Investigation of Motivation Strategies Used by School Teachers for Workplace Engagement

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Abstract

The purpose of this study was to explore the strategies that elementary school teachers use to be engaged in their work. Participation was solicited from a random sample of schools stratified by location (i.e., urban, inner city, and rural) of a large school board. The study used an anonymous quantitative/qualitative questionnaire. The survey tool was based upon Kahn's (1990) psychological engagement framework, which presents the foundation of availability of self, meaningfulness of work, and safety while at work.

Forty-one surveys were analyzed descriptively including a subgroup of self-rated highly engaged teachers. Teachers tended to favour physical and emotional strategies compared to cognitive type strategies, with the exception of the highly engaged subgroup. The theme of preferred strategies reflected a setting outside the school/workplace, that is, a preference for home based strategies.

The study's main contribution highlights the teachers' sense of importance for physical and emotional health in a profession that is heavily focused in the cognitive domain. This may influence administrative and teacher discourse regarding workplace engagement with strategies to help reduce stress and to maintain and increase teacher engagement.

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CHAPTER ONE: INTRODUCTION TO THE STUDY

This investigation is about employee motivation strategies for the workplace, specifically teacher engagement with their work. Current human resources, social, psychological, and popular literature portrays workers as disengaged from or no longer motivated in their jobs (e.g., Ingersoll, 1999; Ramlall, 2004; Seijts & Crim, 2006). To address this problem, a great deal of literature has been generated to assist management and leaders with strategies to motivate employees in order to increase organizational productivity and sustainability and employee retention. Scant literature is found outlining self-motivation strategies used by employees. Yet, it is probable that motivated employees use strategies or engage in habits that help to maintain or reengage their motivation. This study was undertaken to identify practices that could be useful to bolster an employee's motivation. Kahn's (1990) psychological conditions of personal engagement and disengagement at work served as the study's framework.

Background of the Problem

Whether at the office water cooler or a private party, the topic of work is often discussed in disparaging terms. Yet, with all the often-heard negativity, the opposite also must exist. If a researcher is to focus on the engaged workforce, it might be helpful to discover what practical strategies these people use to maintain or regain engagement with their work. In this study engagement has been defined as being engrossed; concentrating intently on an activity, such that a sense of time, place, or self does not distract the person's attention; it is attaining *flow* (Csikszentmihalyi, 1990). Conversely, disengagement has been defined as lacking motivation; its duration may last for any amount of time, and the severity may fluctuate within an episode. In addition, the person

may not be consciously aware of lacking engagement. Last, motivation has been defined as an internal enthusiasm, encouragement, and commitment; Purkey (2000, p. 23) referenced Combs et al., (1978) in writing "there is only one kind of motivation - an internal and continuous incentive that every individual has all the time, in all places, during all activities".

Issues of employee motivation are often discussed in human resource and organizational studies, in addition to daily newspapers and countless books of popular culture and business management. The discussion context is wide ranging, with considerations of impacts upon employee productivity, executive efficacy, workplace wellness programs, employee absenteeism, sick benefit costs, employee retention, and union action. Bookstores hold numerous self-help manuals ranging from effective time management and career planning, to regaining motivation, avoiding and recovering from burnout, and so on. Indeed, new books and articles on personal motivation or engagement and on managing workplaces to be more productive are continually being released, such as Steven Covey's numerous publications or Seijts and Crim (2006). Widespread concerns about motivation have been reported by employees and executives at multiple organization levels, in the private and public sectors (Brim, 2002; Momal, 2003; Ramlall, 2004). In Momal's Gallup survey, for example, it was noted that Canadian employees were 24% engaged, 60% not engaged, and 16% actively disengaged. Similarly, Brim's report for Gallup found a relationship between length of service and engagement, which demonstrated that after 10 years of service the percentage of engaged employees fell by almost half.

These statistics imply that disengagement is likely to have a negative impact on an organization, its workplace culture, and employee the teacher, as well as those served by that individual the student/ family, and community. Organizational examples include potential financial losses related to employee insurance health care costs (Naylor, 2001), recruitment and orientation costs (Kissel, 2005), to a less sustainable organization through loss of employee a) creativity (Oldham & Cummings 1996), b) morale (Ingersoll, 1999; Oldham & Cummings; Woods & Weasmer, 2004), c) productivity (Kissel; Oldham & Cummings; Woods & Weasmer), d) absenteeism (Romero & Kleiner, 2000), and e) retention challenges (Ingersoll, 1999; Kissel; Oldham & Cummings; Woods & Weasmer).

Yet, in spite of these daunting statistics, Csikszentmihalyi (1990) has found that employees report the greatest flow at work, not at home. He describes flow as concentration, engrossment, and enjoyment in an activity. His finding presents an interesting "work paradox" (Csikszentmihalyi, p. 159), in light of disengagement and job dissatisfaction surveys. Despite Csikszentmalyhi's results, the education sector continues to experience significant rates of dissatisfaction amongst teachers, as evidenced by high teacher attrition accepting early retirement packages and choosing different second careers since 1995 (McIntyre, 2003).

To highlight the severity of teachers leaving the profession, McIntyre (2003) noted that 20% to 30% of new teachers, with less than 3 years in the profession, withdrew from the Ontario Teachers' Pension Plan between 1993 and 1999. Attrition rates vary between provinces and countries, but the reasons for career departure are

similar. Common reasons cited include a) unsatisfactory remuneration (Bernard, Hill, Falter & Wilson, 2004; Ingersoll, 1999; Kissel, 2005; McIntyre, 2006; Naylor, 2001); b) high stress levels, including student discipline and lack of administrative support (Bernard et al., 2004; COMPAS, 2004; Ingersoll; Kissel; McIntyre, 2003; McIntyre, 2006; Naylor; Ontario College of Teachers, 2004); c) lack of mentoring (Bernard et al.,; Ingersoll; Kissel; McIntyre, 2003, 2006; Ontario College of Teachers; Woods & Weasmer, 2004); d) lower job satisfaction (Bernard et al.,; Ingersoll, 1999; McIntyre, 2003, 2006; Naylor; Woods & Weasmer); and e) overwhelming workload with teaching (Bernard et al.,; COMPAS, 2004; Kissel; Naylor); in addition to a perceived lack of respect for the teaching profession by media/community (Bernard et al.,; COMPAS, 2003; Kissel; McIntyre, 2006; Naylor). Leithwood and McAdie (2007) succinctly categorize the issues into four categories of workplace conditions: (a) classroom level, (b) school level, (c) principal leadership, and (d) district level. Ingersoll emphasized the importance of school and organizational characteristics to influence attrition rates, as well as teacher recruitment, and noted high-poverty public schools have moderately higher turnover rates, but high turnover rates were not found in larger schools, in public schools in large school boards, or in urban schools. In a study that yielded no statistical significance between males and females, ethnicity, age, or school setting, Mertler (2002) reported that 36% of teachers surveyed would not select the teaching profession if they were to choose their career pathway again.

Teacher dissatisfaction is not only a Canadian concern; it is also an international issue, and the disengagement levels noted amongst teachers reflect contemporary societal

workplace stressor trends. An example of national and international concern is the reluctance of males to enter the teaching profession (Bernard et al., 2004) and the "hints that male teachers may be slightly more alienated than females" (COMPAS, 2004, p. 18).

During the 5 year *Transition to Teaching* study, sponsored by the Ontario College of Teachers, McIntyre (2003) observed that approximately 18% of the 2001 and 2002 teacher graduates may be vulnerable to leave teaching after 2 years. However, after tracking these new teachers for 4 years, McIntyre (2006) surprisingly found that, "by 2005 only eight per cent of 2001 teacher-education graduates were no longer members in good standing with the Ontario College of Teachers" (p. 1). Another interesting finding of this 2006 study was the number of teachers (39.7% of 2003 graduates, 39.2% of 2002 graduates, and 38% of 2001 graduates) who reported teaching as their second career. This second-career group brought an added variable to McIntyre's (2006) study in terms of their perceptions of stress, motivation, work, and life experience. Both of McIntyre's findings (2006) raise the question of engagement in this new teacher workforce, with an important question being the factors that may have influenced the higher-than-expected levels of retention among new professional teachers.

Interestingly, mixed evidence exists regarding teacher age and likelihood of departure. In Ontario, an overwhelming majority of teachers under 50 years of age indicate plans to be teaching in the next 5 years (COMPAS, 2003). One American study (Mertler, 2002) found that most motivated teachers appeared to be young or older adults; the middle-aged adults reported being most disgruntled. Conversely, Ingersoll (1999)

presented American findings of younger and older teachers having higher rates for leaving the profession.

To emphasize the negative perspective of attrition takes the focus off those remaining in the teaching profession. These individuals might be overlooked as valuable mentors and learning resources for colleagues, administrators, and the next generation of students and adults considering entering the education sector. These same teachers remaining in the profession would experience similar stresses and wages as their departed colleagues. Assumptions cannot be made regarding these teachers' motivation levels or implementation of positive strategies to deal with the challenges. Their engagement levels and motivation strategies are worthwhile to explore.

In sum, vast numbers of teachers remain satisfied with their career (Mertler, 2002) and expect to be teaching in 5 years' time (COMPAS, 2004; Ontario College of Teachers, 2004). However, Mertler's (2002) study presents an irony whereby a high number of teachers reported being satisfied with their careers; yet, when these same teachers were asked if they knew of disengaged peers, 24% said they knew at least 10 disengaged colleagues, with a median of 5 to 6 unmotivated teachers.

Statement of the Problem

Literature highlights numbers of teachers leaving the profession and provides reasons, but studies were not found regarding those teachers who remain in practice. Their reasons for staying in teaching are not researched, nor are their motivation strategies that reinforce, increase, or regain their engagement with their career documented.

There are many unknowns regarding the resiliency of teachers remaining in schools. For example, the percentage of teachers experiencing uncomfortable stress levels is not known. It is neither known how many teachers consciously or unconsciously use motivation strategies to combat their stress, nor the degree of success achieved with engagement. It is not known what strategy a teacher would define as motivating. It may be defined as one of the little tricks used to get through a day. Teachers may also use other terms to label motivation strategies, such as relaxation or rejuvenating activities. It is not known if demographic differences exist for definition, selection, or implementation of motivation strategies. Last, teaching is a giving-to-others profession. How much value is given by teachers to doing something for themselves that is giving or caring?

These questions point to a large area of potential study. Kahn (1990) has developed a theory of workplace engagement that is psychological in character, and research is needed to investigate the practical connection between his framework and teacher engagement. This study addressed that connection by asking teachers what motivation strategies they use to maintain their engagement in their work.

Purpose of the Study

The purpose of this study was to investigate successful strategies that teachers have used to engage themselves in the workplace. Kahn's (1990) psychological framework offers concepts of engagement that have been tested and revised (e.g., May, Gilson, & Harter, 2004). In this study, Kahn's concepts of meaningfulness, safety, and availability were translated from a theoretical to an applied base. Posing research questions based upon the cognitive, emotional, and physical activities that address

Kahn's psychological conditions were used to develop this practical framework. The following empirical questions were used to guide the development of a survey to assess the activities and tools that teachers use to engage or reengage with their work.

Question 1: What cognitive, emotional, and physical strategies do teachers use to generate a sense of availability, meaningfulness, and safety?

Question 2: What differences in strategy use exist between males and females, urban versus rural school sites, years of teaching experience, and age groups?

Question 3: What cognitive, emotional, and physical strategies do highly engaged teachers use to generate a sense of availability, meaningfulness, and safety?

Question 4: What differences in strategy use exist between highly engaged males and females, urban versus rural schoolteachers, years of teaching experience, and age groups?

Theoretical Framework

The framework used to support this study is Kahn's (1990) psychological conditions of personal engagement and disengagement. This model entails two main principles. One principle views workplace engagement from the perspectives of task meaningfulness, personal availability, and safety. Meaningfulness relates to the value given to a task or job by an individual. Availability indicates the energy or conscious effort brought by the individual to a task or job. Safety encompasses an individual's sense of real or perceived threat to emotional and, or physical well being in the workplace.

The second principle is that an individual "can use varying degrees of their selves, physically, cognitively, and emotionally, in work role performances, which has implications for both their work and experiences" (Kahn, 1990, p. 692). Work role performance is the character or part that one plays in his/her job. This implies that a continuum exists for bringing oneself fully into a work role, engaging and disengaging in a given moment or task.

Kahn's (1990) framework can be viewed as a holistic framework that accounts for an individual's external and internal workplace influences, which may affect physical, emotional, and intellectual capabilities. Consequently, this can affect the motivation or capacity brought to work or to a task. Furthermore, this model addresses the flexibility in motivation that can occur during a workday, such as when something remarkable occurs that bolsters an individual's energy, or when something distressing happens that lessens motivation. These examples illustrate engagement and disengagement, respectively.

