level and content area teams have the potential to facilitate practice-centered collaboration between novices and experienced teachers, a feature of schools associated with teacher satisfaction and effectiveness (Birkeland & Feiman-Nemser, 2009). Informal conversations were found to build up trust and encourage thinking about and noting specific instruction issues for reflection and improvement (Forbes, 2004). Informal mentorship was seen by some teachers as a “lifeline of knowledge in the sea of challenge” (Fantilli & McDougall, 2009, p. 822), whereas others appreciated having ample time to prepare for assignments, gain familiarity with the school and curriculum, set-up and organize their classroom, and plan their first week. Contributing to the perceived feeling of being an outsider, the beginning teachers examined in the literature indicated they desire a sense of belonging as a member of the school community and ongoing support from colleagues. As shared by one participant in a study by Alharbi and Kinchin (2012, p. 230), a teacher “pointed out that he sometimes did not feel supported in his setting. He shared his story about his head teacher who, in his opinion, didn’t support the strategies he was using related to achievement rewards within his teaching.”

Administrative Contextual Factors

Widely discussed within the organizational category was the *administrators’ role in beginning teacher induction and mentoring programs*. This theme encompassed direct or indirect references to the formal or informal involvement of in-school or building-level administrators (principals/head teachers and vice/assistant principals) in teacher induction and/or mentoring programs for beginning teachers. Although these factors are directly linked to the organizational contextual factors, findings were thought to warrant a stand-alone status and an important role in induction and mentorship programs. Over 40 sources contributed in varying degrees to this theme. Findings from this theme, are presented below within four emergent subthemes: (a) duties and responsibilities for beginning teacher support, (b) types and formats of support, (c) impact and outcomes of school administrators’ involvement, and (d) leadership and commitment to program.

Duties and Responsibilities for Beginning Teacher Support

Implicitly and explicitly, the majority of sources indicated school administrators had an overall responsibility for supporting beginning teachers’ personal and professional development due to their overall leadership responsibility of teacher development and support in their schools. This responsibility was directly related to the need of school administrators to be informed about the needs of novice teachers and various supportive structures and programs available to them (Rhodes et al., 2005). In a study from Cyprus, principals were kept up-to-date about the program in order to offer support and protection to teachers who participated in the program, thus ensuring this will actively contribute to the efforts of reshaping school cultures (Angelides & Mylordou, 2011). In addition, embedded within the overall responsibility of administrators was the need to address specific contextual expectations for teachers through the support and learning opportunities (Ado,

2013; Greiman et al., 2005). Principals were seen as responsible for clear communication regarding various expectations for beginning teachers (Greiman et al., 2005). However, the onus to be informed and up-to-date about the beginning teachers' development was not only on the school administrators. Achinstein (2006) highlighted the importance for beginning teachers to also understand and be aware of the overall role of the school principal for teacher development, as well as his/her position in relation to beginning teachers' support within the broader context of schooling.

Various formal and informal duties of school administrators were discussed in the reviewed literature, varying from informal interactions with the beginning teachers to scheduled formal meetings and teacher supervision. Assignment of mentors to beginning teachers was the most widely detailed aspect of school administrator's role in teacher induction and mentoring processes (Abu Rass, 2010; Bianchini & Brenner, 2009; Bianchini & Cavazos, 2007; Bickmore et al., 2005; Fantilli & McDougall, 2009). One study suggested it would be beneficial for newcomers to the profession if administrators played a more active role in selecting a pool of qualified mentors from which ECTs could select to work with (Fantilli & McDougall, 2009). Bickmore et al. (2005) found matching mentors and mentees in the same content area was beneficial. Others recommended mentors and mentees be matched based on close proximity, similar teaching assignments, opportunities for common meeting times, and a match in gender, age, teaching philosophies, and complimentary personality types (Abu Rass, 2010). As found in the US study of beginning and mentor agriculture teachers' perceptions of psychosocial assistance, similarities, and satisfaction, mentors and induction teachers with similar values, attitudes, working styles, and teaching philosophies were more likely to have a positive mentoring experience, successful relationship, and satisfactory interaction (Burriss et al., 2006). These authors posited that this finding implies the importance of similarity when selecting dyad partners and presents administrators and mentoring program coordinators with the challenge of making a mentorship dyad assignment before the two participants have met and established a rating of similarity.

