

Teachers' Emotion and their Professional Learning

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Effective teacher professional learning (TPL) is a complex process that requires both cognitive and emotional involvement. TPL aims to develop teachers' knowledge, skills and values throughout their career. It provides opportunities for personal and professional learning while helping to improve learning for all. There are numerous factors that are usually considered when assessing teachers' professional learning. TPL is supported by teacher motivation, capacity to examine ideas and beliefs as well as skills in implementing improvement strategies both individually and collaboratively (Avalos, 2011). Another significant TPL factor is social context as supported by Ajzen's Theory of Planned Behavior (1985, 1987 as cited in Ajzen, 1991). The theory, as substantiated by empirical evidence, highlights how behavioural intention is predicted by three things: an individual's attitude toward the behaviour, subjective norms and perceived behavioural control. Since educational improvement occurs within a human context, teachers' emotions greatly influence how they may respond to professional learning including the process of praxis, a theory, lesson or skill put into practice. Thus, developing, implementing and insuring school-based emotionally responsive professional learning (ERPL) for teachers must be a priority because it impacts teachers' learning, practices and, ultimately, the lives of their students.

Until recently, research in this area has been largely "overlooked and understudied" (Sillane et al., 2002, p. 411), possibly due to the complexities of defining, quantifying and evaluating emotions. It may also result from researchers oversimplifying the roles of teacher emotions in the change processes. However, a growing body of psychological, sociological, organizational, physiological and philosophical research is beginning to define and examine the complex relationship between teacher emotions, professional learning, and change. Keltner and

Ekman (2000) define emotions as “brief, rapid responses involving physiological, experiential, and behavioral activity that help humans respond to survival related problems and opportunities” (p. 163). They characterize emotions as having more specific causes than moods but also as being brief. Many studies show strong emotions in particular have significant immediate effects as well as possible long-term physical, emotional and psychological consequences. New emotive educational research shows shifts in methodology from predominately using qualitative methods to implementing mixed-method studies for increased understanding and comparability among and between data. This growing awareness of the importance of teacher emotions in relation to professional learning and change can increase teacher well-being and enhance teaching practices, thus improving the quality of education within classrooms and schools.

Teachers’ reactions to professional learning are shaped by their personal identities as well as macro and micro social and political climates that affect the adoption of new teacher practices. Unfortunately, these phenomena are difficult to conceptualize, quantify and develop within a coherent theoretical framework. Lazarus (1991 as cited in Van Veen & Slegers, 2006) explored the relational, motivational and cognitive processes that produce emotions. He found emotions always involve person-environment relationships and change over time, giving rise to new and different emotions. Further, emotions indicate the status of one’s goals and cognitively imply situational knowledge and generalized beliefs. Denzin, Fineman, Hargreaves and Lord and Harvey (as cited in Saunders, 2013) insightfully view emotions as social constructions. Their research highlights emotions as “individual lived experiences that are understood, mediated and co-constructed by interaction with others and directly linked to the organizations, cultural and social contexts in which they occur” (p. 305). They provide an important distinction for teachers’ professional learning by clarifying that learning does not occur in isolation but is socially

constructed. Therefore, ERPL is more likely to successfully support teachers through the personal and professional change processes, resulting in increased implementation of new teacher practices for sustainable change.

The purpose of this systematic review is to persuade educators, administrators, policymakers, professional learning committees and organizations as well as education districts and systems to change how they initiate, plan, implement, and monitor professional growth for ERPL and school improvement. ERPL is necessary to enhance teacher practices. Teacher professional practices depend on teacher identity and context, resulting in a variety of emotional responses before, during, and after professional learning. Professional learning must recognize, consider, and provide opportunities to integrate unique teacher physical, psychological, and emotional dynamics with professional learning content, processes and systems.

This review explores and classifies key themes, including teacher identity, positive and negative patterns of emotion, reflections and praxis, and implications for professional learning programs (Avalos, 2011; Saunders, 2012; Scott & Sutton, 2009; Yoo & Carter, 2017). It argues that TPL must be emotionally responsive by acknowledging and addressing teacher identities and contexts, thus increasing emotional well-being. To achieve this, professional learning must include inquiry, exploration and meaningful integration of new focus content with existing school structures and contexts, including personal and collective values, goals, and capacity building. These factors, in addition to greater transparency and teacher involvement before, during and after professional learning, are required to address mixed emotions which can hinder educational change and inhibit teacher emotional well-being. This emotional well-being is vital to teachers' successfully adopting and implementing new practices.

Background and Rationale

Teacher professional learning (TPL) practices often do not lead to teachers adopting new instructional practices, resulting in less educational effectiveness. Research shows TPL is largely ineffective because of a lack of relevancy to teachers as well as a lack of congruence among stakeholders and educational systems. There is a constant need to improve the relevancy of individual and collective teacher learning opportunities which address diverse student needs, teachers' traditional and historical influences, the expectations of education systems and a consideration of teachers' working conditions and the availability of TPL opportunities (Avalos, 2011). This systematic review assumes successful professional learning directly affects the quality of teacher learning and practices as well as the frequency of teaching and learning strategies in classrooms, in schools, and beyond school walls.

Several factors contribute to ineffective TPL. System conflicts may occur among schools, districts, provinces/states and nations provincial/state mandates. According to Scott and Sutton (2009), no change in teacher practices takes place when learning does not connect to teachers' past learning as well as when professional learning conflicts with micro and macro environments. Professional learning must bridge both the personal, internal schema and the external governmental context. Van Venn and Slegers (2006) agree that teachers are frequently excluded in system-wide advisory and in national and provincial decision-making processes. They demonstrate that teachers are often left to interpret and reinterpret educational reforms and initiatives while managing multidimensional and often contradictory expectations related to their own professional learning and assessment processes. Teachers struggle with these professional learning barriers. Particularly, as professional performance indicators change and conflict with

both daily practices and professional orientations, their beliefs about education. Moreover, it affects teachers' time, energy and emotionally impacts teachers' lives (Wexler, 2002).

There are missing connections between TPL, emotions and change despite their relevancy to teacher and school development. TPL in research is rarely linked directly to teacher emotions although, ironically, TPL often encourages teachers to accommodate student emotions in the learning process. Just as student emotional needs are an illuminating variable to learning, teacher emotions in professional learning are prominent, central and revealing as well. Many TPL studies refer to teachers' internal feelings but despite their emotions' as key role in change and development, other external elements overshadow them. Professional learning studies usually focus on elements in school structures, teacher groupings, and educational initiatives and programs.

While many studies do identify school culture as a variable in teachers' development, they don't examine how it is also one of the most significant barriers in addressing teacher emotions. The study of a professional learning program for newly qualified teachers set out by Jakhelln (2011) provides evidence of the missing connections between professional learning and emotions and the role of school culture. The qualitative data confirm that participants have strong emotions during professional learning, but rarely express emotional engagement or communicate emotional thoughts and practices during their daily work. The narrative texts, logs from meetings, interviews and emails as well as observational logs from the two-year study show that school culture does not recognize or value teacher emotions in daily practices or in professional learning.

Teacher emotions can either support or hinder school culture resulting in an increase or decrease of TPL and school achievement. For most teachers, teaching is their passion, and they

do it for highly emotionally-charged reasons such as a deep commitment to education.

Additionally, they derive even further strong emotions from their success or failure in their work as well. Hargreaves (2000), awarded for his outstanding educational research in Canada, shows that many secondary teachers create professional distance, considering emotions to be a “threat to individual learning and classroom order (p. 823). This may be a direct response to discounting their emotions within the culture of school. As a result of this disturbing internal conflict, student and collegial relationships suffer as well as teacher emotionality in education. Little to no attention to emotions creates increasingly “rationalized, cognitively-driven and behavioral priorities of knowledge, skill, standards, targets, performance, management, planning, problem solving, accountability, decision making and measurable results” (Hargreaves, 1997 as cited in Hargreaves, 2000, p. 812). This directly threatens the efficacy of constructivist learning theory. Further, emotional distance supports organizational theory based on manipulating emotions for organizational good rather than acknowledging and engaging with one’s own emotions for the common good. This poses a threat to meeting individual relevancy. Jakhelln and Hargreaves clearly agree that teacher emotions are significant, and that greater teacher emotional engagement will both enhance professional growth and provide a better education for students.