Kahn's (1990) framework provided the deductive foundation for this study. The main principle of the three psychological conditions of meaningfulness, availability, and safety drove the research engagement questions by seeking to find how teachers achieved each condition. The second principle of using varying degrees of oneself brought research attention to three subcategories of engagement strategies: cognitive, emotional, and physical. The associated implication of engaging and disengaging with work role performance reflected the deductive expectation in this study that teachers will not use the same motivation strategy daily and that the frequency of motivation strategy use may

vary. Another deduction allowed for a preference to exist for strategies based in one subcategory over the others, such as physical motivators over emotional or cognitive motivators.

Importance of the Study

In an expression of concern for the number of students experiencing disengaged teachers on a daily basis, Mertler (2002) asserted, "the students of these classroom teachers are not receiving the highest quality education" (p. 50) and lamented that, "Unfortunately, the individuals most affected by this state of affairs are their students" (p. 52). These statements highlight the importance of motivation, its potential influence upon younger generations, and the implication for upcoming teachers who work with these students. A teacher's attitude and behavior can affect interactions with other teachers, students and their families, the teacher's own family, and community, thereby affecting the reputation of the teaching profession. The study is important because it can assist educational institutions to plan human resource programs, develop policy and procedures, and facilitate increased organizational productivity through increased staff motivation, retention, and creativity, and decreased absenteeism.

The study is relevant for its potential usefulness to stakeholders, such as education administrators, teachers, students, university educators (Mertler, 2002), and the general community, including families of teachers and students, and politicians. The positive implications of this study range from effective healthy teachers to productive, engaged students to healthy communities. In addition, there are implications for the organization's administration, its culture and sustainability, along with its community

and political reputation. For example, in addition to accessing publicly funded health care, teachers and their families may use employer-paid health benefits for physical and mental health complaints attributed to a teacher's disengagement. The need for these services, and their related health and financial costs, may have been preventable if teachers had greater access to relevant workplace health promotion programs. To further exemplify this scenario, if employees show low usage of human resource programs, administrators may wish to revise preexisting programs to meet teacher needs and incorporate current preferences for motivating strategies. Administrators may seek to incorporate a self-motivation component to professional development agendas. These latter administrative actions may facilitate positive relationships between administration and nonadministration staff.

Keeping a motivated, productive, and creative workforce is paramount for an organization's culture and sustainability. Generative triple-loop learning (Argyris, 1995) occurs with engaged, motivated people; this is knowledge creation (Wang & Ahmed, 2003), which is crucial to organizational sustainability (Homer-Dixon, 2003). These principles apply to the education field, as teachers seek to build upon their pedagogy, support colleagues, and inspire student enquiry for learning, all of which facilitates a healthy, viable society. University educators may review preservice education curriculum and implement course work for self-reflection, stress management, and self-motivation strategies. An enriched university program can increase the university's status in the community and education field; in addition, increased resiliency of education students can concurrently strengthen the students as new teachers, and the profession.

Finally, an engaged teacher can be expected to have a greater vested interest in education, and, thus, be better positioned to add to education's body of knowledge and pedagogy, as well as to share this new knowledge in the education field. An engaged teacher can positively invite other colleagues to function at higher motivation levels through role modeling or mentoring. A strategy that contributes to role modeling or mentoring is collaboration through teaching teams where teachers assist each other and increase teacher self-efficacy and teacher-perceived efficacy of other teachers (Basom & Frase, 2004). The school principal contributes to an engaged workplace in being supportive and visible, by encouraging teacher leadership and teaching innovation, and by inviting staff to participate in school decisions (MacTavish & Kolb, 2006). This process potentially yields numerous benefits, such as increased efficiency, productivity, creativity, commitment, and retention in the profession. "Collegiality in the workplace is also a strong contribution to job satisfaction" (Woods & Weasmer, 2004. p. 120).

From an individual perspective, participants may feel recognized and valued and may consequently experience increased personal and workplace productivity and morale. The final report may lead to teachers discussing the results, as well as discourse between teachers and administrators discussing the study results. Engagement facilitates teachers and the organization to be more responsive and adaptable to evolving education policy and trends. Morgan, Kitching, and O'Leary (2007) found teacher motivation to be based upon multiple factors, such as energy, drive, and commitment. In their analytical review of Canadian literature, Leithwood and McAdie (2007) report that meaningfulness and safety in work are key elements of school cultures that affect teacher attitudes.

Teachers, schools, school boards, and universities all represent the teaching profession, and all have status and respect at stake in the general public. The risk is compounded amongst teachers, where there is potential intellectual and social loss of a sense of teaching community, that is, teachers working in isolation with a lack of collaboration, mentoring, or collegiality. Certainly, the issue of motivation creates an opportunity for enhancing quality of life within work, as well as outside the workplace.

Outline of the Remainder of the Document

The subsequent two chapters discuss the literature review and the research process, respectively. Chapter Four entails the data analysis, followed by discussion of results in Chapter Five. The purpose of Chapter Two's related literature review was to provide a foundation for this study and support the framework developed by Kahn (1990). The literature review was undertaken from a psychological and sociological perspective with the paradigms of self-concept, human needs theory, and positive psychology. Sustainability of motivation is also included because it is integral to employee engagement present and future as much as it directly affects an organization's existence. Completing the literature review is a brief discourse of May et al. (2004) study utilizing Kahn's (1990) framework.

Chapter Three encompasses the research process with methodology and procedures. This chapter explains the quantitative research process, which includes study design, site and participant selection, data collection, descriptive social data analysis, reliability and validity, and ethical considerations. Methodological limitations and assumptions are an important part of this discussion.

Chapter Three set the base for presentation of results in Chapter Four. This chapter begins with a description of the study participants based upon their demographics before the results that detail the strategies used by the greatest number of participants and the strategies used most frequently. The preferred strategy results are presented for the overall participant group and the highly engaged subgroup. For each of these groups the comparison within each demographic category of gender, school site, age, and years of experience was presented with a key point of interest in the comparison of participant self-rated engagement levels for the overall and highly engaged groups.

Chapter Five comprises the discussion, implications, and final thoughts for this study. The results of the favoured strategies are discussed with highlights of subcategory predominance and interesting trends. A profile is presented to reflect the demographics of the teacher most likely to self-report with the highest engagement rating. In this chapter's discussion new query is raised for future study. In addition, the potential usefulness of this study's findings is discussed for practicing and future teachers as well as for their principals and administrators.

CHAPTER TWO: REVIEW OF RELATED LITERATURE

This chapter will review foundational and current theories related to motivation, engagement, disengagement, and sustainability. These concepts are presented to support Kahn's (1990) framework for motivation, which he claimed was grounded in Goffman's (1961) work on attachment and detachment. Kahn noted that "the personal engagement and disengagement concepts developed [in the model] integrate the idea that people need both self-expression and self-employment in their work lives as a matter of course (Alderfer, 1972; Maslow, 1954)" (p. 694). According to Kahn, Maslow and Alderfer saw the human needs theory as being a foundational theoretical principle. Kahn acknowledges that other theories, such as expectancy theory, social exchange, and various group theories, also influence motivation and engagement, but that discourse is beyond the scope of my study.

The literature review yielded other theories, such as McShane (2004) cited *learned needs* (McClelland, 1961) plus *innate human needs* (Lawrence & Nohria, 2002) derived from evolutionary psychology, and *motivation-hygiene* (Herzberg, 1997) to support the framework. Kahn's framework relates to other current theories such as *flow* (Csikszentmihalyi, 1990), positive psychology (Seligman, 2002), and contemporary organizational research, exemplified by Senge (1990) and Ulrich (1998). This review will begin with *self-concept* theory because it represents the basic foundation for the remaining theories, and it addresses human personality that influences motivation and engagement.

Self-Concept Theory

Self-concept theory outlines the rudimentary makeup of who one is, which drives all needs and goals. An individual's self-concept frames thoughts, feelings, and actions. One distinguishing characteristic of self-concept theory is the notion that motivation is intrinsic. According to Purkey (2000), "people are always motivated" (p. 23); it is innate to an individual.

Self-concept theory (Purkey, 2000; Shamir, 1991) reflects the in-role performance that Kahn (1990) proposes, whereby people slide in and out of engagement. Specifically, self-concept's "I-me" constellation highlights how needs and wants vary according to which facet of one's personality is at the forefront of consciousness at a particular moment in time. The particular facet, or "I-me" component, is recognized through self-talk. The self-talk voicing a need or want will influence an individual's motivation for a task or job at a particular moment in time. In this way, self-concept underlies Kahn's framework and all other motivational theories. With respect to Kahn's model, self-concept theory implies that an individual's perception of personal availability for a given task or workday, sense of safety in the workplace or with colleagues, or attached value to task meaningfulness can fluctuate.

Human Needs

In the general grouping of needs theories, an interesting dichotomy in terms exists between McClelland's (1961) theory of *learned* needs and Lawrence and Nohria's (2002) *innate* human needs theory (cited in McShane, 2004). In spite of this apparent dichotomy, both theories share some commonalities. McClelland premises the existence

of "secondary needs or drives that are learned and reinforced through childhood learning, parental styles, and social norms" (cited in McShane, p. 138). This theory identifies three basic needs: (a) achievement, (b) affiliation, and (c) power; whereas, innate human needs theory outlines four categories: (a) drive to acquire, (b) drive to bond, (c) drive to learn, and (d) drive to defend. Innate human needs theory suggests emotional and rationale interpretations of incoming information influences motivation and behaviour. Both theories overlap with Khan's (1990) framework because they directly affect the perception of task meaningfulness, availability, and safety.

Similarly, Herzberg (1997) indicated in the motivation-hygiene theory that happiness appeared to be contingent upon achieving psychological growth, which "depends on achievement in tasks that have meaning to the individual" (p. 375). This theory identified the conditions that facilitate job satisfaction as achievement, recognition, work itself, responsibility, and advancement. Herzberg (1997) noted that patterns of positive work attitudes correlated to accomplishment of self-actualizing needs. As with the needs theories, Herzberg's (1997) findings are consistent with the concepts in Kahn's (1990) model.

Positive Psychology

Kahn's (1990) model is also supported by positive psychology concepts such as the positive conscious thinking of optimism (Seligman, 1998), happiness (Seligman, 2002) and flow, or living consciously, by Csikszentimalyhi (1990). Seligman and Csikszentimalyhi noted that one success determinant for an individual in the workplace is motivation. This determinant, coupled with other factors, may affect personal

immersion in work. According to Csikszentimalyhi, personal immersion is an indicator that flow is occurring with an activity. Flow and positive psychology theory strive to achieve this individual level of immersed functioning. Whereas flow relies upon cognitive involvement, May et al. (2004) note that Kahn's framework is multifaceted; it is concerned with physical and emotional components as well as with cognitive aspects.

Optimism (Seligman, 1998) and happiness (Seligman, 2002) fall under the auspices of positive psychology. Seligman describes optimism as a state where personal setbacks are viewed as short-term challenges that can be overcome, and do not reflect a defect in individual character. Seligman concludes that a crucial determinant of optimism is the self-talk of a person when a situation does not go well. The self-talk, which directly connects with self-concept theory, may be self-affirming or attacking. Optimism, in conjunction with motivation and aptitude, enhance individual success in the workplace (Seligman) because the person persists with tasks and problem solves to reach resolution. Gratification, psychological growth, and flow (Csikszentmihalyi, 1990) are outcomes. These outcomes are maximised when a person is choosing work well suited to individual strengths. Seligman indicates that personal happiness and flow is most attainable when these principles are operationalized and implemented daily.

Flow (Csikszentimalyhi, 1990) encompasses principles of enjoyment, that is, (a) challenging tasks requiring skill; (b) concentration during task; (c) clear outcomes or feedback; (d) loss of self-consciousness, sense of time, and need to control; and (d) complete focus upon task due to being engrossed or immersed in the activity. Flow is a balance between challenge and skill, on one hand, and anxiety and boredom on the other

(Csikszentmihalyi). "Perhaps flow is the state that marks psychological growth" (Seligman, 2002, p.116) and factors heavily into gratification and happiness. This is particularly relevant to the workplace as it implies that individuals flourish by different means and that motivation is a prominent concept in order to achieve flow or happiness.