Development and implementation of mentor training programs in school was one of the ways to enhance the mentoring experiences of beginning teachers. For example, in a study within the rural Australian context, the principal and the Deputy Principal initiated a mentor training for experienced teachers so that they could provide "informed professional support and guidance to the beginning teachers where necessary" (Beutel & Spooner-Lane, 2009, p. 352). Within an induction program for rural US special educators (Irinaga-Bistolas et al., 2007), professional development goals within the mentor partnership were identified based on a self-assessment and an implementation plan was developed to guide the partnership. Based on their study of formal and informal mentoring programs, Desimone et al. (2013) recommended increasing formal mentor training in order to maximize the potential of their role. Harrison, Lawson, and Wortley (2005) argued for tailored mentor training which can assist in developing critical reflective practice and a new teacher's increasing professional autonomy.

Widely mentioned in the literature was the key role of school administrators in ensuring that beginning teachers are provided with mentoring, time to observe each other, and opportunities to reflect on practice. Several authors argued it is crucial for school-level administrators to set aside more time for mentoring, planning for instruction, observing, discussing of student achievement, and providing feedback (Catapano & Huisman, 2013; Certo, 2005). In a US-based study, peer observation was deemed by beginning teachers as the highest valued support (Andrews, Gilbert, & Martin, 2007). However, as these researchers noted, there was a noticeable discrepancy in perceptions; whereas a fairly low percentage of ECTs responded they were given opportunities to

observe other teachers, a high percentage of administrators said this support was provided for their ECTs. One of the duties was implementation of policy or program aimed at supporting beginning teachers (Glazerman et al., 2008; Hellsten, Prytula, Ebanks, & Lai, 2009), with decentralized mentorship policies being implemented at the school level at the discretion of the principal.

Besides the supportive role of school administrators, several studies highlighted the expectations of school principals to supervise and evaluate the work of the ECTs (Abu Rass, 2010; Chatlain & Noonan, 2005). Related to the administrators' evaluative role was the duty to maintain confidentiality. For example, in a study of two US-based programs, mentors were strongly cautioned against sharing specific information with principals that could affect the beginning teachers' job evaluations and compromise confidentiality and openness in the mentor/mentee relationship (Glazerman et al., 2008).

Types and Format of Support

Principals play an important role in teacher induction and mentoring program implementation through the provision of various types of support to the beginning teachers. The resources included assigning experienced teachers to help novices (Sabar, 2004), provision of shared in-school planning time and allocation of scheduled planning days into the calendar for beginning teachers to observe other teachers, to attend workshops, to develop units and lessons, and to try out new software or other technology available at the district level (Clausen, 2007). Other forms of principals' support included bi-monthly and monthly meetings with new teachers and mentors, regular professional development for new teachers in addition to professional development activities for the entire staff, and in-school and district wide orientation activities for new teachers (Bickmore et al., 2005).

In some cases, studies mentioned a lack of resources and supplies in school (Bang & Luft, 2013) and differential access to resources by beginning teachers in multiple-teacher programs as opposed to single-teacher programs (Burriss & Keller, 2008). In such instances, advocating for resources represented another important form of help-seeking among beginning teachers who utilised colleagues and administrators as resources for overcoming obstacles (Castro et al., 2010). In this study, if the school administration did not provide or promised to and did not provide resources, beginning teachers went higher up the chain of command. As noted, one of the teachers, after researching the legal issues associated with special education, presented her findings and the legal issues to her school level administration, and was able to receive support in the form of two additional teacher aids to assist her at various times during the day (Castro et al., 2010). As evidenced from a study of the support structures for mathematics and science teachers in one of the US states, administrative support was one of two most frequently described sources of support (Friedrichsen et al., 2007). In this study, participants sought out their administrators to help resolve conflicts with individual students and/or parents, and viewed their principals more as problem solvers, rather than as curriculum consultants or teaching mentors.