ERPL must be further researched and developed for increased teacher learning and effective school improvement. Researchers and those invested in school improvement must understand how teacher emotions and emotional processes support teacher well-being, increase motivation and engagement, and improve social learning and enhance teacher identity.

According to Yoo and Carter (2017), “[e]motions can convey powerful messages about a teacher’s inner state” (p. 48). They find teachers’ lack of personal and professional drive, along with an absence of purpose and meaning in professional learning results in emotional exhaustion

rather than improved teacher well-being and quality of instruction. This leads to teacher burnout and retention problems. Decontextualized, outcome focused professional learning undervalues teacher emotional identities and negatively affects morale, engagement and well-being (Yoo and Carter, 2017). Hong (2010) describes idealistic and emotionally burned out participants in pre-service teacher education programs and recommends a more reflective, continuous professional learning program with greater emotional support that enables belief modifications for long term growth and engagement. Such programs can provide researchers with better interpretations of pre-service teacher experiences as well as prevent teacher burnout and the resulting teacher attrition. Timoštšuk and Ugaste (2012) discovered not only positive emotions but also negative and mixed emotions in professional learning influence social learning and teacher identity. They observed emotions are interrelated with cognition and context. This helps teachers frame their perceptions of the world and determine who they are within it. Strong positive and negative emotions are fundamental to professional practice and to building teaching relationships and a growth mindset in the broader school community.

Methods

Literature Search Strategy

A systematic review is chosen for its relevant, rigorous and replicable methodology. Systematic reviews provide the means for evidence-based conceptualizations which lead to informed practices and policies. Unlike traditional literature reviews, systematic reviews focus more specifically on “evidence, impact, validity and causality” (p. 448) by focusing on reducing research bias through increasing breadth and transparency as well as synthesizing empirical evidence (Mallett et al, 2012).

This systematic review of qualitative and mixed method research on teacher emotions and professional learning thematically analyzes different research studies to develop a conceptual framework for emotionally effective professional learning that will result in increased teacher capacity and educational improvement in schools. Research using qualitative methods such as ethnographic studies captures nuances of teacher emotion (Denzin, 2007) and provides “subjectivity, emotionality and verisimilitude to account for ambiguity, paradox and complexities surrounding research into emotion” (Yoo & Carter, 2017, p. 43). Mixed methods research provides greater opportunities to make connections between teacher emotions, learning and changes in teaching practices. For these reasons, this review includes qualitative as well as mixed method studies focusing on teacher emotions and professional learning.

Because of the limited number of journal articles about teacher professional learning and emotions and because of the need to understand the broad spectrum of teacher professional needs, this review includes articles focusing on teacher professional learning and emotions of pre-service, early career and experienced K-12 teachers as well as higher education instructors. Two articles which focus on school psychologists and social service workers, including teachers, also provide valuable insight into professional learning and emotions. For fuller depth and breadth, the review includes a wide range of articles exploring emotions and different professional learning contexts. These contexts include system-wide and localized professional learning; mandated and voluntary professional learning; elementary, secondary and higher education environments; online learning and face to face learning; teacher certification school placement programs, newly qualified induction programs, masters and doctoral programs and various mediums such as in-service seminars, workshops, Communities of Practice, reflection groups, mentoring and coaching as well as training programs. Research focusing mostly on other

stakeholders, such as students and administration, has been excluded to develop a conceptual framework specific to effective emotionally responsive professional learning for teachers.

Three electronic databases were searched in October 2017, to identify, within an international scope, peer reviewed literature relating to professional learning, teacher emotions, and the change process: SpringerLink (SL), Taylor and Francis Journals (TFJ), and Educational Resources Information Centre (ERIC). The search was restricted to literature published between 2000 and 2017. The key search terms used were “professional development,” “teacher emotions,” “change practices,” and “learning.” Results from three searches are shown in Table 1. In addition, relevant literature was selected through citations and personal contact. The electronic and manual searches together revealed a total of 118 papers (111 electronic and 7 manual) of potential relevance. Authors, titles, and abstracts were copied to a file and duplicates were removed. After initial screening, 80 items were identified for further scrutiny and 37 abstracts were found to address professional learning and emotions specifically in relation to teacher education and learning in K-12 and higher education settings. After these sources were retrieved, they were read in full and screened further using inclusion and exclusion criteria.

Search terms	Total hits	SL	TFL	ERIC
professional development, teacher emotions (ti)	11	1	6	4
professional development, teacher emotions, change practices (ab)	8	1	4	3
professional development, teacher emotions, learning (ab)	92	6	28	58

Selection Criteria

The inclusion criteria required that research focus on teacher professional learning and emotions; address pre-service, early career teachers and experienced teachers in primary, middle,

secondary or higher education; and be peer-reviewed empirical investigations in various professional learning settings beyond isolated student classrooms. Studies were excluded if they were not published in English, were focused on early childhood education such as toddlers and preschoolers, or investigated school administration or student development rather than teacher development specifically. Of the 37 studies examined in full text, 25 met all the inclusion criteria including quality assessment criteria, methodological detail and contribution of findings to the review questions. These articles were selected for in-depth analysis and synthesis.

Data extraction and synthesis

A review template was created to extract the data from each article. Key information was recorded such as research design, method and study duration; research context and samples; and research questions and findings. Each article was reviewed several times and the review template was checked for inaccuracy (see Appendix A for further information about research articles).

Characteristics of Included Studies

The studies identified for in-depth review ranged in date of publication from 2000 to 2017 and were undertaken in the USA (7), the UK (4), Australia (3), Israel (3), Norway (3), Canada (2), Estonia (1), Ireland (1), and the Netherlands (1). Eight addressed pre-service or newly qualified teachers; 16 addressed experienced early, middle, and high school teachers; and eight addressed higher education teachers. Studies with K-12 teachers were often grouped together. Participates were elementary teachers in four studies; middle or high school teachers in six; and a mix of elementary, middle and high school teachers in eight studies. Some articles included more than one of these groups. Across all the studies reviewed, sample sizes ranged from a single participant to 378 teacher participants. Studies with larger sample sizes were often

related to large professional learning programs in educational reforms as well as teacher certification and induction programs.

The selected articles adopted various methodological approaches. The majority (17) employed qualitative strategies, such as narrative, case study, ethnography, autoethnography inquiry, and collaborative action research. The most common interpretive techniques used to generate data were surveys, semi-structured interviews, discussion groups, observations and written accounts and reflections. There were eight mixed method studies, with the most frequently used instrument for gathering quantitative data being questionnaires, whereas qualitative data were gathered mostly through interviews and written accounts. The number of data sources used in each article varied from one data source to five.

Results

Teacher professional learning research, when synthesized, clearly shows an overwhelming need to address pre-service and early career teachers' emotions, and experienced elementary, secondary and higher education teachers' emotions in professional learning environments. The research implies emotionally responsive professional learning (ERPL) can increase teachers' motivation and build capacity when learning new knowledge, skills and values. ERPL can support teachers in effectively implementing new practices and strategies successfully. However, it is not possible to map teachers' emotional responses before, during and after professional learning, or in other words, prior to learning, during learning, and throughout the implementation process. No studies looked specifically at teachers' learning progression and emotions in these stages.

What Influences Teacher Emotions?