Sustainability

A key theme that emerged from the motivation literature is individual and organizational sustainability. For the purposes of my study, I will focus upon the individual, and define sustainability as the means and processes by which an individual maintains motivation. Sustainability is important because ongoing performance and engagement levels are measured individually, and an individual's self-concept and goals are held accountable by the individual and organization. An organization's sustainability, or ability to exist, which is partially reflected in its culture and organizational practices, is interwoven with an individual's sustainability. The remainder of this literature review focused upon internal and external factors that serve to sustain an individual's motivation.

Self-concept comprises the underlying foundation for internal factors affecting individual motivation. Closely connected with self-concept is the person's mental model, referred to by Senge (1990) as an individual's attitude and perceptions. The construct of mental model highlights personality, is instrumental to commitment, and influences optimism and adaptability. Individual self-concept and mental model is demonstrated through self-talk. Positive self-talk can sustain or increase personal motivation with statements that reinforce optimism, encouragement, goal attainment, growth, and

learning, and that foster meaningfulness, persistence, and engagement with an activity. This may be evidenced by behaviours and outcomes that sustain motivation and engagement. In the workplace, work meaning is integral to an individual's behaviour and attitude. Research has been conducted to highlight the importance of meaningful work in North American culture, and its relevance to self-identity that is influenced by others (Wrznesniewski, Dutton, & Debebe, 2003). Self-identity is a component of self-concept. A person's mental model and self-talk can be shaped by internalization of the prevailing workplace culture, in the form of other people's approval, indifference, or disapproval. Hence, an individual may work in an organizational culture that is stimulating and that supports the individual's motivation and engagement with their work. This atmosphere fosters flow and happiness for the individual.

However, a form of creative tension may occur when an individual becomes aware of an unsatisfactory engagement level. According to Senge (1990), creative tension is the gap between the reality a person experiences and the reality one envisions. "With creative tension, the motivation is intrinsic. This distinction mirrors the distinction between adaptive and generative learning" (p. 10). Generative learning tends to foster a sense of accomplishment. This enriched form of learning can lead to a continuum of changes in optimism. The capacity to increase optimism (Seligman, 1998) can enhance the ability to self-motivate or potentially create flow (Csikczentimihalyi, 1990). If physical and emotional energy are expended with the cognitive energy of flow, the individual can be expected to experience engagement (May et al., 2004). Taking control of these processes can increase engagement.

This happens in a "career orientation in which the person, not the organization, is in charge, where the person's core values are driving career decisions, and where the main success criteria are subjective (psychological success)" (Hall, 2003, p. 1). An engaged person can better develop a flexible career (Hall & Moss, 1998). This planning is self-managing one's career pathway; it is a process where the individual looks to learn, accomplish tasks, then move on to another challenge. Success is determined by psychological accomplishment and meeting one's self-fulfillment needs. These accomplishments and needs may also facilitate organizational productivity and sustainability. Organizational citizenship behavior (OCB; Schermerhorn & McCarthy, 2004) defines an employee who spends discretionary behavior to promote or increase organizational productivity. According to Schermerhorn and McCarthy, the extra effort or energy is not part of the job description and is rendered to boost organizational success. They further report that OCB has positively influenced performance measures such as teamwork, productivity, organizational effectiveness, and customer service. Hence, a potential overlap of the flexible career may occur with OCB. Similarly, Finnie and Early (2002) noted in an interview with Ulrich that he reframes commitment as intentional engagement harnessed with discretionary energy. This action occurs with an engaged individual, hence, increasing individual and organizational sustainability.

Regardless of motivation or engagement level, an effective work-life balance is important to sustain engagement. Hall and Richter (1988) contend that optimal balance for each individual is unique. They argue that organizational commitment and active

support of work-life balance can increase awareness amongst employees to rejuvenate and to avoid burnout.

Organizational sustainability requires employee engagement. Ulrich (1998) believes that organizations should facilitate motivation by considering the workforce's intellectual capital because intellectual capital is "a firm's only appreciable asset" (p. 15). Ulrich sees intellectual capital as a product of employee commitment and competence. Ramlall (2004) extends this definition by providing a calculation strategy: intellectual capital "equals the knowledge, skills, and attributes of each individual within an organization multiplied by the willingness to work hard" (p. 53). According to Ramlall, this thinking is the premise of human capital theory and is integral to organizational sustainability.

Schermerhorn and McCarthy (2004) link OCB to intellectual capital theory and social capital development. They contend that enhanced employee commitment and intellectual growth rely upon consideration of how employees perceive and conduct their work, in addition to reviewing workplace policy and procedures and established work environment. Schermerhorn and McCarthy point out that a positive relationship exists between employees' involvement in training and development and their self-confidence to learn. In this way, both professional growth and professional confidence enhance the individual's organizational availability.

Senge (1990) argues that organizations concerned with sustainability seek to move beyond adaptive learning to generative learning. Argyris (1995) contends that organizations look to engaged employees who will generate triple-loop learning. Finnie

and Early (2002) write that Ulrich considers job design as one factor leading to greater engagement and commitment; Ulrich argues that, when employees are allowed to do their job without the "silly stuff," they become engaged and more committed. Ramlall (2004) indicated job design is a contemporary spin on Herzberg's (1959) motivation-hygiene theory and is premised upon task meaningfulness.

In addition, Finnie and Early's (2002) report places a heavy emphasis upon team process and functioning, which affects a sense of safety. Schermerhorn and McCarthy (2004) view organizational support to entail managerial, coworker, and organizational components, such as ensuring uncomplicated access to development training. Da Cunha and da Cunha (2002) succinctly note that getting people to participate happens when they are motivated by their interest and experience as well as when they have the needed resources in place. Resources are noted again by Hall and Moss (1998) and Tyler and Blader (2002), as well as recognition or attaining status within the organization (Herzberg, 2003; Tyler & Blader), to be determinants of engagement. Herzberg (2003) also maintains that achievement and its recognition, along with a challenging job, responsibility, and opportunity for psychological or career growth, remain motivators.

Oldham and Cummings (1996) suggest that the organizational context of complex, challenging work and supportive, noncontrolling supervisory style combine to facilitate employee engagement and inspire employee creativity through routine or radical innovations. They found that employees performed better and had less intention to leave the organization under these conditions. One might assume that these factors would contribute to job enrichment and thereby increase the organization's sustainability.

With respect to a sense of safety within the group or organization, White, McMillan, and Baker (2001) point out that the dominant group sets group norms. Discontent or dysfunctional group dynamics can affect a person's sense of safety, task meaningfulness, and personal availability, and will, thus, have a negative outcome upon an employee's commitment and/or competence. It is interesting to note that studies conducted between 1924-1932 regarding group conformity with Hawthorne and the Western Electric Company (Mayo, 1997) resulted in increased productivity and group motivation. However, May et al. (2004) found that maintaining co-worker norms did not promote safety for the individual. They did find, however, that satisfying relations with co-worker and supportive supervisors were positive links with safety. Argyris (1995) observes that defensive routines could be destructive to team functioning and to individuals. Furthermore, marginal groups do not appear to access employee development programs for reasons such as cynicism, disengagement, and underuse of their skills and capabilities (O'Brien et al., 2004).

Marquardt (2000) laments that many leaders of organizations are adept at reorganization but are not competent with human relations and do not manage well the consequences of disengagement. Schermerhorn and McCarthy (2004) address the issue that disengagement or marginal performance can become an organizational norm. Hence, there is a current focus upon leadership and a renewed interest in human resource development. Another motivational strategy that many organizations seek to incorporate is a work-life balance philosophy (Hall & Richter, 1998), which is particularly prudent given workplace-associated mental and physical health costs. Other workplaces initiate

"employer of choice" programs as a means to attract and retain employees. Regardless of the dominant organizational strategy, however, the emphasis is upon retaining valued employees (Herzberg, 2003; Marquardt, 2000; Ramlall, 2004).

Manager efficacy has been linked with employee engagement and productivity in a symbiotic reinforcing relationship (Luthans & Peterson, 2002). This connection might be attributed to a possible exchange of motivation strategies or to employees' conscious or unconscious view of their manager as a motivator. The link affirms that managers need to work with their valued employees to identify a work component important to them at a particular point in their lives and then help the employee achieve that need (Finnie & Early, 2002). Most frameworks that aim to increase an employee's performance overlap on components of employee ability, organization input via support or opportunity, and employee effort or motivation (Schermerhorn & McCarthy, 2004). These frameworks acknowledge that a partnership exists between the organization and the employee regarding employee performance.

Summary

To sum, Kahn's (1990) three psychological conditions of meaningfulness, availability, and safety can be found in varying degrees in well-accepted contemporary theories. Research emphasizes the importance of motivation for individual and organizational sustainability, as well as the role of leadership, organizational support, and policy. New frames for motivation include terms such as *discretionary behavior* and *organizational citizenship behavior* (OCB), but little research could be found on practical strategies that employees use for maintaining or reengaging motivation. Theories and

frameworks point out motivator concepts, again with heavy emphasis upon management and leadership, but field research from the employees is lacking. The timeliness for considering these conditions is further highlighted by contemporary researchers expounding high teacher workloads and stress levels, high labour insurance costs, and OCB perspectives (Ramlall, 2004; Schermerhorn & McCarthy, 2004).

The literature search yielded one valuable engagement work that had been built on Kahn's (1990) framework. May et al. (2004) conducted a study that reinforced the three psychological conditions and developed a revised model. They found that meaningfulness is most strongly related to engagement, and that job enrichment and work role fit are positively related to meaningfulness. Second, they found that psychological safety was important for engagement, with supervisor relations being the greatest determinant. May et al. also found that adhering to coworker norms and self-consciousness negatively impacted safety. Finally, availability was not found to have a significant relation to engagement under Kahn's original model; however, when May et al. correlated resources directly to engagement, significance of availability was achieved. They noted that "The amount of one's cognitive, emotional and physical resources had the strongest effect on psychological availability" (p. 31). These concepts have been incorporated into the research design and methodology that I used to conduct my investigation and that I describe in the next chapter.

CHAPTER THREE: METHODOLOGY AND PROCEDURES

This study investigated the self-motivation strategies that school teachers from junior kindergarten to grade 8 used to maintain engagement in their profession. The purpose was to identify the types and usage frequency of public school teachers' self-motivation strategies. The research process from research design to data analysis, as well as the ethical considerations, is outlined in this chapter.

Research Design

This was a descriptive study using deductive quantitative methods in an exploratory applied research design. A deductive approach was used because the study was based on the existing framework developed by Kahn (1990). The exploratory applied approach was chosen because the study was intended to yield a concrete framework that moved Kahn's abstract work into the practical domain. The quantitative approach was preferred in order to attain the greatest amount of information from the largest possible sample size within a reasonable timeframe. Hence, a survey method was well suited to this investigation.

A cross-sectional study design was used to measure motivation strategies at one point in time without participant manipulation. The study methodology was appropriate for descriptive social science (Neuman, 2003) because the study purpose was to investigate how teachers maintain engagement in their work lives. The study plan was to share the results with the teaching profession and, hopefully, assist disengaged teachers to regain or increase work engagement. This motive reflected an applied social science philosophy where the impetus was to help empower people to see how others "create and maintain their social worlds" (Neuman, p. 537). Engaged teachers improve the quality of

their life, and positively affect the lives of students and community in a direct and an indirect manner.

Site and Participant Selection

To invite study participation, I approached a local public school board with 3,000 teacher members, and a mixture of inner city, urban, and rural schools. Inner city referred to a zone in an older, densely populated city area with higher rates of socioeconomic discrepancies (Allen, 2003). Urban referred to areas of the city excluding inner city areas, and rural referred to areas outside the city and associated with countryside. The school board region was ethnically diverse, predominantly working middle class in a population of 500,000 people. Elementary school teachers were targeted as study participants because I wanted to invite a single target group and I believed it would be easier to secure participation from elementary teachers than from secondary teachers. This sampling strategy created a potential sample size of 2,021 teachers in about 100 schools. Each school had between 15-40 teachers on staff. The goal was to invite 50% of schools in each category (i.e., rural, urban, and inner city).

A teaching acquaintance in the school board provided the name of the school board representative who conducted ethics reviews, whom I contacted via email for the purpose of attaining study approval and assistance. The study proposal topic with the completed school board ethics application was introduced to the ethics representative in autumn 2006 and was well received. To ensure continued interest in the study, I contacted the ethics representative in January 2007 to confirm commitment for the winter

school term. The ethics review process at the school board was anticipated to occur in about 6 weeks. However, school board approval was not granted until mid-May 2007.

The study was introduced to school principals via school board internal memo, accompanied by a promotional flyer. Shortly afterwards, I sent a letter of introduction to the study to all targeted principals and followed up with a telephone call to the school. At most schools there was no success speaking directly with principals; the secretaries were the communication link. Interest in the study was varied, largely due to severe time restriction at the end of the school year. The final outcome yielded agreement from the principals of three rural, five urban, and two inner city schools to participate in the study. Survey packages were delivered the first week of June to participating schools with a pickup date of mid June.