Principals' attendance at the initial orientation for administrators or professional development sessions specifically designed for administrators (Glazerman et al., 2008) helped gain administrators' support for their beginning teachers' participation in the induction program and for the involvement of the mentor assigned to their school. The orientation events also provided brief overviews of beginning teachers' needs for support and development and the induction program's purposes and activities. These efforts were also aimed at minimizing conflicts which could impede mentors' efforts to schedule time with beginning teachers.

In rare instances, the school administrator provided direct mentoring to the beginning teacher. For example, Tillman (2005, p. 264) found one “teacher’s indecisiveness provided an opportunity for the principal to personally mentor her by encouraging her, implementing support structures, and reducing the isolation she felt.”

Impact and Outcome

Several of the reviewed studies provided empirical data on the direct and indirect impact of school administrators on the effective outcomes of teacher induction and mentoring programs and ultimately, teacher retention and development. Glazerman et al. (2008) noted schools and districts evidenced wide variation in the level of principal support, ranging from principals who were extremely supportive, actively encouraging teachers to make the most of the induction opportunities, to principals who actively resisted participation and would not permit teachers to be released for program activities. Further exploration of the impact of principals’ involvement in the program and support for beginning teachers revealed two subthemes.

Provision of support. A number of studies reported school administrators’ support was found to be helpful by beginning teachers (Achinstein & Ogawa, 2011; Kapadia et al., 2007; Rhodes et al., 2005). However, it is important to note this appreciation for principals’ assistance was usually discussed as part of an eclectic supportive system consisting of program providers, administrators, mentors, and colleagues. More specifically, actions perceived as helpful by beginning teachers in various studies encompassed warm welcome and orientation to the school (Sabar, 2004), encouragement (Abbott et al., 2009; Kapadia et al., 2007), informal interactions and formal meetings with principals (Chatlain & Noonan, 2005), instructional support (Achinstein & Barrett, 2004; Cherubini, 2007). In another study, mentors and ECTs indicated that people—mentors, interdisciplinary teams, and administrators—had greater positive influence in the induction of new teachers than activities (Bickmore et al., 2005). Main (2008, p. 126) found beginning teachers who believed

the principal, deputy principal, and other teachers are improving their teaching in the context of a high-quality induction programme in which the principal holds the tutor teacher accountable are more likely to report that their induction was useful and pedagogically oriented. They also reported higher levels of efficacy and satisfaction.

Kapadia et al. (2007, p. 30) reported three supports which had the greatest influence on new elementary school teachers and made them more likely to report a good teaching experience and intention to remain in the same school: “encouragement and assistance from their principal, regularly scheduled opportunities to collaborate with peers in the same field, and participation in a network of teachers”. In another study, participants mentioned they needed help and support from the administrator and other sources in order to respond successfully to critical incidents at the school (Lambeth & Lashley, 2012).

Exploring the personal needs support function of principals for new teachers in the US context, found novice teachers positively viewed principals as key to establishing personal needs of respect, belonging, self-esteem, confidence and autonomy (Bickmore & Bickmore, 2010). Similarly, Blömeke and Klein (2013) examined the effects of school management and teacher support on teaching quality in Germany as perceived by middle school mathematics teachers in their third year in the profession and found beginning teachers positively rated the school principals’ support and the quality of school management. All indicators of teaching quality improved if the teachers perceived more autonomy and more frequent appraisal. They concluded that principals have a key

role in providing high-quality management through administrative leadership and a climate of trust if they want to support their teachers in terms of autonomy and appraisal. Overall, these authors argued “principals have a crucial role in all respects if the quality of a school’s environment is to be improved” (Blömeke & Klein, 2013, p. 1044).