Teachers' emotions are influenced in different ways. Both teacher identity and context are the basis for teacher emotions, and how they respond to professional learning. Saunders (2012) found teachers' emotions during professional learning were largely dependent on teacher identity, thought processes, and views of reality, as well as their relationships with others, and the wider system. Leitch and Day (2001) also highlight patterns of teachers' responses to professional learning as being influenced by their orientations to learning and emotions, "derived from personal professional histories and current work contexts" (p. 248). They found teacher identity and context provided both negative and positive emotional stimuli, including conflicting personal and professional experiences and environments, for learning, change and decision-making. Emotions, personal belief systems and identity are interconnected, and changes in teacher practices are dependent on internal psychological processes as well as a subjective reality of learning. For instance, a participant's positive emotional response to a system-wide TPL program provided insight into internalized identity-learning processes when she stated, "[I] feel myself very successful. It's in me and I just won't change [the new implementation of professional learning initiatives and strategies]" (Saunders, 2013, p. 325). An understanding of teacher identity and context is necessary in developing effective professional learning because these influence teacher emotions. By understanding teacher emotions, professional learning programs can influence teacher motivation, capacity and overall success.

Teacher Identity

Teacher identity is an on-going, lifelong process. It depends on teachers' prior knowledge, skills and preferences; their personal, professional and organizational beliefs, values and attitudes as well as social, cultural and political contexts in conjunction with their physical,

psychological and emotional health. These key elements of teacher identity provide insight into how teachers emotionally respond to professional learning.

Teacher identity is a lifelong emotional development process of reflection and internalized personal and professional learning. Research shows teacher identity is a continuous learning process (Ben-Peretz, 2002; Hong, 2010; Timoštšuk & Ugaste, 2012) formed by prior knowledge, skills and preferences as well as personal and professional beliefs, values, and attitudes. These further influence teacher emotions and behavior. Throughout the learning process, professional experience is “re-thought against a background of [prior] interactions of emotions and knowledge” (Geijesel & Meijers, 2005 as cited by Timoštšuk & Ugaste, 2012, p. 422). Leitch (2001) emphasized this highly reflective, recursive learning process as not only a dynamic interaction based on teachers’ professional lives, but also noted “powerful sights for a number of individuals [who] experience[ed] the interplay that existed between the personal and professional in their lives” (p. 245). Ben-Peretz’s 2002 study also demonstrated the importance of time as well as personal and professional interplay in teacher identity formation. She explored retired teachers’ recollections concerning their own professional learning and practices, and highlighted the importance of a slow teacher maturation process of praxis, emotional maturity and critical examination. Teacher narratives in Lasky’s (2005) study revealed that both “early professional training along with the larger political and social context mediated the development of [teachers’] professional identity,” (p. 913). Specifically, Hong (2010) identified pre-service teachers’ self-perception of their future selves as impacting current teachers continuously-forming identities. Teacher identity is a continuous process of personal and professional reflection for internalized learning.

Prior knowledge, skills, and preferences provide insight into how teachers emotionally respond to professional learning. Teachers' knowledge and skills are shaped by their educational framework and affect how they approach teaching and learning. Fulmer and Turner (2014) discovered changes to teacher practices rely on the compatibility between teacher identity and new teacher practices where teacher identity is often subject-specific especially in secondary schools. In the study, most secondary teachers accepted and implemented new progressive, challenging strategies while one traditional mathematics teacher struggled because the new strategies conflicted with his more traditional pedagogical views. Mathematic teachers, unlike other subject specific teachers, reported fears and pressure to meet the requirements of the curriculum and high-stakes testing as reasons to disregard new, challenging methodology, whereas English Language Arts teachers rarely reported testing or the curriculum as obstacles to implementing new strategies. These subject area differences highlight different priorities and perceptions of teaching and learning which influence teacher identity and teachers' responses to professional learning. Similarly, in a secondary school in Ontario, Lasky (2005) found previous teacher training shapes teacher identity, but when there was discord between teacher's identity and professional learning initiatives, teachers with especially strong professional identities were resistant to change, felt negative or no emotions, and refused to change their practices in accordance with mandated reforms. Thus, previous experiences and system pressures significantly affect how teachers respond to change and develop professionally.

Teachers' personal, professional and organizational beliefs, values and attitudes play an additional key role in developing identity and in teachers' emotional responsiveness to professional learning. Studies show personal beliefs such as a teacher's sense of self-worth affect teacher emotion and behaviors. Lasky (2005) argued teachers' "sense of self-worth as a person

[is] intricately intertwined with professional identities” (p. 910). For instance, feelings of insecurity and anxiety often arise from negative beliefs about oneself and can prevent teachers from trying new things (Saunders, 2013). As Day and Leitch (2001, as cited in Lasky, 2005) explain, subjective emotional worlds determine how personal constructs and meanings are created about reality. Thus, what teachers believe is used to make sense of relationships and their own place in the wider world, which, in turn, affects teachers’ personal and professional learning. Christesen and Turner (2014) studied a mandated professional learning program, and three distinct teacher types emerged from the data, the Enthusiastic, the Concerned and the Uninterested Teacher, closely resembling the Improver, Worrier and Opponent Teachers (Hall & Loucks, 1977 as cited in Christesen & Turner, 2014) respectively. These teacher types did not differ in years of experience but did differ in beliefs about themselves and the professional learning program which identified teachers’ intentions to implement new practices. Personal beliefs are significant. They can even attenuate a teacher’s intentions as evident in Stoehr’s case study (2017). The study clearly shows how one teacher’s long-held beliefs about her mathematics ability as a child resulted in low self-esteem and influenced her teacher identity, emotions, and behavior. Despite her intention to ensure all students were successful in class, her negative internal dialogue led her to develop specific strategies for coping with fear and anxiety that negatively impacted her students’ mathematics competencies. Personal beliefs affect teacher identity and produce emotions which support or hinder teacher efficacy and learning.

In addition to personal beliefs, professional and organizational beliefs impact teacher identity, emotions, and professional learning. How teachers view their work and approach teaching and learning, including collaborating and networking, are critical components of professional identity. Lasky (2005) found teacher beliefs related to “being a good teacher [are]

inseparable from their notions of professional identity” (p. 906). Teachers’ professional beliefs begin forming in elementary school when, as children, they experience negative, positive and mixed emotions; these beliefs influence why many teachers enter the profession (Hong, 2010). The stronger, more developed belief systems, according to Saunders’ study (2013), the more resilience a teacher has in coping with ups and downs when implementing change. Teachers in the study accepted and integrated new professional learning into their belief systems by relying on their beliefs, emotions and supportive relationships throughout the change processes. In addition to previous school experiences and developing strong belief systems, teacher orientations contribute significantly to professional identity and development. Schuck et al. (2008) within a Community of Practice, found teachers did not evaluate peer observations in isolation but in terms of how it fit with their position, teacher orientation, and what it told them about their teaching within that particular context. Depending on teacher orientation and the strength of their belief systems, teachers will either be motivated or demotivated; flexible or inflexible, resilient or weak. As Fulmer and Turner (2014) pointed out, “pressures from within” (p. 315) affect teacher identity and are based on professional characteristics such as the internal need to control specific aspects of teaching and learning. Depending on professional learning opportunities and their alignment with teacher orientation, a teacher will either accept or dismiss professional learning. Van Veen and Slegers (2006) attributed teacher professional learning rejection to “the organizational demands being imposed on [teachers] were perceived as incongruent with their orientation towards their work” (p. 103). Teacher identity shapes personal and professional contexts, how teachers emotionally respond and their development as professionals.

Context

In addition to teacher identity, various contexts along with systems and subsystems, influence teacher emotion and learning. According to Schulz et al. (2008), emotions are “relational-activated by transactions between an individual and their environment...[they] become reference points for judgements and appraisal. In other words, teacher identity interacts with its transactional and contextual environments (Dostal et al, 2005) which actuates teacher emotion and behavior. Teacher identity can greatly impact outcomes in personal and professional micro transactional environments, such as teachers’ health, family and work environment, including school departments and other social and organizational groups. In contrast, teachers usually have less direct contact or insignificant influence over larger or more macro contextual environments such as national and international political environments and historical, generational context. Regardless of teachers’ influence within micro and macro educational environments, these environments have a profound effect on teachers’ emotions and development.