Two factors were taken into consideration when determining sample size. "Smaller samples are sufficient when less accuracy is acceptable, when the population is homogeneous, or when only a few variables are examined at a time" and "a rule of thumb is to have about 50 cases for each subgroup to be analyzed" (Neuman, 2003, p. 233). There were three school subgroups in the study design, and great accuracy was not required to complete the survey tool. Hence, a sample size of 150 participants was determined to be acceptable. It was hoped that 20/52 targeted schools would participate, with 50% of a potential 18-20 teachers per school completing surveys.

A stratified sampling process was used for targeting schools to participate in the study. This process involved grouping the schools into rural, urban, and inner city categories, then selecting a random sample of schools from each category. The school

board representative provided a list of 98 elementary schools: 23 inner city, 63 urban, and 12 rural. Fifty percent of each category was randomly selected for invitation; 52 schools were invited to participate by randomized computer generated sampling list. "This guarantees representativeness or fixes the proportion of different strata within a sample" (Neuman, 2003, p. 223). This was of particular interest due to the background information indicating higher burnout rates for teachers in high poverty public schools, typically associated with inner city schools. Within each selected school, all teachers were invited to participate. This process was important to reduce bias for participant invitation by reducing sampling error (Neuman). The combined participant selection process of stratified sampling with inclusive sampling coupled with a reasonable sample size was intended to increase the ability to make inferences about the teaching profession within the selected school board.

The final tally for participating schools was three rural, five urban, and two inner city schools. The specifics of these sites for participant demographics begin with 17 rural teachers (4 male; 13 female). The age demographic in the rural participants was 9 (2 male; 7 female) at 50+ years age; 1 female at 45-49 years age; 2 (1 male; 1 female) at 40-44 years age; and, 4 (1 male; 3 female) at 30-34 years age. The years of experience were weighted as follows: 7 (2 male; 5 female) at 20+ years of experience; 2 (females) at 11-15 years of experience; 7 (2 male; 5 female) a 4-10 years of experience; and, 1 female at less than 3 years of experience.

The inner city site was comprised of 3 participants (1 male; 2 female). One female was 50+ years age and the remaining teachers were 25-29 years age. Not

surprisingly, the years of experience were 20+ years for 1 female and less than 3 years of experience for the remaining male and female.

There were 21 urban teachers where 5 were male and 16 were female. The age demographic for this group was 8 (females) at 50+ years age; 3 (females) at 45-49 years age; 5 (3 male; 2 female) at 40-44 years age; 2 (1 male; 1 female) at 35-39 years age; 2 (1 male; 1 female) at 30-34 years age; and, 1 female at 25-29 years age. The years of experience specifics are 6 (females) at 20+ years of experience; 5 (females) at 16-20 years of experience; 2 (males) at 11-15 years of experience; 7 (3 male; 4 female) at 4-10 years if experience; and, 1 female at less than 3 years of experience.

The issue with these participant numbers and demographics is that a skew exists related to an overall lower than expected participant rate. Neuman (2003) advocated for greater participant numbers to attain data reliability. The ability to make generalizations related to the data analysis is reduced to observations of data findings. This study would need to be repeated with greater participant numbers in order to affect generalization to the teacher group. Second, it would be ideal to have greater participant numbers in each demographic category to reflect a reliability of data and allow generalization to be made about gender, age, school site, and years of experience.

The concern related to participant numbers was addressed by reforming demographic subgroup categories; for example, the age and years of experience were compressed into a smaller number of subgroups. This reformation led to 4 age groups (50+ age; 40-49 age; 30-39 age; and 29 years or less) and 3 years of experience groups (20 years+; 11-20 years of experience; and 1-10 years of experience). The inner city

school site was incorporated into the urban school site to yield urban and rural school sites. Some demographic groups remained too small for data reliability but findings based upon observation were enhanced.

Data Collection

The instrument used for the study was titled Motivation Strategies for Work Engagement Questionnaire, which was a Likert-based matrix question survey (Appendix A). The survey format was based upon the format and organization of the survey instrument developed by Georgiou (2007) in order to expedite participant completion time. This questionnaire differed from Georgiou's instrument in the following ways: it was longer but still developed to be completed in 15- 20 minutes; this time frame has been found to have the highest acceptance rate with survey participants (Neuman, 2003). The demographic information varied by relating specific questions to the teaching profession and adding a question on first or subsequent career status. The Likert scale had minor revisions to the rating guidelines. The strategies were to be rated according to frequency usage, not affective responses as in Georgiou's instrument. Finally, participants were asked to self-rate their engagement level and to define their sense of engagement, whereas Georgiou enquired about activities to increase participant capacity to do a good job.

The content for the survey was developed deductively based upon Kahn's (1990) theoretical psychological engagement framework and the revised work of May et al. (2004). That is, I reviewed the literature to identify potential practical expressions and strategies that reflected the various psychological indicators proposed by Kahn and May

et al. Kahn's engagement framework has three conceptual conditions: availability, meaningfulness, and safety with subcomponents classified as cognitive, emotional, and physical. I identified common motivational strategies that could be found in contemporary workplaces and culture, and selected those that matched Kahn's conceptual categories. The survey sections were organized by the engagement framework with suggested strategies appropriate to each conceptual principle. The strategy responses for the availability section with the three subcomponents were rated with a given Likert scale for frequency of usage. The remaining sections addressing meaningfulness and safety were developed with open fields for participants to list and rate the frequency of their personal strategies in the same manner as in the availability section. To complete these latter areas, participants were requested to select previous availability strategies if relevant, in addition to listing and rating personal strategies not indicated earlier on the survey. All sections included a free text box for participant comments. This form of survey construction was chosen to maximize participant input and to solicit strategies without researcher bias.

Survey clarity was established before distribution to survey participants. The survey was reviewed for question clarity and survey flow by family, a private senior teaching consultant, and teacher volunteers in an elementary school that was not included in the target sample. Feedback indicated that minor wording changes were needed in Section 1 demographics to increase user ease of understanding. Other than that, no changes were recommended to the wording or organization of the instrument. The small pilot was useful to assess how accessible the survey appeared to participants.

Upon receiving consent from the school principal for study participation, survey packages to cover the number of all teaching staff were delivered to the school. Participants reported via a completed paper or electronic survey. Each completed survey with signed consent, along with an optional completed request form for a coffee shop voucher, was submitted by the participating teacher and sealed inside the original school survey package envelope. The sealed envelope was kept in the main office for safekeeping. Only one enquiry occurred for the electronic survey; all completed surveys were submitted by paper copy.

Neuman (2003) suggested numerous strategies to gain the highest completion rates on a survey instrument. For example, a mail questionnaire is "very effective, and response rates may be high for a target population that is well educated or has a strong interest in the topic, or the survey organization" (Neuman, p. 289). Hence, given the study topic and the education level of the teachers, it was believed that school teachers would have an acceptable participation rate. Other strategies included a $2.00 Tim Horton's coffee shop voucher and an addressed return envelope in each study package for confidential survey completion and return for pick up. Timing of survey distribution is crucial to participation success, but the timeline for this research was not optimal because the survey was distributed several weeks before summer closure.

To further facilitate effective data collection, Neuman (2003) recommends sending nonresponding participants a reminder letter about 7 to 10 days after the first distribution. Neuman indicates that low response rates are the greatest issue with mailed self-administered surveys, and the reminder letter strategy can be expected to bolster

return rates. In an effort to boost participation following Neuman's suggestion, a telephone call was placed to each school several days before scheduled pickup to remind the contact person of the pickup date and to solicit additional participation.

On the day of collection, the researcher decided to present all participants, unless expressly indicated otherwise, with a coffee shop coupon. All survey packages were privately opened; all identifiable participants received a $2 coffee shop voucher in a sealed participant-addressed envelope. The sealed envelopes were placed in the teachers' private message folders.

Surveys were collected 10 days after distribution during the third week of June. The short time period between distribution and collection was due to school summer closure the following week. After survey pickup, each survey was coded by school with an arbitrary alphabet letter, followed by a number in ascending order, such as A1, A2, B3, B4, and so on to survey number G57. This coding permitted random quality assurance checking for reliable data entry. The collection process yielded completed surveys from the following school sites: 5 urban, 3 rural, and 1 inner city school.

Data Analysis

Of the 57 returned surveys, 18 participants did not complete the last section on engagement; hence, there was no engagement rating on those surveys, in addition to omission of at least one other survey section on several of the same instruments. A decision was made to delete surveys where fewer than three sections (availability, meaningfulness, safety, or engagement) were completed. This decision removed 16 of the 18 incomplete surveys, leaving 41 surveys for data analysis.

Before analyzing the data in a meaningful manner, the 41 surveys were reviewed and prepared for analysis. Several cleaning tasks were completed; the initial process sorted participants by demographics based upon gender (male; female), regrouped school site (urban; rural), regrouped age (50+ age; 40-49 age; 30-39 age; and 29 years or less), and regrouped years of experience (20 years+; 11-20 years of experience; and 1-10 years of experience). Despite the demographic regrouping to increase data reliability, some demographic groups remained very small for analysis. The final demographics presented as: 31 females; 10 males from 3 rural and 6 urban sites with 18 participants at 50+ years age, 11 at 40-49 years age, 8 at 30-39 years age, and 4 at 29 or less years age. Finally, there were 14 participants having 20+years of experience, followed by 9 having 11-20 years, and 18 having 1-10 years of experience.

The second cleaning task before data analysis began related to the survey tool review. The tool was distributed with 81 strategies listed under availability. A printing error was noted where a strategy was duplicated in side-by-side frames (cognitive C23; C24). The duplication was resolved by deleting the repeat frame (C24). It was noted that one survey had not answered the first strategy (C23), but responded to the repeat strategy (C24); this C24 response was placed in C23 for this participant survey. The meaningfulness and safety sections were reviewed; listed strategies were either copied from strategies listed in the availability section or free-text responses by participants. All strategies were assessed and grouped for commonality in type or purpose, such as spending time with family, and subcategory designation was based upon the subcategory (i.e., emotional, physical, cognitive) definitions provided in the availability section. Any

strategy that was matched in type or purpose to a listed strategy in availability was renamed by the researcher based upon the listed strategy in availability.

The last cleaning task prior to analysis entailed preparation of the survey responses data for the strategies. This was important because this study sought to determine and analyze strategies that were most useful to participants and negate those strategies of little usage. This data cleaning presented the data to be used for analysis. To target the most useful participant strategies, several steps were required to complete data preparation with each step remaining a separate entity for analysis. The first stage was strategy sorting based upon determining an overall minimum Likert response rating; this determined the strategies to be analyzed according to participant frequency of use. Second, it was important to determine strategies used by any given number of teachers. This following step entailed the determination of which strategies were used by at least 50% of participants. Finally, the self-rated highly engaged participants were to be categorized for analysis as a subgroup of the overall participant group.

For this first step of the strategy sorting process, an acceptable baseline for analysis of participant frequency rating response was established by reviewing the survey Likert scale. There were two options for determining the acceptable response baseline. The first option of a potential frequency rating category consisted of capturing all strategies rated between *often* (4), *very often* (5), and *almost always* (6); the second option was an enhancement of the first option that added the rating of *sometimes* (3) to the initial three ratings. A comparison was done between these two baseline options and it was found the differences between the two categories revealed that the greater amount

of data would be derived from the second category (participant responses to a strategy with the Likert scale rating from 3-6). Specifically, the details of the comparison were: the first option (responses Likert rated from 4-6) category yielded 3/41 surveys for analysis under cognitive; 12/41 surveys for analysis under emotional; and 15/41 surveys for analysis under physical categories. The second enhanced option (responses Likert rated from 3-6) category encompassed 17/41 surveys for analysis under cognitive; 30/41 for emotional; and 29/41 for physical categories.

The next step to determine which strategies were used by at least 50% of participants involved the conversion of all frequency rated responses to *yes/no* responses. This allowed a true frequency count to establish how many teachers used a strategy but did not indicate how often the strategy was used by the teachers, that is, the ability to discern between participant usage ratings of *sometimes, often, very often,* and *almost always* is indistinguishable because all are grouped together in a *yes* category. A *yes* response indicated the most commonly used strategies, not how often they were used. Strategies that were participant rated on the Likert 3-6 scale inclusive were converted to *yes*, and frequency ratings of 1-2 (blank responses were excluded and calculations adjusted) were converted to *no* responses.