Cherubini (2009) found intentional directedness of principals’ partiality for the induction program, as perceived by participants themselves in sustaining school cultures, was affected the meanings attributed to programs by beginning teachers (Cherubini, 2009). Similarly, findings of a study that sought to determine the relationship between the presence of administrator-facilitated support for mentoring and perceived helpfulness of mentoring suggested novice teachers perceive their experiences with mentors as more likely to occur and more helpful when administrative support is built into the mentoring program (Clark & Byrnes, 2012). Another finding from this study suggests that if an administrator needs to choose between different forms of support (i.e., common planning time and release time for observation), common planning time is the more important administrator-facilitated type of mentoring support to provide.

Lack of support. In contrast to positive impacts described in studies where teachers received supports from school administrators, a number of the studies indicated negative outcomes of principals’ perceived lack of involvement or provision of support. For example, researchers noted ECTs rarely found curriculum support from their administrators as departments rarely had an administrator in their own field (Carter & Keiler, 2009). Similarly, Morris and Morris (2013) discussed overall perceptions of principals’ lack of communication, lack of assistance in improving student behaviour, and lack of sufficient resources in support of beginning teachers. In other cases, novice teachers described situations where their administrators failed to provide support during student conflicts or disagreed with the participant’s teaching philosophy (Friedrichsen et al., 2007), made decisions that surely impinged upon their professional development and emotional well-being (Brindley & Parker, 2010), or failed to fulfil or satisfy beginning teacher’s personal needs (Haigh & Anthony, 2012). Frels, Zientek, and Onwuegbuzie (2013) noted feelings of frustration and isolation in beginning teaches who wanted administration to “make more effort to talk to the new teachers, ask how everything is going, offer advice and support” (p. 47). Cherubini (2009) found a sense of genuine disconnect between the importance of the induction program as it was communicated by the board personnel, and the lack of preference principals had attributed to it at the local school level. Furthermore, this negative impact was amplified by the perceptions of novice teachers being at the bottom of the totem pole when they observed principal’s arbitrary modifications to the induction program schedule by reducing the structured time which the induction program offered protégés at the expense of other school priorities.

Leadership and Commitment

Finally, literature noted the significance of school administrators’ leadership and commitment to the program if teacher induction and mentoring programs are to succeed. First, principals’ commitment to and recognition of the program may positively or negatively influence the beginning teachers’ justification of their own commitment to and understanding of the need for the program (Cherubini, 2009). As Birkeland and Feiman-Nemser (2009) noted, the success of a school-based induction program relies on the commitment and investment of school leaders who strove to develop a supportive professional culture by fostering a school-wide appreciation that learning to teach well takes time and promoting the idea that the entire school is responsible for helping ECTs succeed; educated board members and parents about the importance of helping ECTs develop their practice; prioritized induction activities in the budget (such as protected time for mentors and ECTs

to meet and release time for induction leaders). Furthermore, Wynn et al. (2007, p. 222) highlighted the importance of principal leadership, finding “teachers who were more satisfied with the principal leadership in their schools were more likely to report planning to stay in the school district and at their school site.”

Administrative and structural leadership was deemed important for the success of the induction programs in various settings and geographical locations. For example, such practices of principals as active engagement in conjunction with quality interactions were deemed integral to not only keeping special education teachers in the field, but also cultivating their successes (Correa & Wagner, 2011). Early career special educators within rural school settings have also stressed the importance of collegial support from school administration and colleagues who are “available to answer questions and acculturate them into the culture, community and procedures of the school” (Irinaga-Bistolos et al., 2007, p. 21). Similarly, Kono (2012) argued school administrators can create meaningful teacher induction programs which incorporate diverse and unique features to help new teachers adjust to their new rural schools.