Micro transactional environments shape how teachers’ emotionally development throughout their careers and emotionally respond in professional learning settings. Some of these environments include teacher family life, department and generation. Hargreaves (2000) specifically identified organizations and workplaces as “prime sites for adults to experience and learn to express their emotions in particular ways” (p. 815). He explains how emotional responses are dependent on how teachers were emotionally-shaped by “emotional experiences they have developed” (p. 815) within their cultural upbringings and relationships with those around them. These may include micro and macro contexts such as departmental and generational cultural contexts, which impact teacher emotion. Lasky (2005) shows how teachers from different departments and generations respond differently to multi-facet reform. In

particular, teacher shared identity and agency usually correlates with attitudes and behaviors when teachers first enter the profession and department routines, structures and norms.

Depending on the congruence of professional learning with departmental and generational goals, teachers' emotional responses differ based on whether they feel greater or lesser professional vulnerability (Lasky, 2015). Increased alignment between professional learning context and micro and macro contexts such as departmental and generational context may create more positive emotions and increase teacher inclination to take risks. This parallels Hofstede's Avoidance of Uncertainty Index (1984) and relates to teachers' physical, psychological, and emotional contexts. These contexts interact with "critical incidents acting as triggers to intensify or in other ways change a person's existing state of vulnerability (Lasky, 2005, p. 901)"

Openness and trust are necessary for taking risks when building relationships and learning. For instance, Hong's (2010) study showed dropout teachers with low psychological and emotional well-being are emotionally drained by unfilled expectations, but are erroneously perceived as having a lack of commitment. Thus, teachers' physical, psychological and emotional contexts influence their emotions and development.

Macro transactional environments influence teacher emotional development especially through socialization. Some of these environments include social, national and international political contexts. Emotions are not only within the individual mind, but are also "embedded and expressed in human interactions and relationships" (Hargreaves, 2000, p.824). Saunders (2013) discovered that, as teachers interacted socially, emotions were activated and impacted teacher practices in a system-wide professional learning program. Social activation of emotions is described by 13 mid-career teachers in a doctoral of education module as an emotional process of gaining clarity among individuals who stimulate, juxtapose and question ideas and issues

acting as sounding boards or mirrors (Leitch, Day, 2001). Another form of emotional contextual inquiry is autoethnography as advocated by Spenceley (2011). She critically reflects on how teachers support each other through emotional highs and lows to form a “testimony of [her and other teachers’] development as learners and people...rather than a journal of teaching practice” (p. 410). However, emotional, social interactions operate ideally, as Hargreaves emphasizes, with high teacher emotional competence, clear, emotional expectations within organizations as well as supportive school structures to encourage teachers’ emotional expressions and understanding. Without these, as Jakhelln (2011) observed, new teachers especially, are rejected by their colleagues when not following unstated emotional rules. They are unable to contribute or confront their circumstances with a lack of supportive school structures. Social interactions, whether positive or negative, activate teacher emotion.

Teacher emotions are also influenced by macro contextual environments such as political environments, affecting areas of education policy, economic climate, teaching and learning pedagogy, and assessment practices. Parker, Patton and Tannehil (2012) examined the Croake Park Agreement, which occurred at a time of Irish national financial crisis. The main goals of the agreement were to simultaneously save money and reform the education system, which resulted in teacher wage freezes along with an increase in significant, additional professional demands. They found the agreement caused low teacher morale as a consequence of reducing pay, restructuring support needs and increasing teacher training along with staff and parent meetings. This is not a rare occurrence.

In addition to facing more immediate micro changes in policies and funding, teachers must emotionally respond to more macro district, provincial or state, national and international student learning and assessment changes. As Lasky (2005) describes, teacher emotions are

activated by political shifts in educational purpose and emphasis such as preparing students to compete in an international marketplace by increasing accountability and rigor. This is evident in international political agendas giving rise to undue reliance on international standardized testing such as the UK Programme of International Student Assessment (PISA), despite questionable reliability and validity issues. Since political contexts often stem from top-down leadership models, teachers' emotions and job satisfaction are significantly affected. For instance, Estonia's high rankings on PISA and Trends in International Mathematics and Science Study contradicted teacher indicators of low self-esteem and low job satisfaction. (Timoštšuk & Ugaste, 2012). However, political contexts can also positively affect teacher emotions depending on the nature of the change and its affects on teacher agency (Lasky, 2005). Thus, macro political contexts impact teachers' emotional responses to educational changes and how they develop professionally. In the end, both teacher identity and context shape teacher emotions and affect how teachers respond during professional learning opportunities.

What Emotional Responses and Effects Impact Teacher Professional learning?

Hargreaves (2000) describes teaching as an emotional practice— one in which teacher interactions with children and adults produce helpful or harmful emotions. As previously noted, an array of emotions shape and influence how teachers “perceive the change process and the energy with which they pursue it” (McCaughtry, Martin, Kulinna, & Cothran, 2006, p. 232). Teachers' positive, negative and mixed emotional responses to professional learning highly impact their relationships, professional growth and often depend on their educational context. Hargreaves' study (2000) shows elementary teachers usually have more intense emotions as a result of stronger, emotionally connected relationships with children and adults whereas secondary teachers are more likely to have emotionally distant relationships. This is a result of

typical bureaucratic specialized secondary structures. These emotionally distant or neutral relationships in secondary school often lead to misunderstandings including negative teacher stereotypes.

Teacher emotions can be examined, categorized and provide insight into how much teachers learning and their success or lack of success in transforming their learning into new practices. Jakhelln's two-year study (2011) within a newly qualified teachers' professional development program found teachers who did not reflect on their learning neglected their emotions whereas teachers who reflected enhanced the quality of their teaching by emotionally connecting more effectively to professional learning. A large range of teacher emotions before, during and after professional learning are identified and categorized as negative, positive and mixed emotions from 25 research articles. Most of the articles do not directly study the nature of teacher emotions or their direct effects on professional development. However, this large body of research as a whole provides the means to unravel teachers' complex, emotional responses to professional learning and their negative and positive effects on teacher learning. The research points to a combination of teacher emotions impacting teacher learning, well-being and growth.

Negative Emotions

Negative emotions are often highly internalized and therefore, play a significant role in shaping teachers throughout their professional learning processes (Timoštšuk & Ugaste, 2012). Seventeen articles highlight negative teacher emotions before, during and after professional learning. The studies identify over 60 negative emotions which can be grouped into six general categories: confusion, inadequacy, loneliness, depression, fear and anger (see Table B1 in Appendix B for negative emotion data). These negative emotional responses are produced by a lack of connections among teacher identity, knowledge, skills and abilities as well as their beliefs

and values. In addition, negative emotions are produced by professional learning when it is irrelevant to teacher classrooms or schools, lacks shared leadership, does not build meaningful relationships between stakeholders and does not explicitly connect professional learning content with emotions and the change process.

These negative emotions often stunt teachers' behavior and professional growth. Understanding these emotions and how they adversely and beneficially impact teachers' professional learning is necessary for school improvement. A few studies show negative teacher emotions can motivate teachers and drive professional learning, but most research shows these emotions are usually responses to poor teacher professional learning practices. Negative emotions frequently have adverse effects on teachers' abilities to implement new strategies and initiatives. Poor teacher professional learning does not address teachers' internal or contextual needs or may conflict with wider systematic structures. There are many adverse effects of teacher negative emotions such as less teacher support, cooperation and professional growth within an organization as well as perpetuating negative self-concepts such as low efficacy and motivation.