The final step in data preparation entailed distinguishing the highly engaged subgroup. The researcher determined the distinction of the highly engaged subgroup was for participants who self-rated their engagement from 8-10 inclusive. The inclusion parameter was arbitrary with the assumption that a minimum of 8 rating would yield the data that helped support the most highly engaged teachers. Each participant's self-rating

of engagement was reviewed according to the parameter and surveys were sorted into two groups. All participants were included in the overall participant group analysis with the highly engaged participants in a subgroup that was analyzed in parallel manner to the overall group. This process allowed observations to be made between the two groups.

Data analysis was initially attempted using SPSS but the participant sample numbers in the various groups were too small to yield useful information. It was determined that descriptive statistics would be most suitable for the data. This would allow a summary of the study findings by raw count, utilizing frequency percentages and calculating average scores (means) of the data. More in-depth analysis was not done because several demographic groups remained very small despite being transformed (two groups combined into one). From the descriptive analysis used, trends and observations were made about the participants. Overall frequency usage of motivation strategies (i.e., the three psychological conditions of availability, meaningfulness, and safety and the subcategories of cognitive, emotional, and physical strategies) were presented by mean scores in relation to participant gender, age group, years of experience, and school subgroup (i.e., rural, urban and inner city) categories. This allowed comparisons between various participant categories with preferred specific strategy usage and preference between cognitive, emotional, and physical subcategories for types of strategies. The engagement levels were analyzed based upon mean scores of the self-rated engagement values of the participants as an overall group with the highly engaged subgroup and by demographic categories.

A central tendency measure was used to facilitate rapid identification of the most commonly used strategies, that is, by the greatest number of participants, and the strategies that were used most frequently. This process encompassed either raw count of frequency scores (i.e., to attain strategies used by the greatest number of participants) or calculation of mean scores for each strategy (i.e., to attain the strategies used most frequently); then sorting the strategies with their scores in descending rank order to identify the top utilized strategies. This newly ordered list was then divided into quartiles to identify the median. The strategies above the median (50%) were presented in tables and the top quartile (25%) indicated the most useful and, or most used strategies. The median was used to represent the mid-point of data; for example, it may have been determined according to the total number of strategies in availability with all those strategies rank ordered in a descending manner by cumulative sums. Cumulative sums were tallied by counting all the raw response values provided by the participants. The absolute value of a quartile in each table varied due to differences in strategy numbers. Descriptive statistics were simplistic, yet, provided important rudimentary information about strategy usage related to the framework (Kahn, 1990) and participant demographics.

Reliability and Validity

Reliability and validity are integral concepts to having research results judged as credible by peers. According to Neuman (2003), "reliability means dependability or consistency. It suggests that the same thing is repeated or recurs under the identical or very similar conditions" (p. 178). Validity differs by "referring to the match between a

construct, or the way a researcher conceptualizes the idea in a conceptual definition, and a measure. It refers to how well an idea about reality 'fits' with actual reality" (Neuman, p. 179). The survey tool of this study was unique and challenged these two important components. This survey was developed because no other survey was found suitable for teachers that addressed Kahn's (1990) framework. The survey tool was designed for descriptive statistics; however, design issues were learned and tool redesign must occur for a repeat study to gain high reliability and validity.

There are multiple types of reliability, and Neuman (2003) outlined three types; stability, representative, and equivalence. Stability reliability involved a test-retest process which was not relevant for my study. The target population (teachers) was requested to voluntarily participate in the study once; there was no opportunity to return to repeat the survey given the time parameters of research (Master's Program) and the study timing of school year end where current participants may not have been present in the fall term for a repeat survey.

Representative reliability, a second reliability type, is affected when the survey tool may be used with other populations and yields the same results. This reliability was not relevant for this study. This survey tool was an initial design for teachers and first time tested; it was not designed with other populations in mind. Many strategies were specific to teachers, their classroom, and school workplace.

Equivalence reliability, the third reliability measure, has occurred when there are multiple indicators that address the same construct and yield the same outcome (Neuman, 2003). This type of reliability is related to this particular study design. This survey tool

was designed with specific strategies under category and subcategory constructs that required the participants to indicate their strategy preferences and strength of preference. While the survey was organized under Kahn's (1990) framework, availability, meaningfulness and safety with subcategories of cognitive, emotional, and physical components, the teachers were responding to, and with specific strategies. Even though there were numerous strategies devised and categorized by a specific construct, this study explored specific strategies that teachers used for engagement and it is possible the outcome to construct preference i.e., subcategories physical, emotional, and cognitive) could have been different were not the specific strategies (top ranked) present. It must be noted that this reliability discussion applied to the quantitative availability section with the listed strategies/Likert rating scale and this reliability was omitted with the mixed qualitative/quantitative meaningfulness and safety sections because strategies were not listed and it was incumbent upon the participant to list their strategies, then rate them with the given Likert rating scale.

However, Neuman (2003) provided several recommendations to increase reliability. Four suggestions were implemented to improve reliability of the survey tool. Neuman's first recommendation for enhancing reliability was "developing unambiguous, clear theoretical definitions" (p. 180) and to "clearly conceptualize constructs" (p. 180). It was important to include practical definitions on the survey tool to guide participants because Kahn's (1990) framework is abstract. The survey constructs of motivation strategies for cognitive, emotional, physical, meaningfulness, and safety, were clearly defined with the study package information in the survey introduction letter under the

heading of Guidelines for Survey Completion. Each participant received this letter, in addition to a reminder of construct definitions and Likert scale for rating frequency of strategy usage with each section and on the survey tool. Once the surveys were distributed, an oversight was noted where the definition for availability was present in neither the study introduction letter nor the survey tool. The word *availability* was embedded in the definitions for the subcategories (i.e., cognitive, emotional, and physical); this definition omission and free use of word in other definitions could weaken clarity and affect reliability.

Neuman's (2003) second recommendation, to "use a precise level of measurement" (p. 180), is implemented on the survey tool with each strategy indicating a Likert six-rating scale for usage ranging from *never* to *almost always*, with a definition for each rating. The overall tool was organized so that the strategy rating scale and definitions were repeated on each page to facilitate participant consistency with rating selection. The availability section had prelisted strategies; in addition, there was an area for each subcategory where a participant was offered to include personal strategies not listed and rate the frequency of use with the survey rating scale. The meaningfulness and safety sections consisted of definitions and an open text area for strategies with the same Likert rating scale guideline for each strategy; this created a consistent approach throughout the survey regarding strategy frequency rating, however, the tool was inconsistent with strategies listed only in the first section while directing participants to copy relevant first section strategies and, or free text their personal strategies in the remaining two sections; this aspect affected validity, which will be shortly discussed.

The last element of increasing the level of measurement with this survey tool was at the survey's end; participants were asked to self-report their engagement level based upon a scale of 1 to 10 and it was noted during data preparation for analysis that a scale definition was omitted. This issue was handled by the researcher to reflect the intent (assumption) that a value of 1 indicated the lowest engagement and a value of 10 presented the highest engagement level.

Another reliability strategy was to "use multiple indicators" for a construct (Neuman, 2003, p. 180). In availability, the constructs of cognitive, emotional, and physical subcategories were presented with numerous listed strategies as well as options for self-reporting on personal motivation strategies; however, the listed strategies differed from one another. The 'multiple indicator' occurred where participants listed a strategy that was assessed by the researcher to be the same in meaning as one that was listed on the survey or where multiple participants listed a strategy with the same meaning despite minor word variation.

The strength of the participants' response to the numerous strategies offered in each subcategory was expected to indicate a construct preference, that is, one strategy subcategory being favoured above others. The open text area facilitated participants to list strategies either not presented on the survey or to list a strategy in their preferred words. In the latter case, all participants supplied strategies were assessed for duplication of listed strategies in purpose/meaning and theme. In the sections for meaningfulness and safety, participants were directed to select motivation strategies from the availability list, in addition to free-narration for motivation strategies. Despite these efforts to gain an

additional depth of strategies, or increase the indicators for a construct preference, a small number of returned study surveys contained participant comments that indicated difficulties or lack of understanding with the strategy frequency of use measurement scheme and the option to provide their own free text strategies in meaningfulness and safety. This manner of attempt to increase multiple indicators may have been problematic in survey design.

The last recommendation from Neuman (2003) entailed a pretest. This was done with voluntary elementary teachers in a school that was removed from the list of potential target sites for the study. Input was given by the teachers regarding the survey tool's ease of use/understanding with small wording changes made to the tool driven by the feedback.

The concern for validity followed the same premise as reliability with the goal to strive for the highest level of validity possible. There are four validities discussed: measurement, face, content, and construct. The first type of validity that I addressed in my questionnaire was measurement validity, which "refers to how well the conceptual and operational definitions mesh with each other" (Neuman, 2003, p. 182). This validity was composed of several subtypes, including rules of correspondence, which is a "logical statement about the fit between indicators and definitions" (p. 182). Each construct in the survey tool and study package was defined based upon the framework's definitions (Kahn, 1990). The listed strategies under each construct of physical, emotional, and cognitive were devised to mesh with the construct's meaning and were based upon the action or outcome. The rating process for strategy usage was clearly presented in a

defined quantitative/qualitative Likert scale. The attention to meshing constructs and strategy rating process established rules of correspondence.

A second type of validity was face validity, which is typically judged by research peers. This validity entailed the questionnaire's ability to measure a given construct. My proposal was reviewed by my thesis committee and the proposal was deemed acceptable for dissemination to participants; this established face validity.

The third type of validity was content validity, which regarded the "full content of all ideas of a definition represented in a measure" (Neuman, 2003, p. 183). This was most relevant because Kahn's (1990) framework is abstract. For example, the availability condition of engagement included physical, cognitive, and emotional content to achieve full engagement under that principal construct category. Kahn's (1990) definitions of the constructs were used to guide creation of a survey tool that reflected the spirit of the framework. There was no survey available that was based upon Kahn's framework and, given the nature of the study being exploratory and descriptive,the researcher devised the definitions and strategies based upon the spirit of the framework.

The survey tool contained numerous strategies that supported content components. The key to the content validity was that diverse strategies were developed to be concrete indicators related to each particular subcategory definition (i.e., cognitive, emotional, and physical) of availability. Participants were requested to respond to each specific strategy within a subcategory (20-30 strategies in each subcategory). The overall subcategory frequency of use (i.e., calculated average score of all strategies within a

subcategory based upon participant use of a Likert rating scale) reflected the subcategory preference for the individual and collective group.

Hence, content validity occurred with availability. The remaining two content components of engagement (i.e., meaningfulness and safety) were addressed qualitatively in the survey by self-identified self-reported motivation strategies. This reflected a lack of content validity for these two sections because participants were to list their personal strategies, and/or list strategies provided from the first section (i.e., cognitive, emotional, physical), which were based upon their interpretation of the defined constructs. Otherwise, the tool was consistent with the preliminary section for validity aspects where construct definitions (i.e., meaningfulness and safety) were presented and each strategy was to be rated for frequency usage according to the Likert scale that had been presented in the initial section. The scale with its definitions was repeated in the meaningfulness and safety section. The repeated definitions for constructs and frequency rating scale on each page fostered consistency for participant responses. However, content validity is not consistent throughout the survey tool.

Construct validity had two requirements; this validity was partially met. First, there must be multiple consistent indicators; and second, there must be a clear definition of the concept. The survey tool had consistent indicators (i.e., Likert scale for usage frequency with supporting definitions; numerous strategies as indicators) for availability only. The lack of listed indicator strategies occurred with meaningfulness and safety. Second, the construct definitions, minus the availability construct definition, were clearly written in the participant introduction letter and repeated in the survey tool. The study

construct definitions were aligned with the definitions that Kahn provided in his 1990 framework.

The survey tool inquired into diverse psychological conditions of engagement by presentation of many motivation strategy indicators. The proposal committee process reviewed reliability and validity, including statistical validity. Achieving a degree of reliability and validity was desired, so that the study results would be disseminated as a credible professional development component for teachers by the school board.

Methodological Assumptions

There were numerous assumptions for this study that ranged from the researcher, participants, and the school board to the survey tool and study process. First, as the researcher, I do not have any liaison with, or position of power with, the teaching profession. My past work experience with elementary, secondary, private, and postsecondary education entailed (a) public health nursing assignments for provision of classroom health education, (b) one-to-one health counseling, (c) facilitation of student groups, and (d) participation with school health initiatives. I have been removed from the school nursing role for about 10 years and am not aware of current teaching or morale issues within the local school board. This lack of awareness could generate insensitivity to the challenges faced by the teachers, which could affect response rates, or result in protest responses. In addition, schoolteachers may be skeptical of a noneducation-employed researcher's credibility in their domain. However, being external to the formal education setting allows an unbiased observation regarding prejudged outcomes, and lack of political favoritism to individuals or schools.