Cherian and Daniel (2008) outlined a number of roles for the school principal as related to teacher induction with the recognition of the collective responsibility for induction. The principal plays a vital role in creating supports for the induction process by focusing on structure, strategy, environment, implementation, experimentation, and adaptation. In addition, principals are called upon to manage the political issues which affected power relationships and status. Finally, although the notion of instructional leadership was important the participating principals, their educational leadership roles was often reduced to management of people, budgets, and behavior (teachers’ and students’). They concluded administrators’ role in the induction program is imbued with strong tensions between personal intentions, individual politics, and contradicting institutional objectives (Cherian & Daniel, 2008).

Discussion of Review Findings

International Scope of Review

Our review sought to establish an international perspective of induction and mentorship programs for beginning teachers. We acknowledge some previously completed literature reviews purport to be international in scope (e.g., Hobson et al., 2009); however, they are somewhat limited in range and are largely focused on English-speaking nations (e.g., United States, United Kingdom, Canada, New Zealand, and Australia). Therefore, we extended our systematic review to capture perspectives from as many nations as possible. In total, 14 different nations are represented; the full list of which can be found in Appendix E. Studies from other nations (e.g., Malta, France, and Brazil) were obtained through our searching strategy, indicating an extensive range of international support for beginning teachers. However, some of these studies were excluded from our final sample, as they did not meet the particular search criteria of our systematic review.

Many of the studies in our final sample (64 out of 113) were from the United States, and in total, 97 out of 113 studies were from English speaking nations (United States, United Kingdom, Canada, Australia, and New Zealand). This perhaps makes sense given our search for articles written in English; however, we would suggest further research is desirable to establish whether there is any correlation between where studies are undertaken and where induction and mentorship programs are located.

The findings of our systematic review suggest there are many commonalities shared by beginning teachers across different geographic locations. For example, being provided with emotional support from peers was seen to be of value in many of the articles regardless of their geographic location. Similarly, mentors were cited numerous times as being the mitigating factor for socializing beginning teachers into their teaching roles, schools, and school districts, regardless of where teachers were located geographically. Feeling isolated was a feeling shared by many beginning teachers irrespective of being placed in an urban or rural school, and regardless of their different jurisdictions.

Although our review found many of the reported challenges faced by beginning teachers did not vary significantly across different regions, there were localized contextual challenges which were important to recognize. For example, political contextual factors were very specific to nation, state, and region. Because much of the content of individual programs for beginning teachers is often very similar, the underlying rationale and the micro-politics of where the program is located is varied and often presents beginning teachers with individualized tensions and concerns. This was also noticed in other literature reviews; for instance, Long et al. (2012) highlighted how tensions could vary within a single school district, and Totterdell, Woodroffe, Bubb, and Hanrahan (2004) explained that a *rogue school* which fails to implement induction properly and subsequently exploits beginning teachers in some way, has a significant negative impact upon beginning teachers.

A Heuristic Model of Contextual Factors' Impact on the Beginning Teachers

A number of contextual factors emerged from our review had an impact on the experiences of ECTs during the induction and mentoring process. Based on the key findings from the reviewed literature, we adapted Bronfenbrenner's (1994) ecological systems theory to create a heuristic visualization (see Figure 3) of the complex and multi-layered contextual factors which influence and impact mentorship and induction programming for beginning teachers. When employed in this framework, Bronfenbrenner's theory directs attention toward the interaction between the personal/individual, social, political, cultural; and organizational contextual and environmental variances and nuances; and their potential influence upon induction and mentorship programming.

Within this framework, beginning teachers' personal factors are situated at the core, being both distinctive, and dependent on, and shaped by organizational, social, political, and cultural contextual factors. Personal factors comprise the social identity of an individual beginning teacher. These includes the beginning teacher's sense of professional competence, emotional intelligence, ability and opportunity to take initiative, prior skills and experience, professional identity, and the quality and structure of mentorship they perceive as an individual. The beginning teacher's personal factors are constantly shaped by both the individual environment and by encounters with other individuals situated within the immediate microsystem environment. The microsystem consists of interpersonal features at the school organizational level. These factors include the school culture, and the ethical values and practices which are embedded into that culture. In addition, they include individual groups of factors relating to the entire school staff, which are unique to that school. Mezosystem refers to the school administration and their management of duties and responsibilities towards beginning teacher support, the types and format of such support, the leadership roles and commitment towards supporting beginning teachers within the school, and the impact and outcomes of school administration involvement in supporting beginning teachers. Exosystem refers to organizational or institutional factors at school district level which shape or structure the environment within which the beginning teacher's experiences of mentorship and