Inadequacy and Confusion. Feelings of inadequacy and confusion occur frequently in TPL studies and often negatively affect teacher learning and well-being. Teachers feel a range of emotions such as insecurity, nervousness, anxiety as well as bewilderment, confusion and frustration when they are not well supported in high risk environments. Low teacher efficacy is not only a product of individual self-esteem, but may also be an indication of poor professional development. Shernoff et al. (2016) interviewed 72 educational professionals and asserted, "low- efficacy [is] not simply a function of inadequate skills but also inadequate support" (p. 243). They found ineffective professional learning supports and a disconnect between teacher

expectations and classroom reality contribute to confusion, ineffectiveness and low teacher efficacy. Kelchtermans and Ballet (2002, as cited in Fresko & Nasser-Abu Alhija, 2015) call this “praxis shock” (p. 36).

Professional learning content, processes and personnel must support teachers emotionally and academically in order to prevent this outcome. Fulmer and Turner (2014) found teachers who feel confused require more “modeling, subject-specific support and concrete feedback to understand the value of the strategies [to] use them effectively” (p. 321). Leitch and Day (2001) described the emotional consequences of mid-career professionals’ when they are unfamiliar or misunderstand the professional learning processes. Feelings of fear, apprehension, and resentment create significant learning blocks when participants perceive critical reflection as an invasion of privacy as well as a solitary activity. Additionally, ineffective, unprepared, unwelcoming, unethical facilitators who are unable to provide effective teacher differentiation and scaffolding perpetuate negative stereotypes and create an indiscriminate learning environment (Timoštšuk, & Ugaste, 2012). As one teacher emphasizes, “I felt like I was really needy, a really needy person, a really needy teacher and I just needed help...I couldn’t face [teaching] because my needs weren’t being met” (Parker et al., 2012). These kinds of insidious learning environments, demoralize and disempower teachers rather than build confidence and empowerment.

In addition to teachers’ feelings of inadequacy and confusion intensifying with a lack of support, as previously indicated before, teachers usually take fewer learning and implementation risks. Fewer learning risks usually produce adverse effects. However, there is some evidence which shows positive results are also possible. Many teachers with low efficacy are fearful of making mistakes in front of colleagues, so they do not use instructional innovations to their full

capacity (Saunders, 2013). Teachers who are often highly critical of themselves may have unreal expectations, personalize errors and blame themselves without understanding the complexities of school interactions (Shernoff et al., 2016). Yoo and Carter (2017) find teachers feel vulnerable as they learn new skills and make several self-effacing comments such as, “I don’t know if I did it properly” (p. 47). The facilitator reminds teachers about the “process of risk taking, openness and ‘getting it wrong’ within the creative process” (p. 46-47).

Jensen’s study (2007) differs from other studies because she finds teachers’ feelings of inadequacy and confusion support learning. She finds insecure teachers accept professional learning changes more easily out of moral duty and have a strong desire to avoid “feeling like a fool” (p. 499) in professional situations. Despite nervousness, teachers will participate and apply current professional learning content to avoid being perceived as less professionally competent. Nearly all research shows teachers with low efficacy who feel inadequate and confused during professional learning usually require better supports so they can take further learning and implementation risks for growth.

Isolation and Depression. Feelings of isolation and depression affect TPL and cause a lack of teacher motivation and participation. Teachers feel a range of emotions such as alienation as well as disinterest, disappointment, dread and indifference when meaningful relationships and a growth mindset are not cultivated during professional learning. How teachers are perceived, the power they possess to make changes, how they emotionally engage with others and their internal drive for lifelong learning directly affects their relationships and ability to improve professionally.

Teachers’ professional roles can negatively influence their relationships by causing isolation, alienation and disengagement. The Bryan and Blunden research (2013) demonstrated

how teachers who feel isolation, depression and alienation in professional learning settings have lower motivation, participate less and are negatively impacted in learning processes. They find newly qualified teachers and newly appointed heads of department lose motivation because the wider school community provides these groups with relatively little agency, voice or capacity for school improvement and change. This lack of empowerment can cause greater isolation and depression which inhibits teacher development. Emotionally distant relationships with colleagues are also harmful to teachers' emotional well-being and growth. Disconnected teacher learners are becoming more prevalent in schools as digital mediated professional learning (DML) has become more accessible. Emotional disengagement occurs when authentic, meaningful dialogue loses momentum in decontextualized digital learning. A DML module explored by Cramp (2015) demonstrates how teachers become disengaged and unmotivated as complex information is shared digitally, without non-verbal communication. He attributes the lack of teacher emotional engagement and motivation to less meaningful relationships and dialogue.

Equally significant are feelings of isolation and depression that hinder teachers' emotional engagement and affect their intrinsic drive for life-long learning. Usually teachers who emotionally disengage are not invested in their professional learning, which is usually adversely affected. However, there is evidence which shows teachers' feelings of isolation and dread in professional learning tasks can provide opportunities for positive and intense realizations. Teachers' self-concept, the kinds of professional feedback they receive, and their opportunities to challenge their identity and norms impact their emotions and how they internalize professional learning. Christesen and Turner (2014) classify emotionally disengaged teachers as the 'uninterested teachers,' differing slightly from previously discussed 'opponent teachers' (Hall &

Loucks, 1977, as cited in Christesen & Turner) in that they have no intention of incorporating new strategies into their teaching.

Bryan and Blunden (2013) provide insight into these groups of teachers who feel emotionally dismissive and negative. They find these teachers often lack a growth mind set and perceive themselves as already competent teachers, so further professional learning is unnecessary. At times this self-image may not be linked to performance, but be the result of a coping mechanism against acknowledging failure or being disappointed with unfulfilled expectations of professional learning. This can also explain how intrinsic life-long learning can be extinguished by ungrounded and superficial criticism in professional settings. Timoštšuk and Ugaste (2012) find teachers feel isolated and depressed when negative feedback, especially subject knowledge focused criticism, is the focus of learning rather than pedagogical and psychological aspects of teaching and learning. However, it is possible to provide relevant and thoughtful professional feedback and overcome the negative emotions of trepidation during professional learning. Leitch and Day (2001) observed teachers within tasks that challenge teacher identity and professional decision making. These experiences initially create isolation, dread and resistance in teachers, but ultimately lead to greater insights and self-confidence. They describe these events as ‘a-ha moments.’ Isolation and depression affect how teachers respond to professional learning, both negatively and positively.

Fear and Anger. Emotions of fear and anger are often reported and intensely depicted in TPL settings. These feelings negatively affect teachers’ learning, growth and well-being. Feelings may begin as confusion, isolation, depression and helplessness and development into fear and anger. When this happens, teachers may feel a range of emotions such as fear and anger as well as anxiety, distress and reluctance as well as frustration, resentment and resistance. As

teachers feel threatened, they may feel controlled and even dehumanized. As Hochschild (1993, as cited in Hargreaves, 2000) notes, these feelings of emotional labour are not always publicly displayed but masked or shielded, perhaps, because of cultural rules and self-preservation.

Teacher fear and anger before, during and after professional learning are often responses to systematic barriers such as a lack of organizational support and pedagogical changes which threaten teachers' identities. Before implementing new initiatives or strategies, many teachers are identified as the 'concerned teachers' (Christesen & Turner, 2014), or 'the worriers' (Hall & Loucks, 1977 as cited in Christesen & Turner, 2014). This group is interested in new strategies, but question how much time and energy are needed for learning, how students will react, and how the school will support them. Unfortunately, many organizational structures provide more barriers than supports for teacher learning. When systematic barriers occur instead of organizational support, teachers feel fear, anger and despondence. These barriers prevent teacher learning and the implementation of new changes (Saunders, 2013) especially as negative teacher emotions emerge from the lack of organizational support and overshadow more positive emotions related to teaching and learning (Timoštšuk & Ugaste, 2012).