For the participants, it was assumed that some teachers may have experienced lack of motivation, or disengagement at some point during their work, possibly more than once and of varying time lengths and have successfully reengaged, while some teachers may not have been able to successfully reengage. Second, it was also assumed that some teachers may have only experienced engagement with their work. In addition, it was assumed that engaged teachers use more engagement strategies than disengaged teachers do. Last, it was assumed that teachers want to be engaged with their work, students, colleagues, school, and education community.

Kahn's (1990) framework is positioned within American cultural values. Although Canadian and American cultures are different, they are closely aligned. It is assumed that the framework is relevant to the cultural values of North America. However, it might not be relevant for other cultures in which, for example, high priority is not placed on personal meaningfulness for work. Other ethnic groups, such as some Asian cultures, might be more concerned with meaningfulness of task related to the needs of their society. Hence, further study may entail examination of the relevance of Kahn's framework outside North America.

This study addressed engagement in the context of practicing elementary school teachers in a public school board. A local school board was chosen for the study due to research convenience, such as ease of survey package distribution and pick up. It was also assumed that the commitment to the study by the school board was responsible. The board's ethics review process was published as being 4 to 6 weeks in length; the proposal was submitted on February 2, 2007 and notification of ethics review was expected by

mid-March. However, a letter dated March 13 to confirm receipt of the proposal indicated that the review process had not yet begun. It was mid-May when approval was granted, about 4 weeks before school summer closure. In a telephone contact of May 17, the ethics representative claimed responsibility for having "dragged my heels on this" due to a large number of research requests and a sense that teachers were overwhelmed. School board ethics approval was granted, but the ethics representative preferred that the study be introduced from their department before I approached the target school sites. I finally received approval to contact principals in late May, although I was informed that a number of school principals had already declined participation. Consequently, the time-lag in the ethics review process lead to a much smaller participant pool than expected.

Several methodological assumptions were made for this study. First, effort to reduce sampling error was achieved by the random stratified process for school selection, and the random selection process for teacher participant. The random process was achieved by use of a computer website with generated lists of randomized numbers. This form of sampling was assumed to increase external validity, that is, the results could be replicated amongst other professions and the results were expected to prove useful for other organizations.

Second, the survey completion process was designed to minimize false or mis-reported participant answers. I assumed that the use of a self-administered survey rather than a face-to-face or phone interview (Neuman, 2003) would generate more honest and open responses. In addition, I presumed that the topic of the study would minimize anxiety for participants and thereby contribute to honest responses. Neuman, for

example, contends that occupation questions tend to be seen as less threatening than numerous other topics, such as relationships or income.

In spite of these safeguards, the survey tool did not have built-in reference points or triggers to affect memory recall for motivation strategies, and an interviewer was not available to clarify participant information. I was available by email, but this option required participants to take additional steps that may have been inconvenient. It was expected, therefore, that not all invited participants would complete the survey. However, I assumed that the teachers were likely to have a vested interest in the study purpose and that there would be willingness to participate, and they would return completed questionnaires within the 10-day timeframe.

Methodological Limitations

Intervening variables were complex in this study. For example, the responses to each survey were influenced by participants' personalities and perceptions, which are influenced by many factors, such as values and beliefs, age, gender, life and work experiences, education, mental and physical health, recreational activities and hobbies, home life, family and marital status, economics and disposable income, personal supports, social issues, stress sensitivity, and the manner of how their day is faring. Environmental factors also posed intervening variables such as the physical classroom structure and location within the school, including elements of lighting, heating, and urban versus rural versus inner city sites.

Cause-effect or correlational relationships among motivating strategies, engagement level, and demographics could not be drawn from this study because of the survey design, descriptive statistics and limited participant numbers.

The design-associated limitation of no immediate opportunity for question clarification with the researcher was traded off for the generally accepted principle that private self-reporting yielded accurate results better than does the means of face-to-face discourse between interviewer and interviewee (Neuman, 2003). The survey package introduction letter included the email address to contact the researcher with questions or comments. It was assumed participants would contact the researcher if a need arose.

Concern regarding the survey existed that a lack of definitions could lead to skewed responses that may have resulted from participants' subjective interpretations of words such as engagement, meaningfulness, safety, and availability. This was addressed by the inclusion of the survey Likert rating scale definitions for each numerical value to rate strategy frequency use and definitions provided to explain cognitive, emotional, and physical aspects of motivation under availability, meaningfulness, and safety terms. The definitions were provided to be utilized in an objective manner by the principal and potential participants; they were expected to reduce participant confusion during the study. It was noted that the definition of availability was omitted from the introductory letter and the survey tool and was embedded in the definitions for cognitive, emotional, and physical.

Additional concerns arose related to skewed data, bias, reduced reliability, and validity of the survey. First, a skew existed with the availability section on the survey

tool. The cognitive and emotional subcategories each had 30 listed strategy questions, whereas the physical subcategory had 20 listed strategy questions. This imbalance of listed strategies may have led to altered participant choices, heavier weighting of strategy usage in cognitive and, or emotional subcategories or bias for one subcategory over the others. Second, the survey was not standardized in format between availability, meaningfulness, and safety categories. Availability offered three subcategories with each subcategory having listed strategy questions and open free text areas for participants to list personal strategies not listed on the survey; whereas, the meaningfulness and safety sections only offered open free text areas for which participants could list their strategies. This inconsistency may have misled participants to create a bias for the availability section, in addition to frustration and confusion where increased incompletion rates would occur. Another concern occurred due to the survey design where the researcher had to review all free text strategies in each section and assigned the strategies to the subcategories (i.e., cognitive, emotional, and physical) based upon the subcategory definitions (Kahn, 1990) used in the framework. Despite being guided by Kahn's work, a bias must be declared by the researcher. The bias was minimized given the researcher alone was responsible for survey assessment and analysis.

The discussion of the survey tool is critical because its design was influential to the quality of data and participation response rates. The questionnaire was 10 pages in length with four sections and had been piloted successfully with voluntary teacher participants. The initial section (availability) had 100% participant response, which increased data reliability; each subsequent section (meaningfulness and safety) received

continually reduced participant response, which made data analysis ineffective. In the latter sections, participants were to inscribe and rate their preferred strategy; this additional process may have been too cumbersome compared to the availability section where the strategies were listed and only required rating. Interestingly, in the final section, where rating of engagement level was required, participant response returned to a high level. The poor completion rates may have been due to the survey length plus the inconsistent approach for participants to share their personal strategies in two sections.

It was interesting that key design issues were not apparent during the pretest. Design issues were learned during data preparation and analysis; tool redesign must occur for a repeat study to improve reliability and validity. Overall, data analysis became problematic and I was unable to draw conclusions from the data.

Another consideration related to the survey tool design was the positioning of the three subcategories. Strategies in the cognitive and emotional subcategories led the survey, respectively, and each of these subcategories had 30 listed strategies, compared with the subsequent physical subcategory which had 20 listed strategies. However, it was the physical subcategory that yielded the overall highest mean usage of strategies. This suggests that the prior placement of the cognitive and emotional strategies did not give them a design advantage over the physical strategies.

Another factor that may have had an impact on participant participation was the timing of the study at school year end. This aspect was beyond the control of the researcher. The study was cleared for approval very late in the school year, and most principals declined school participation. For those schools that accepted the study for

participation, it is possible that the very small number of returned surveys was related to competing tasks and year-end timelines. The low return on surveys created a further challenge with analysis of demographic subgroups. Despite reforming some of the groups, such as age and years of experience, the number of participants in some subgroups remained so small that analysis and interpretation of results was difficult.

Despite the limitations of the study, the results can be useful because the teachers have reported the specific motivation they use to be engaged with their work. This study is preliminary research for the educational profession, and may be relevant to other professional fields. The survey tool used in this study does not allow the results to be generalized beyond the target population. Literature was not found with this practical research; hence the study may create interest for researchers to launch further studies in this neglected area.

Ethical Considerations

This study was conducted in accordance with the ethical requirements for research with human participants, as specified by the Brock University Research Ethics Board (Appendix B) and the school board ethics review committee. The study introduction letter stated that participants could limit or terminate their participation at any time without penalty or repercussion by the researcher or employer. Participant consent was secured by giving participants the option to sign the consent form and return it with the completed surveys. A small number of completed surveys was received without signed consent. It is possible that these participants wished complete anonymity or forgot to sign the attached form. The completed surveys with consents were kept in

safekeeping and destroyed once the research was completed to protect participant privacy.

The thesis advisory committee confirmed the survey tool was well designed in order to respect participants' time and input (Neuman, 2003). There was no financial funding from any sources for the study; the researcher paid for all study expenses. A $2.00 voucher for a coffee shop was distributed to participants to signify appreciation for participation.

CHAPTER FOUR: PRESENTATION OF RESULTS

The purpose of this chapter is to present data from participant responses to a survey assessing the use of motivation strategies in the workplace. This chapter is organized around two main groups, with the overall data presented first, followed by data for the highly engaged group. The chapter begins with a presentation of demographic data about the participants, after which the results are organized in order of the study questions that addressed cognitive, emotional, and physical motivation strategies for each component of Kahn's (1990) engagement framework of availability, meaningfulness, and safety. The top-ranked strategies were reviewed for a theme base of school/workplace versus outside school/home based. Following the presentation of strategy use, results are provided to show participant differences based upon gender, school site, years of experience, and age; first, for all participants and, second, for the highly engaged participant subgroup.

Study Participants

There was a small participant return on surveys (N=41), with 31 females and 10 males, 21 teachers from 5 urban sites, 17 teachers from 3 rural sites, and 3 teachers from 1 inner city school. Nine of the 11 schools that approved the study returned surveys, for a participation rate of 18% (9/51) of the initial randomly selected schools. The greatest number of teachers was at least 50 years of age, and the greatest number had been teaching either for more than 20 years or for 4-10 years. The vast majority had a baccalaureate degree, and education represented a second career for almost a third of the participants. Just over half (54%) of the participants' engagement levels clustered at 7 or

8 on a maximum scale of 10; with 56% self-rated as highly engaged (= or >8). Finally, most participants taught in grades 1 through 6. Table 1 provides these demographic data.

Availability Strategies Used by All Participants

One purpose of the study was to investigate participants' use of availability strategies to enhance their motivational levels. Data were analyzed (a) to identify the most commonly used availability strategies, (b) to establish the average strategy usage by the entire participant group, and (c) to determine the highest scored strategies by strategy subcategory.

To prepare for this analysis, the responses for each strategy were converted from a Likert scale to a *yes/no* frequency count to indicate how many participants used the strategy. The parameters for *yes* and *no* classification were defined as the following: Likert scale responses from 3 to 6 were converted to *yes* scores, whereas a Likert score of 2 or 1 was allocated a *no* response. The strategies were then rank ordered in descending order by *yes* scores to identify the most commonly used strategies. Percent calculations were conducted to reveal the popularity of a strategy. The percentage of *yes* and *no* responses was calculated using the actual number of responders for each strategy (identified in the *N per Strategy* column of Table 2) rather than the maximum number of participants (N=41). The percentage of *yes* responses was used to rank the availability strategies in order of use. Tables 2 and 3 present these results through different analyses.