induction programming occur. These factors include the policies, procedures, community relationships, organizational structure, and overarching institutional culture of the school district. Macrosystem includes federal/national/provincial and state politics and initiatives, national ideologies and identities, and demographical diversity, including religion, ethnicity, and socioeconomic status.

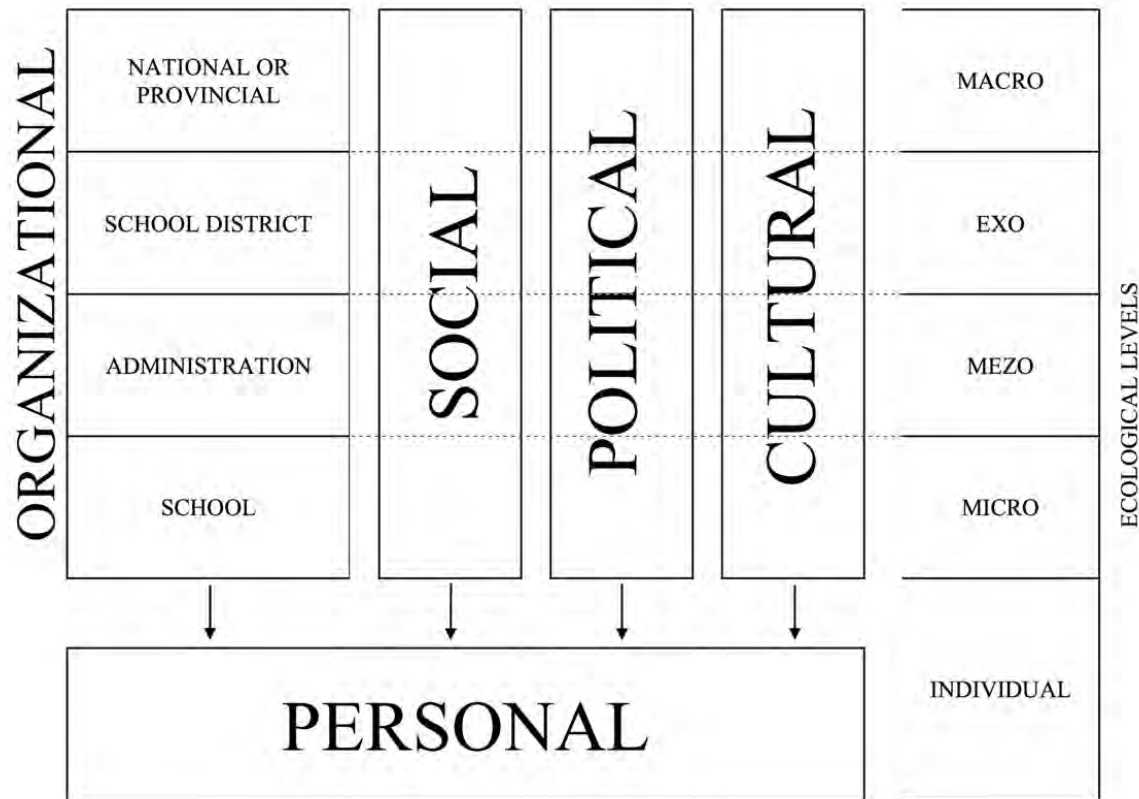


Figure 3. A heuristic framework of contextual factors’ impact on ECTs and programs.