How time is scheduled and how it is used affects teacher emotions as they try to balance an array of responsibilities, needs, and wants. Professional learning scheduled during work hours as well as professional learning in locations outside of schools must overcome significant organizational barriers such as timetabling (Bryan & Blunden, 2013). When professional learning is arranged, Leitch and Day (2001) point out, professional learning sessions are usually agenda-driven, focus on satisfy bureaucratic demands and heavily emphasize housekeeping tasks such as planning subject progressions. For instance, Saunders' (2013) provides evidence of public vocational and college teachers in Australia encountering systematic obstacles while

trying to implement new instructional processes. She finds participants have strong emotional reactions of anger, disappointment, distress and crankiness as they experience system restrictions related to support and timetable issues. These participants describe the “fractured system” affecting their progress and the conflict between meeting administration needs and those of teachers and students. The need for coordinated planning among systems and subsystems within an education organization is paramount for teacher well-being and development. Even when resources are provided for teacher support, they need to be systematically integrated within the education systems. McCaughtry et al. (2006) found many teachers initially experienced feelings of happiness when provided with sports equipment to implement new initiatives, which shifted to feelings of concern. They feared the equipment would not be safe or mismanaged because they were not provided with a secure place to store equipment and the school policies did not support long term, responsible usage.

In addition to system issues causing fear and anger, teachers are adversely affected emotionally by professional learning content that is irrelevant to their context and threatens their identities. Irrelevant professional learning causes negative feelings of frustration and annoyance especially when it occurs frequently (Christesen and Turner, 2014). Irrelevant professional learning content can create intense dissatisfaction because it does not positively affect teacher development. Professional learning content can be perceived as irrelevant when it depicts the ideal situation without considering individual teacher, student and school needs. Yoo and Carter (2017) found teachers were troubled when professional learning content encouraged them to cultivate critical, creative thinkers without acknowledging and including how to do so within an overly rigid curriculum and outcome-driven, exam-focused school culture. When teachers who are invested in their work are unable to achieve praxis, their failures may lead to lower self-

esteem. In addition, ineffective professional learning facilitators and irrelevant teacher groupings can contribute to teacher anger. Fresko and Nasser-Abu Alhija (2015) found teachers felt dissatisfied when professional learning facilitators are not experts in their areas, and teachers are grouped heterogeneously. According to their study, teachers would rather learn with peers who share similar contextual environments and concerns. When they are grouped with peers who share contextual and environmental experiences, professional learning is reflective and meaningful.

As teachers begin the implementation phase of their professional learning, they may encounter many obstacles which negatively impact their confidence in successfully achieving praxis. As a participant in Jensen's study (2007) explains, "the outcome of professional updating is so fragile and uncertain..you just have no idea where you're headed at the same time as there are all kinds of practical problems." Many professional learning programs do not prepare professionals for implementation, resulting in a failure to achieve praxis. Jensen (2007) explains some of the obstacles teachers face including missing components such as:

a lack of critical faculty as needed for personal orientation and balance in negotiation with an increasingly open world of knowledge; failure of professional organizations to provide guidelines and navigational aids to assist their members in the search for knowledge, structural characteristics in the manner in which knowledge is framed and transmitted by the professions in question accentuate the problem of orientation (p. 478).

It is not unreasonable to question if teacher professional learning initiatives may intentionally seek to emotionally and academically disable teachers' critical faculties, so they are less empowered and more acceptable to professional manipulation.

Teacher emotions and implementation problems are intensified when teachers are controlled, expected to attend mandated professional learning, and implement strategies conflict with their teacher identities and contexts. Teachers in these situations can experience strong feelings of fear and anger resulting in emotional disruption of personal and professional lives (Hargreaves, 1994 as cited in Leitch & Day, 2001) as well as emotional pain (Lasky, 2005). Teachers may feel deprofessionalized, debilitated and even dehumanized in professional learning situations where they are controlled, have no choices, and their identities are under attack. Intense emotionality is difficult to sustain. Negative emotions of fear and anger may lead to teachers burning out and abandoning the profession. Christesen and Turner (2014) find teachers are expected to willingly and enthusiastically attend non-voluntary professional learning as well as implement mandated strategies, whether they agree with them or not. Teachers often feel controlled and threatened in non-voluntary professional learning (Fulmer & Turner, 2014) resulting in emotional disruptions, an interference of current emotional state. Teachers may feel their professionalism and identity are under attack if they feel controlled. Lasky's study of a mandatory reform in Canada showed how teachers felt disempowered, ineffectively vulnerable and dehumanized by the reform initiative with a lack of resources, condensed curriculum, higher workloads, and forced instructional practices in their classrooms. Teachers' professional identities were threatened by new policies.

In addition to macro political reforms, new research may threaten teachers' identity and purpose causing emotional pain when it conflicts with their values. Fulmer and Turner (2014) noted, some teachers in the study felt their personal experiences contradicted research evidence and would be unsuccessful in their context. Lasky (2005) described teacher emotional pain in a research-based reform with mandated directives which conflicted with teacher beliefs. These

“high levels of emotionality can be difficult to sustain for teachers working in a reform climate with which they feel at odds” (p. 912). These severe teacher emotions cause a lack of professional purpose. Yoo and Carter (2017) explain the erosion of teacher purpose often resulting in teacher burnout and departure from the profession. Those that leave the profession usually feel fear or anger, low commitment, weak efficacy, incompatible beliefs as well as negative perceptions about their power within the education system (Hong, 2010). Teacher emotions of fear and anger strongly affect how teachers respond to professional learning.

Positive Emotions

Positive emotions stimulate thought, support objective and creative problem solving and, therefore, play a significant role in shaping teachers throughout their professional learning processes (Timoštšuk & Ugaste, 2012). Ten articles highlight positive teacher emotions before, during and after professional learning. The studies identify over 40 positive emotions which can be grouped into five general categories: joy, belonging, encouragement, empowerment and hope (see Table B2 in Appendix B for positive emotion data). Understanding these emotions and how they impact teachers’ professional learning is necessary for greater school improvement. No articles emphasize positive teacher emotions, which implies these positive feelings are not directly employed in professional learning settings. Unlike negative emotions, positive emotions, when mentioned, are given little attention and rigor. The collective body of research is inadequate in providing a clear, compelling analysis of teacher positive emotions and how they affect the change process and professional development. Several research studies do refer to positive emotions, but they are often perceived as a secondary product of effective professional learning. None of the research studies exclusively examines positive emotions. However, it is possible to surmise that positive teacher emotions can support professional learning, and unlike

negative emotions, occur in more effective teacher professional learning workshops and programs. There are many positive effects of these emotions such as greater organizational support; positive school climate; higher teacher efficacy and professional growth; as well as teacher well-being, all of which support successful long-term school improvement planning.

Joy and Belonging. Feelings of joy and belonging are found to positively affect teacher well-being and growth. Teachers feel a range of emotions such as happiness, excitement and freedom as well as collectiveness, gratitude, generosity and validation. They feel joy when wider organizational systems support professional learning practices such as flexible spaces, timing, networks (Saunders, 2013; Cramps, 2015) and differentiated support (Cramps, 2015). These supports increase teacher participation and generally create positive perceptions about learning and growth. Positive teacher communities develop when teachers feel a sense of belonging and enthusiasm. Shared teacher context promotes emotional engagement, motivates teachers in their learning process, and provides them with multiple learning perspectives.