Table 2 rank-orders the strategies with respect to the number of participants meeting the established parameter of 3 to 6 rating scores (converted yes response), whereas Table 3 rank-orders the strategies with respect to the mean Likert-scale response

Table 1

Demographic Profile of Study Participants

School Site	n	Gender	Total	Age (year)	n	Years of Experience	n	Job	n
urban	21	female	31	<25	0	<3 yr	4	Full-time	37
inner	3	male	10	25-29	4	4-10 yr	14	Part-time	4
rural	17			30-34	6	11-15 yr	4		
				35-39	2	16-20 yr	5		
				40-44	7	>20 yr	14		
				45-49	4				
				50+	18				

Education	n	Career	n	Teaching Grade	n	Engagement Level	n
<bacc	3	first	26	JK/SK	9	1 - 4	3
bacc	35	second	12	Gr 1-2	18	5 - 5.5	1
>bacc	2	unknown	3	Gr 3-4	17	6 - 6.5	4
unknown	1			Gr 5-6	17	7 - 7.5	10
				Gr 7-8	6	8 - 8.5	12
				Multiple Grades	14	9 - 9.5	7

Table 2

Rank Ordered Top 50% Availability Strategies

Availability Strategy (41 strategies)	n (max=41)	Yes	No	% Yes	% No	Rank
Sleeping regular hours, as personally defined	41	39	2	95	5	1
Engaging with support network - family	41	39	2	95	5	1
Setting personal work objectives	41	39	2	95	5	1
Implementing a new teaching strategy	41	38	3	93	7	2
Eating 3 - 5 meals daily based upon Canada Food Guide	41	38	3	93	7	2
Sharing household duties, child or elder care - emotional subcategory	41	37	4	90	10	3
Engaging with support network - colleagues	41	37	4	90	10	3
Participating on a school planning team	41	37	4	90	10	3
Sharing of household duties, child or elder care - physical subcategory	40	36	4	90	10	3
Reading for pleasure	40	35	5	88	13	4
Hobby (participant to specify)	37	32	5	86	14	5
Watching movies at home or in theatre	41	35	6	85	15	6
Self-reflecting practice	41	35	6	85	15	6
Participating with workplace committee(s)	41	34	7	83	17	7
Engaging with support network – nonteachers, nonfamily	41	34	7	83	17	7
Engaging in informal conversations with colleagues for performance feedback	41	34	7	83	17	7
Regular relaxation time at home	41	33	8	80	20	8
Play a music instrument/sing/listen to music/concerts	41	33	8	80	20	8
Self-pacing according to energy level and health status	41	33	8	80	20	8
Assuming a leadership role in school	41	32	9	78	22	9
Median (top 20 strategies)	-	-	-	-	-	-
Attending professional development workshops	41	32	9	78	22	9
Walking before or after work	41	32	9	78	22	9
Participating with school planning	41	32	9	78	22	9
Reading hardcopy educational or professional journals	41	32	9	78	22	9

(table continues)

Availability Strategy (41 strategies)	n (max=41)	Yes	No	% Yes	% No	Rank
Lunching with colleagues	41	32	9	78	22	9
Gardening	41	31	10	76	24	10
Working at creative personal projects	41	30	11	73	27	11
Collaborating and co-facilitating to teach a class – cognitive subcategory	39	28	11	72	28	12
Participating in seasonal sports	41	29	12	71	29	13
Maintaining regular fitness routine at home	41	29	12	71	29	13
Spending time with an animal companion or pet(s)	41	29	12	71	29	13
Assisting extracurricular programs or clubs with students	41	28	13	68	32	14
Taking vitamin(s), iron, or calcium	41	28	13	68	32	14
Mentoring role to school student(s)	41	27	14	66	34	15
Mentoring role to colleague(s)	41	26	15	63	37	16
Maintaining personal spirituality	41	25	16	61	39	17
Vacationing at home	40	24	16	60	40	18
Playing with family children at home or playground	40	23	17	58	43	19
Enjoying weekend get-away or day trip	41	23	18	56	44	20
Collaborating and co-facilitating to teach a class – emotional subcategory	41	22	19	54	46	21
Implementing a new work project	40	21	19	53	48	22

Table 3

Top 50% Availability Strategies Rank Ordered by Mean Response

Availability Strategies (40 strategies)	n (max=41)	Cumulative Sum	Mean Usage	Rank
Sharing household duties, child or elder care – emotional subcategory	41	219	5.34	1
Sharing of household duties, child or elder care – physical subcategory	40	205	5.1	2
Sleeping regular hours, as personally defined	41	203	5.0	3
Eating 3 - 5 meals daily based upon Canada Food Guide	41	202	4.9	4
Engaging with support network - family	41	200.5	4.9	5
Hobby (participant to specify)	37	168	4.5	6
Reading for pleasure	40	177	4.4	7
Setting personal work objectives	41	180	4.4	8
Regular relaxation time at home	41	178	4.3	9
Spending time with an animal companion or pet(s)	41	175	4.3	10
Subcategory Means of Top 10 Strategies: Physical 5.0; Emotional 4.6; Cognitive 4.4				
Engaging with support network - nonteachers, nonfamily	41	172	4.2	11
Walking before or after work	41	172	4.2	11
Play a music instrument/sing/listen to music/concerts	41	171	4.2	12
Engaging with support network - colleagues	41	170	4.2	13
Gardening	41	168	4.1	14
Implementing a new teaching strategy	41	167	4.1	15
Taking vitamin(s), iron, or calcium	41	167	4.1	15
Lunching with colleagues	41	166	4.1	16
Self-reflecting practice	41	165	4.0	17
Watching movies at home or in theatre	41	164	4.0	18
Top Quartile Overall Mean			*4.4*	

(table continues)

Availability Strategies (40 strategies)	n (max=41	Cumulative Sum	Mean Usage	Rank
Participating on a school planning team	41	162	4.0	19
Engaging in informal conversations with colleagues for performance feedback	41	162	4.0	19
Self-pacing according to energy level and health status	41	161	3.9	20
Assuming a leadership role in school	41	159	3.9	21
Maintaining regular fitness routine at home	41	158	3.9	22
Participating in seasonal sports	41	153	3.7	23
Working at creative personal projects	41	150	3.7	24
Participating with workplace committee(s)	41	149	3.6	25
Participating with school planning	41	140	3.4	26
Collaborating and co-facilitating to teach a class – cognitive subcategory	39	132	3.4	27
Mentoring role to school student(s)	41	138	3.4	28
Assisting extracurricular programs or clubs with students	41	138	3.4	28
Reading hardcopy educational or professional journals	41	137	3.3	29
Maintaining personal spirituality	41	137	3.3	29
Vacationing at home	40	128	3.2	30
Playing with family children at home or playground	40	126	3.2	31
Attending professional development workshops	41	128.5	3.1	32
Enjoying weekend get-away or day trip	41	127	3.1	33
Mentoring role to colleague(s)	41	126	3.1	34
Collaborating and co-facilitating to teach a class – emotional subcategory	41	123	3.0	35

for each strategy. A comparison of the ranking in the two tables shows numerous strategies that share the same rank position in respective scoring.

Table 2 provides the rank-ordered results for the availability strategies that received at least 50% of yes responses (41 strategies). This highlights the most popular strategies where strategies required a minimum of 50% yes responses by participants. From all the strategies listed on the survey under availability (80 strategies), Table 2 shows that 19/80 (24%) of the listed strategies were used by 80% of teachers at least sometimes, and 76% of teachers used 26/80 (33%) of the listed strategies at least sometimes. In addition, strategies with at least 90% usage by participants (9/41; 22%) were evenly split between the three subcategories.

The analysis in Table 3 entailed calculating mean (average) scores using the Likert scale ratings for strategies. This statistic serves as a general indicator of the average frequency of use by participants for a specific strategy, with a score of 1 indicating minimum usage and a score of 6 indicating maximum usage. The strategies were then rank ordered in descending order by mean scores to highlight the highest scoring strategies. Table 3 presents the strategies that scored in the top 50% of use, meaning that the strategies included in the table required a minimum mean of 3 (attained a score of 50% on the 1-6 Likert rating scale). Table 3 indicates that the top quartile strategies (20/80) achieved an overall mean usage of 4.4 with a minimum strategy mean of 4. The top ten strategies indicated a preference for emotional strategies (6/10); yet, the physical subcategory attained the greatest participant mean (5.0) for frequency usage.

The accompanying Tables 4 to 6 distinguish in descending order the mean usage per strategy for the availability strategies according to the cognitive, emotional, and physical subcategories. The data for these tables were drawn directly from Table 3 to form clarity regarding specific usage of availability strategies in each subcategory.

Table 4 provides cognitive strategies, Table 5 presents emotional strategies, and Table 6 indicates physical strategies. The three top-ranked strategies (i.e. by list means) across the three tables are as follows: emotional subcategory *sharing household duties, child or elder care* (mean of 5.3); physical subcategory *sharing household duties, child or elder care* (mean of 5.0); and physical subcategory *sleeping regular hours, as personally defined* (mean of 5.0). The three lowest ranked strategies of the three tables are as follows: emotional subcategory *enjoying weekend get-away or day trips* (mean of 3.1), cognitive subcategory *mentoring role to colleagues(s);*(mean of 3.1), and emotional subcategory *collaborating and co-facilitating to teach a class* (mean of 3.0). The top-ranked cognitive strategy (Table 4) was school/workplace based; this was in sharp contrast to the emotional (Table 5) and physical (Table 6) subcategories, where the top-ranked strategies were based in locations external to the school.

Meaningfulness Strategies Used by All Participants

The study also set out to identify the most commonly used meaningfulness strategies and to establish the mean (average) strategy usage by the entire participant group in general, as well as within the cognitive, emotional, and physical subcategories. In this section of the survey questionnaire, participants were asked either to relist strategies from the Availability section or to generate their own strategies that

Table 4

Top Cognitive Availability Strategies Rank Ordered by Mean Usage

Cognitive Availability Strategies (12 strategies)	n (max=41)	Cumulative Sum	Mean Usage	Rank
Setting personal work objectives	41	180	4.4	1
Implementing a new teaching strategy	41	167	4.1	2
Self-reflecting practice	41	165	4.0	3
Participating on a school planning team	41	162	4.0	4
Engaging in informal conversations with colleagues for performance feedback	41	162	4.0	4
Assuming a leadership role in school	41	159	3.9	5
Participating with workplace committee(s)	41	149	3.6	6
Collaborating and co-facilitating to teach a class	39	132	3.4	7
Mentoring role to school student(s)	41	138	3.4	8
Reading hardcopy educational or professional journals	41	137	3.3	9
Attending professional development workshops	41	128.5	3.1	10
Mentoring role to colleague(s)	41	126	3.1	11

Table 5

Top Emotional Availability Strategies Rank Ordered by Mean Usage

Emotional Availability Strategies (18 strategies)	n (max=41)	Cumulative Sum	Mean Usage	Rank
Sharing household duties, child or elder care	41	219	5.3	1
Engaging with support network - family	41	200.5	4.9	2
Hobby (participant to specify)	37	168	4.5	3
Reading for pleasure	40	177	4.4	4
Regular relaxation time at home	41	178	4.3	5
Spending time with an animal companion or pet(s)	41	175	4.3	6
Engaging with support network - nonteachers, nonfamily	41	172	4.2	7
Play a music instrument/sing/listen to music/concerts	41	171	4.2	8
Engaging with support network - colleagues	41	170	4.2	9
Lunching with colleagues	41	166	4.1	10
Watching movies at home or in theatre	41	164	4.0	11
Working at creative personal projects	41	150	3.7	12
Participating with school planning	41	140	3.4	13
Assisting extracurricular programs or clubs with students	41	138	3.4	14
Maintaining personal spirituality	41	137	3.3	15
Vacationing at home	40	128	3.2	16
Enjoying weekend get-away or day trips	41	127	3.1	17
Collaborating and co-facilitating to teach a class	41	123	3.0	18

Table 6

Top Physical Availability Strategies Rank Ordered by Mean Usage

Physical Availability Strategies (10 strategies)	n (max=41)	Cumulative Sum	Mean Usage	Rank
Sharing of household duties, child or elder care	40	205	5.1	1
Sleeping regular hours, as personally defined	41	203	5.0	2
Eating 3 - 5 meals daily based upon Canada Food Guide	41	202	4.9	3
Walking before or after work	41	172	4.2	4
Gardening	41	168	4.1	5
Taking vitamin(s), iron, or calcium	41	167	4.1	6
Self-pacing according to energy level and health status	41	161	3.9	7
Maintaining regular fitness routine at home	41	158	3.9	8
Participating in seasonal sports	41	153	3.7	9
Playing with family children at home or playground	40	126	3.2	10

contributed to meaningfulness. On the questionnaire, meaningfulness was defined as a sense of return on personal investment and effort given in one's work (Kahn, 1990), but participants broadly interpreted the definition of meaningfulness, resulting in diverse ways of expressing the strategies. In order to eliminate duplications and to bring order to the diverse lists, participants' listed strategies were reviewed, analyzed, and regrouped for a total of 35 strategies. This section received a reduced rate of participation (n = 34; 83%) for a loss of 7 (17%) responses. The participation rate was too low to generate a useful *yes/no* frequency count measure as presented in the availability section. For meaningfulness, therefore, the data were analyzed by calculating cumulative sums and mean scores per strategy. For two strategies provided by a participant that were similar in meaning, the ratings were added together and divided by two for an adjusted rating.

Table 7 shows that most strategies received low participation numbers (e.g., n=2, 3, 4). All strategies where n=1 (1 participant) or not rated (4 strategies) were deleted from Table 7. The most frequently cited strategies were listed by 7 (21%) and 9 (27%) participants for 5/35 (14%) strategies, followed by 4/35 strategies with 5 participants (15%). These 9 strategies were reviewed and categorized by location (school/workplace or outside school/home locations), as well as by subcategory of strategy (cognitive, emotional, and physical as determined by subcategory guidelines used for strategies listed under availability). Table 8 presents these data.