This heuristic framework is designed to help conceptualize the sources and relationships between the contextual factors which affect mentorship and induction programming. This allows for purposeful, intentional recognition of the full richness of formal, facilitated, and spontaneous avenues of mentorship and induction programming that support early career development of beginning teachers.

Conclusions and Implications

We conclude our systematic review with an overview of its strengths and limitations, and discuss potential implications for policy, practice, and future research.

The Significance of the Review

Our systematic review highlighted a significant number of research studies which were conducted on the effects of mentorship and induction on beginning and ECTs’ learning, performance, attrition, and retention. First, our review indicated there are some commonalities involved in the successful induction and mentorship of beginning teachers, in spite of their geographic variance.

Second, the literature search employed in this review identified relevant research published in English, whether or not it originated in non-English speaking countries; the bibliographic information on these was extensive and included a variety of different nations. Finally, our search confirmed that research on induction and mentorship of beginning teachers has been conducted for several decades, and that research from 10 years ago remains relevant to the current research agenda.

The Limitations of the Review

Our review was limited to searching for articles written in English; this approach excluded research conducted in a variety of other nations from being represented. It must be noted our original inclusion criteria had to be modified, as there was a lack of valid, recent, and robust research on the effects of induction and mentorship which explicitly related to retention and attrition of beginning teachers. In addition, our search strategies concentrated on terminology familiar to us as Canadian and European researchers. We acknowledge other nations might employ various other terms when discussing support for beginning teachers.

Implications for Policy, Practice, and Further Research

We believe the heuristic framework which emerged from the review could be helpful for policy makers and educational leaders in the process of designing, implementing, and maintaining the teacher induction and mentoring programs. Application of the framework allows for the planning, analysis, and evaluation of the entire policy cycle (inasmuch as possible, recognizing the complex and non-linear nature of policy development processes) by offering a broad picture of the gamut and nature of factors which have an impact on effective programming and successful induction and mentoring experiences of ECTs. We contend the policy environment surrounding the induction and mentoring processes matters, and that this heuristic brings it into focus. Furthermore, it is important to further examine the implications of the increasingly diverse contexts of schooling and the ever-increasing policy requirements for an administrator's role.

In terms of practice, the heuristic framework is helpful for situating and assessing the existing or planned programs. Given the instrumental role of school administrators in the induction and mentoring processes, it may offer an assistive lens to principals and other administrators by identifying the areas where novice teachers' needs are being or not being met by the programs. The heuristic framework also provides school leaders with a better understanding of the source and type of challenges faced by a beginning teacher, so they can then measure the respective alignment or misalignment of the program supports necessary to mitigate those challenges.

Given the empirical support for the importance of mentoring within the induction programs, we see the need to further explore the role of mentorship frameworks as mitigating contextual challenges (especially through forming effective mentoring relationships). We suggest more in-depth studies of the mandates, structures, and programmatic support of successful formal mentoring programs at the system and school levels, as well as comparative studies between the perceived impacts of formal and informal mentoring arrangements in induction processes. Noting the interplay between the external (organizational, social, political, and cultural) and internal (personal) factors and the ultimate impact of the former on the latter, we see the need for further qualitative studies into the lived experiences of ECTs. Of particular importance would be studies which delve into the role of mentoring and induction supports in developing resilience and promoting wellbeing of early career educators. While it is evident school leaders (administrators)

have an important role in terms of involvement within the induction and mentoring program provision, additional examination of the specific role of administration in mitigating contextual challenges is warranted. Further studies would do well to examine the mechanisms and structures which can help school administrators develop trusting and collaborative relationships with mentors and ECTs. Stemming from this point is the need to explore the effect of mentoring and supporting structures and training available for new administrators and their links with subsequent involvement in induction programs for beginning teachers. In other words, we suggest further research on the connection between the mentoring support experienced by beginning administrators and the subsequent shaping of their role as supportive figures for beginning teachers in their schools. Finally, this review warrants continuing research into the multifaceted nature of organizational and contextual factors which shape the roles and responsibilities of all stakeholders' participation in induction and mentoring programs.

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