Implementing learning opportunities for high quality professional learning and equitable spaces for learning can also promote positive emotions. Bryan and Blunden (2013) discover 15 government-approved teachers and heads of department feel empowered and free in the university space rather than at their school in the teaching and learning program and policy initiative in the UK. The university environment provides teachers greater equity away from their hierarchical elementary and secondary school roles. This professional learning environment evoked positive emotions for chosen participants while teachers who did not qualify for the program felt jealous and jilted. When schools consider teachers' demanding schedules and provide them with choices for professional learning, teachers feel positivity and invigoration. Cramps (2015) found teachers positively responded to flexible timing options such as online

classes and feel invigorated because they have the time and space to connect prior learning to new knowledge, skills and values. He observed teachers' interest in additional readings and website links which promote differentiation and opportunities for complex, multi-perspective, personalized learning. Even though individualized learning is important, collective learning greatly influences teacher emotional engagement and development. Fresko and Nasser-Abu Alhija (2015) provide evidence of the emotional importance of building teacher communities. 378 new teachers and 29 seminar leaders in a 156-hour higher education and public school-system mentoring program felt satisfaction in sharing with others and having others share with them in a safe, learning environment.

Teacher-shared context has many characteristics that develop emotional engagement and achievement. According to Cramp (2015), feelings of belonging and a collective mindset promote emotional engagement by providing opportunities for validation, critical reflection resulting in greater enthusiasm and motivation. They assert in an anonymous environment with less teacher belonging, teachers may overlook the importance of conversation and dialogue leading to underachievement. In addition, Yoo and Carter (2017) describe teacher communities as deeply engaging because practitioners are "bonded by gratitude, generosity and inspiration." These feelings are demonstrated as teachers and facilitators 'give' vulnerability and trust to each other as they disclose personal and professional insecurities. Another characteristic of a shared context is 'shareable moments.' These exchanges provide teachers with opportunities to explore a range of new possibilities for praxis including a range of relevant, emotional practices and experiences. Without interpersonal emotional engagement, teacher emotions become less positive and a shared learning context becomes less effective. Cramp (2015) provides evidence of this when two participants initially are enthusiastic about the online learning community but

over time the emotional responses become more negative and their participation decreases.

However, when online learning successfully facilitates a shared emotional context, enthusiasm and motivation increase.

Encouragement. Encouragement plays a key role in developing teacher efficacy, and therefore, directly affects their personal and professional learning. Teachers feel a range of positive, self-esteem-building emotions such as encouragement, strength, confidence and success. These emotions may relate to ‘feeling better’ by solving a teacher identity or contextual issue. Teachers feel encouragement when their learning needs are supported. Teachers feel encouraged when other teachers and administration anticipate and are receptive to teacher emotional responses. Moreover, acknowledgement of teacher efforts as well as the provision of resources for quality instruction further promote encouragement (McCaughtry et al., 2006). As teachers gain higher efficacy they take greater learning risks and improve over time. McCaughtry et al. find professional learning facilitators increase teacher success by anticipating and being receptive to teacher emotional responses as they circulate within schools and districts providing training and resources. Additionally, the principal reacts positively to the new resources as a teacher reflects, “It felt real good. My self-esteem just elevated because my principal said, ‘how’d you get this?’ I said, “I was selected, and I worked hard to get this” (p. 229). Further, another teacher discusses how her feelings of professional marginalization in the physical education program began to lift as the resources acknowledged the subject’s importance. These emotional responses to resources reveal greater teacher efficacy in facilitating teaching and learning for greater student participation, differentiation, and safety measures. As teachers feel confident, they will take greater instructional implementation risks. In professional learning interventions, group seminars, professional learning communities and coaching in K to 8 in a

Midwestern city in the United States, Shernoff et al. (2016) finds teacher positive efficacy increases over time whereas negative and mixed emotions decrease over time. Complementary to this, four years into the professional learning program, Saunders (2013) finds teachers who developed a more positive orientation to teaching began mix-matching strategies as well as layering more complex content. One participant exclaims, “I enjoy bringing all sorts of bits and pieces and having complete confidence it’s going to work and knowing that I am able to change and be responsive” (p. 320). Through this learning process, teacher emotional strength can develop from supportive, prompt feedback which validates progressive teaching and learning (Bryan & Blunden, 2013; Saunders, 2013; Cramp, 2015). These positive, encouraging emotional responses are analyzed in connection to teachers’ internalization of their professional learning.

Empowerment and Hope. Emotions of empowerment and hope are important in teacher professional learning settings because they positively affect teacher learning, development and well-being. Teachers feel a range of emotions such as feeling positive energy, vibrancy, innovation, inspiration and complexity. Teachers feel empowered when professional learning supports quality teaching and relevant, purposeful, authentic learning (Yoo & Carter, 2017). Hope emerges as teachers repeatedly experience effective support and success in their professional learning context. They become more invested in the professional learning processes and in the pursuit of school improvement. Yoo and Carter (2017) find teachers are “emotionally vibrant, complex and dynamic practitioners” (p. 49) instead of powerless and frustrated when goal congruence occurs during professional learning. In the study teachers learn an instructional strategy within a strategy they inherently value and apply the same strategy in their classrooms.

Teachers feel empowered when professional learning is relevant to teacher identity and context. Consequently, teachers become more goal-focused, invested in change and hopeful.

Timošćuk and Ugaste (2012) imply opportunities to talk and integrate teacher professional identities into school context during professional learning cause positive emotional responses. They indirectly describe some steps in the integration of teacher identity and context as a process of enabling teachers to implement instructional plans which are teacher and school relevant as well as address system barriers. In addition to greater support and encouragement by the school, Bryan and Blunden (2013) assert this critical thinking about praxis enhances teachers' goal focused behavior. As one goal-focused teacher exclaims, "I've decided this is the right way to do this and I'm going to do it! (p. 16). This heightened emotional state motivates and inspires. As Saunders' (2013) suggests teachers who develop their professional identities and are successful in applying professional learning initiatives and strategies to their contextual environment, view professional learning as a positive stepping stone in attaining new, relevant and exciting possibilities for personal and professional growth as well as school improvement.

Mixed Emotions

Mixed emotions are always present, although at times negative emotions can overshadow positive emotions (Timošćuk, & Ugaste, 2012). This is evident in the majority of research studies focusing heavily on negative emotions and their effects. However, teacher mixed emotion studies are emerging about how a combination of negative and positive emotions influences teacher practices and development. Research suggests emotional events should be studied as a single phenomenon instead of observing negative and positive emotions discretely. Examining mixed teacher emotions provides insights into their relevancy, measurability, internalization processes and explores the relationships among emotions as well as the complex role of empathy in teacher development (see Table B3 in Appendix B for mixed emotion data).

Relevancy and Measurability of Mixed Emotions. The study of mixed emotions is relevant to our understanding of teacher emotions, change and professional learning. These positive and negative emotions may occur at difficult times or all together. Saunders (2013) makes strong arguments about the relevancy of mixed emotion and how teachers often “simultaneously exhibit a combination of concerns, often accompanied by strong positive and negative emotions” (p. 327). In her study on emotions, change and professional learning, teachers’ mixed emotionality directly impacted their use of instructional practice. She found successful implementation was largely dependent on a “cyclical emotional pattern” of negative and positive emotions influenced by teacher identity and context. Particularly, deeply felt beliefs about professional learning and work values along with supportive relationships are instrumental to teacher development.

Mixed emotions provide an understanding of teachers’ emotional well-being and predict teachers’ development. According to Lazarus (1991, as cited in Van Veen & Slegers, 2006) both positive and negative emotions are relevant foci because they have significant consequences for teachers’ social and moral well-being as well as their health. Engvik (2014) explores the development and concerns of newly qualified teachers in several high schools in Norway and finds evidence of mixed emotions occurring together and affecting teacher well-being. “Every day I think about quitting teaching and every day I tell myself that I have an interesting job” (p. 466). Mixed teacher emotions are particularly complex and relevant to teacher well-being and may provide the means to predict teacher professional development. Scott and Sutton (2009) in their mixed method study observe and measure mixed emotions quantitatively and qualitatively, and their qualitative data indicates how mixed emotions may predict possible changes to teachers’ instructional practice. However, more research is needed in this area especially with

their quantitative data not showing a relationship between mixed emotions and teacher development. Regardless, this is an interesting find because predicting teacher development may provide additional understanding and supports for teacher emotionality and their overall professional and personal growth.

Empathy. Mixed emotions are difficult to categorize and usually involved many emotions occurring over the same event. Leith and Day (2013) captured participants mixed emotions as they reflected on professional and personal contexts such as the misuse and imbalance of professional and personal time, contrived collegiality, feelings of bereavement with changes in teacher identity, and guilt and sacrifice in taking care of self and others. Notably, empathy, understanding and sharing feelings of another, is found in a few studies (Leitch & Day, 2001; Scott & Sutton, 2009; Dolev & Leshem, 2017; Yoo & Carter, 2017) and has potential to help teachers develop both personally and professionally (see Table B3 in Appendix B for mixed emotions data).

Acknowledging and engaging with a range of teacher emotions including empathy is key in supporting teacher and school development. Scott and Sutton (2009) encourage researchers to understand the role of empathy, a central factor in education and social science disciplines. They assert empathy plays a key role in psychotherapy which uses psychological methods to help individuals change and overcome problems, and teachers empathize with their students as a way to foster and build relationships, motivation and learning. Creating professional learning training which triggers empathy can provide teachers with profound learning moments for development and implementation of new teacher instructional practices. Teacher professional learning that is meaningfully connected to teachers' mixed emotions produced a renewed sense of empathy with student experiences (Leith & Day, 2001). This empowered and enable teachers to make greater

sensitivity modification for praxis. One method used in Saunders' study which successfully develops empathy for students is engaging teachers in similar processes and strategies within a relevant context. Dolev and Lesham (2017), in emotional intelligence (EI) training, found empathy is a key competency in pursuing teacher aims, but found that too much empathy is detrimental to teacher and student well-being. In their two-year study in Israel, a teacher identified as having high empathy, based on her EI profiling, struggled with maintaining high expectations and classroom management. As she became more emotionally self-aware, she could self-regulate her emotions more effectively and reflected, "I no longer yield to pressures from my students. I don't give exams which are overly easy and I don't help students during the exams...I'm not afraid to be assertive [when rules are challenged]...When you are sure of yourself, you are less likely to feel pressured, you do what you believe in...you make the right decisions" (p. 31).

Internalization and Learning Mechanisms of Mixed Emotions. One of the most important goals of educational change is teachers' internalization of the change process and teaching and learning concepts and strategies as an integral part of their professional identities and personal belief systems (Saunders, 2013). Both Saunders (2013) and Leitch and Day (2001) provide evidence of teacher mixed emotions acting as a catalyst in the internalization processes. Saunders' data illuminate participants' emotional journeys of acknowledging, accepting, and integrating changes into their teacher identities. Internalized TPL encompasses both professional and personal contexts and usually requires intensive, critical reflection. Leitch and Day describe this complex, emotional internalization process experienced by the majority of participants in their study which reveals "the powerful part played by a combination of emotions upon participants capacities to reflect, and, through this, confront the personal in the professional (p.

254). They describe this autobiographical reflective process as re-awakening emotive dimensions associated with past events. This encourages re-evaluation of the emotions as well as a reappraisal of the role of the self in the experience. Further, they explain, this personalized confrontation with the self may lead to reformulation as participants explore inconsistencies and uncomfortable paradoxical emotions. One of the participants recalls, “after discussing how badly I felt I had handled the situation, and not feeling judged, a weight lifted off my shoulders and I could see our working relationship in a new light” (p. 245).

In addition to developing teacher internalized learning, mixed emotions create systems and mechanisms for teacher learning. According to Shernoff et al. (2016), early career teachers may feel shock and disbelief at first, but over time they will be able to anticipate and predict situations. This shows they are using many events throughout their careers as learning experiences. A cyclical pattern about teacher mixed emotions and learning is present in research. Jensen (2007) implies a dynamic teacher learning loop exists, triggered by strong teacher emotions. She explains “as desire is looped through the knowledge-object and back, self-motivation takes on a form of direction,” and this wanting structure is described as “exciting, a thrill, challenging/tricky, overwhelmingly stressful (p. 496).” Further, sometimes insufficient teacher knowledge can cause frustration, but it can also lead to self-development and enhanced professional practice.

Conclusion

The development of TPL is largely unsuccessful. For a long time, it has been the case that teacher emotions are often neglected with little attention to teacher emotions, identity and context. The research in this systematic review strongly support a re-evaluation of how professional learning is approached while highlighting the necessity for emotionally responsive

professional learning (ERPL). Teacher emotions significantly impact teachers' learning and their ability to implement new practices and strategies. Therefore, negative, positive and mixed emotions must be addressed in professional learning for successful teacher growth and school improvement efforts. Teachers feel a range of emotions such as inadequacy and confusion, isolation and depression, fear and anger as well as joy and belonging, encouragement and empowerment and hope. Perhaps more important than the range of these emotions or the strength of each emotions are the different combinations of emotions providing insight into the internal emotional state of each teacher. This may provide the means of predicting teachers' likelihood of implementing new instructional strategies and providing ways to individually tailor professional learning for increased success.

The role of empathy and a learning loop, particularly play significant roles in the change process. Empathy supports the internalization of the change process, teaching and learning concepts, and connects TPL with teacher identity as well as micro and macro contexts. In addition to empathy, a combination of mixed emotions drive a dynamic learning loop by providing motivation and an on-going need for new information, a wanting structure. TPL without cultivating empathy and supporting learning to fuel a learning loop, teacher turnover will increase with lower teacher efficacy and school success.

ERPL is needed for teacher growth and school success. Research implies various characteristics of ERPL, and how it can improve emotional relevancy, engagement, motivation and relationship building. To improve emotional relevancy, TPL must connect to teacher identities and context, utilize teacher differentiation by acknowledging and developing teacher knowledge, skills and abilities, and achieve successful praxis. To support emotional engagement, ERPL must explicitly address interactive professional learning content with the change process

and teacher emotions. To improve emotional motivation, it must help teachers develop a growth mindset by cultivating teacher awareness, and personal and collective reflection. Promoting personal as well as professional well-being is critical to teacher and school community development. Further, to improve emotional relationship building in professional learning, empathy among administration, teachers and students must be central as well as developing shared, transformative leadership.

Moving forward, teacher emotions, professional learning and change are critical areas of research development with significant capacity for expansion. Areas of potential research include studies explicitly addressing teacher emotions before, during and after professional learning, ERPL conceptual models, and in-depth examinations of ERPL characteristics. TPL has the capacity to improve on micro and macro scales and considerably enhance education for all.

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Appendix A

Professional learning Data: Negative, Positive and Mixed Emotions

Table A1

Professional learning Data of Negative Teacher Emotions by Category

Confusion	Inadequacy	Isolation	Depression	Fear	Anger
bewilderment conflicted overwhelmed skeptical torn uncertain unfamiliar unsure	embarrassment fragile ineffective insecurity jealousy nervousness obligatory unconfident vulnerability	alienation discouragement helplessness isolation loneliness misunderstood withdrawn	closed demotivated depressive despondence disappointment dismissive guilt resignation troubled terrible uninspired uninterested	apprehension anxiety anxiousness distress dread guarded reluctant worried	annoyance challenged controlled crankiness cross dehumanized deprofessionalized disempowerment frustration resentment resistance

Note: Negativity, stress and pain were too broad to categorize

Table A2

Professional learning Data of Positive Teacher Emotions by Category

Joy	Belonging	Encouragement	Empowerment	Hope
better contentment enjoyment excitement freedom goodness happiness satisfaction	admiration collective friendly friendliness generosity gratitude validated	energy enthusiastic inspired keen goal-focused motivation passion successful uplifted	complex confidence dynamic expressive innovative invigoration inspirational skilled strength vibrant	positive vulnerable

Table A3

Professional learning Data of Mixed Teacher Emotions by Category

Empathy