The results in Table 8 highlight the most commonly used strategies (9/35; 27% participants) to be *family/children/spouse* and *engaging with support network* – colleagues with, respectively, 5.8 and 5.1 mean usage. The strategies were evenly split

Table 7

Meaningfulness Strategies Rank Ordered by Mean Usage

Meaningfulness Strategies (35 strategies)	n (max=34)	Cumulative Sum	Mean Usage	Rank
Rapport with students about work/emotional/behavioral issues	7	42	6.0	1
Co working/Collaborating/Co-facilitating with colleagues	5	30	6.0	1
Watching children grow; gain skill, and respond to learning (with 1 nonrating)	3	18	6.0	1
Maintaining spirituality	3	18	6.0	1
Spending time with pet	3	18	6.0	1
Talking/working with students (with 1 non rating)	3	18	6.0	1
Personal and professional growth	2	12	6.0	1
Mentoring students	2	12	6.0	1
Positive feedback from noncolleagues (with 1 nonrating)	2	12	6.0	1
Sharing household duties, elder and child care	2	12	6.0	1
Gardening	2	12	6.0	1
Maintaining regular fitness	5	29	5.8	2
Family/children/spouse	9	52	5.8	3
Reading for pleasure	4	23	5.8	4
Volunteer – using skills learned but not used in teaching – running a meeting – sending out minutes – speaking before a large group of adults (with 1 nonrating)	3	17	5.7	5
Eating well	3	17	5.7	5
Engaging with support network - nonteachers	5	28	5.6	6
Attending religious ceremonies/church	2	11	5.5	7
Sleep regular hours	7	38	5.4	8
Playing with family children	3	16	5.3	9
Maintaining integrity, pride, and confidence with work	4	21	5.3	10
Personal work objectives	4	21	5.3	10
Self reflecting	4	21	5.3	10
Hobby/Recreation	4	21	5.3	10

(table continues)

Meaningfulness Strategies (35 strategies)	n (max=34)	Cumulative Sum	Mean Usage	Rank
Feedback from noncolleagues-parent/std/former principal	2	10.5	5.3	10
Engaging with support network - colleagues	9	46	5.1	11
Assuming leadership role in school	3	15	5.0	12
Maintaining job perspective	2	10	5.0	12
Seasonal/nonseasonal sports	2	10	5.0	12
Walking	2	10	5.0	12
Planning interesting/meaningful lessons/new units to meet student/teaching needs	5	24	4.8	13
Implementing new teaching strategy/ways to implement curriculum	7	33.5	4.8	14
Continuing my own education-advancement, university	3	14	4.7	15
Mentoring a colleague	2	8	4.0	16
Attending workshops/PD courses	3	10	3.3	17

Table 8

Meaningfulness Strategies with At Least 15% Participant Response

Subcategory	Meaningfulness Strategies With At Least 15% Participant Response	n (max=34)	Cumulative Sum	Mean Usage
Emotional	Rapport with students about work/emotional/behavioral issues	7	42	6.0
Cognitive/ Emotional	Coworking/Collaborating/Co-facilitating with colleagues	5	30	6.0
Physical	Maintaining regular fitness	5	29	5.8
Emotional	Engaging with support network (nonteachers)	5	28	5.6
Emotional	Family/children/spouse	9	52	5.8
Physical	Sleep regular hours	7	38	5.4
Emotional	Engaging with support network (colleagues)	9	46	5.1
Cognitive	Planning interesting/meaning lessons/new units to meet std/teach needs	5	24	4.8
Cognitive	Implementing new teaching strategy/ways to implement curriculum	7	33.5	4.8

between school/workplace (5/9; 56%) and external-to-work locations, that is, personal or home based (4/9; 44%). Of the 5 strategies located in the school/workplace, 2 were emotional strategies, 2 were cognitive strategies, and 1 strategy was in a cross-over emotional/cognitive subcategory. The strategies in the outside work/home location (4/9) were equally divided between emotional and physical subcategories.

Interestingly, in meaningfulness, the physical and emotional classified strategy *sharing household duties/child and elder care* scored very low usage by the participant group despite a high mean usage by individual participants, whereas under availability it occupied the top-ranked positions as most commonly used by the group and most frequently used by individuals. In meaningfulness, similar to the results under availability, the physical strategy *maintaining regular fitness* continued to rank as high frequency of use by individuals and common use by participant group.

Safety Strategies Used by All Participants

Completing the identification of engagement strategies using Kahn's (1990) framework, safety strategies were treated to the same analysis as meaningfulness strategies. The most commonly used safety strategies and the mean usage by the entire participant group were determined. Following this analysis, the strategies were aligned with cognitive, emotional, and physical subcategories. On the survey tool, safety was defined as feeling able to be oneself without fear of negative effect to self-image, status, or career (Kahn, 1990), but participants were able to interpret subjectively the meaning of safety. This led to varying interpretations of safety strategies being listed by the participants. The participants' safety strategy responses were reviewed in a similar

process to the meaningfulness analysis; strategy duplication was reduced by analysis and regrouping to generate a total of 17 strategies.

This section of the questionnaire received an increased reduction of participant responses that continued from the meaningfulness section. This section indicated 16 participants who did not make any responses and a further 5 who listed a strategy but did not rate their frequency of use. This represented a participation rate of 49% (20/41) or a loss of 51% (21/41) of participant input. Parallel to the meaningfulness section, the *yes/no* frequency count was not conducted because of the low participation rates. Consequently, rank-ordering was conducted on the basis of cumulative strategy sums and participant means per strategy.

Any 2 strategies, provided by a participant, that were similar in meaning were combined by adding the ratings together and dividing by two. Table 9 shows that most strategies yielded low participation numbers, such as n=2 or 3. All strategies where n=1 (21 strategies) or not rated (4 strategies) were deleted from the results. Strategies where participation was at least 15% (n = 3 or greater) led to 6/17 strategies (35%) retained for analysis. These strategies were reviewed and categorized for school/workplace or outside school/home locations, followed by subcategory designation of cognitive, emotional, or physical, based upon guidelines for strategies listed under availability. Table 10 presents the data of the 6 strategies.

In the safety category, strategy use showed a strong school/workplace (5/6; 83%) focus. The most frequently cited strategy occurred with 25% participation (n=5) as the school/workplace emotional strategy *engaging/networking with support network* –

Table 9

Safety Strategies Rank Ordered by Mean Usage

Safety Strategies (17 strategies)	n (max=20)	Cumulative Score	Mean Usage	Rank
Set of routines/rules/prepared plans	2	12	6.0	1
Social skills development; Ensure only positive comments are made about other students in the classroom. The teacher makes positive comments or constructive comments when a change needs to be made. (with 1 nonrating)	2	12	6.0	1
Keep physically and emotionally fit/positive self image	2	12	6.0	1
Intercom/PA system	2	12	6.0	1
Verbal contact and staff support close at hand	2	12	6.0	1
Implementing new teaching strategies	2	11	5.5	2
Open staff communication	3	16	5.3	3
Participating with workplace committee	2	10	5.0	4
Checking for safe environment-car park/school	2	10	5.0	4
Collaborating and co facilitating to teach a class	3	14	4.7	5
Continuing education	2	9	4.5	6
Engaging/networking with support network - colleagues	5	20	4.0	7
Reading to keep abreast of new ideas	3	12	4.0	7
Attending professional development workshops	2	7	3.5	8
Implementing/learning nonviolent crisis interventions	2	7	3.5	8
Fire drills	3	8	2.7	9
Lock down drills and procedures	3	8	2.7	9

Table 10

Safety Strategies with At Least 15% Participant Response

Subcategory	Safety Strategies With At Least 15% Participant Response	n (max=20)	Cumulative Sum	Mean Usage
Cognitive	Open staff communication	3	16	5.3
Cognitive/ Emotional	Collaborating/Co-facilitating to teach a class	3	14	4.7
Emotional	Engaging/networking with support network (colleagues)	5	20	4.0
Cognitive	Keeping abreast of new ideas	3	12	4.0
Physical	Fire drills	3	8	2.7
Physical	Lock down drills and procedures	3	8	2.7

colleagues. The 5 strategies receiving at least 15% participation (n=3) were split between cognitive (2/5) and physical (2/5), with 1 strategy in a cross-over cognitive/emotional category. Two strategies were noted to overlap in the participants' responses throughout the questionnaire (availability, meaningfulness, and safety), specifically *engaging support network – colleagues* and *collaborating/co facilitating to teach a class*. Safety strategies yielded the most diverse responses, from physical tangible strategies, such as fire drill and lock down, to emotional intangible strategies, such as social skill development and open staff communication.

Demographic Comparisons of Strategy Use by All Participants

A key study purpose was to investigate differences in preferred strategy usage between participants according to their gender, school site, years of teaching experience, and age. The comparisons were generated for the framework categories of availability, meaningfulness, and safety (Kahn, 1990) with specific analysis for the preferred strategy subcategory (i.e., cognitive, emotional, or physical). The purpose was addressed in two manners. First, the most favoured strategy under each subcategory was selected by the strategy attaining the highest cumulative score for each participant group of a demographic. Second, to determine the preferred strategy subcategory within each of the main categories of availability, meaningfulness, and safety, the means of the strategy subcategories were calculated for each group in the demographic.

Comparison between Genders of All Participants

Of 41 participants, 31 (76%) were female and 10 (24%) were male. To compare strategy use across these two groups, the question of most interest was which strategies

and which subcategories of strategies were used most frequently by each group. Because of this focus on strategy preference, a rank ordering of each gender group's strategy use was not considered necessary, and rank-ordered tables were not generated. The first level of analysis, therefore, was to select the most frequently used strategies for each gender group. Data were separated according to the two groups, and the respective strategies were summed for highest scores to reveal the most frequently used strategy for each group.

Regardless of subcategory, both genders of the overall group preferred *sharing household duties, child or elder care* (from emotional and physical) as the top strategy for first and second ranking. Divergence of preferred strategy occurred with the subsequent top ranked strategies: the overall female group favoured *engaging with support network – family*; and, *eating 3-5 meals daily based upon Canada Food Guide*; while, overall males preferred *sleeping regular hours, as personally.*

In the cognitive subcategory for males, the 2 strategies that received the same highest cumulative score were *setting personal work objectives* and *implementing new teaching strategies,* whereas for females the top-scoring cognitive strategy was *setting personal work objectives*. In the emotional subcategory, males and females showed the same top-scoring strategy of *sharing household duties, elder, or child care*. Under the physical subcategory, males again showed a preference for *sharing household duties, child or elder care,* whereas females preferred *eating 3-5 meals daily based upon Canada's Food Guide.*

The second level of analysis was conducted to identify the preferred strategy subcategory (i.e., cognitive, emotional, and physical) within availability, meaningfulness, and safety for each gender group. To begin the analysis, the data were separated according to each gender group and, within each demographic group, according to main category (i.e., availability, meaningfulness, and safety) and subcategory (i.e., cognitive, emotional, and physical). Mean scores for each category and subcategory of strategy were calculated in a two-step process. First, each participant's total cumulative Likert Scale ratings on a particular field of strategies (e.g., cognitive strategies within the availability category) were divided by their number of responses for that field of strategies. Second, the overall mean for each gender group was attained by averaging the means of the number of participants in the demographic group who had responded with strategies in a particular field (e.g., cognitive strategies within the availability category). These results are reported in Table 11. It is important to note that some participants did not respond to all main categories (i.e., availability, meaningfulness, and safety), hence, the inclusion of *n* for each field. This inclusion, which shows the number of participants who provided strategy responses within each field, was useful because it permitted observation of cognitive, emotional, or physical subcategory preferences accounting for different numbers of respondents between the demographic groups and across the fields of strategies.

The availability mean scores, which were based on 100% participant response (10/10 males, 31/31 females), attained the most comprehensive data field of all the main

Table 11

Comparison between Gender Categories' Mean Scores

Category	Gender	Cognitive Mean	Emotional Mean	Physical Mean	Participant Response (% Range)
Availability					
	Males	2.7 (n=10)	3.2 (n=10)	3.3 (n=10)	100%
	Females	2.8 (n=31)	3.3 (n=31)	3.2 (n=31)	100%
Meaningfulness					
	Males	4.4 (n=6)	5.4 (n=9)	5.3 (n=5)	50-90%
	Females	5.1 (n=21)	5.4 (n=22)	5.6 (n=9)	29-71%
Safety					
	Males	4.9 (n=5)	5.7 (n=3)	6.0 (n=1)	10-50%
	Females	5.1 (n=8)	4.5 (n=8)	4.5 (n=7)	23-26%

Note. Mean scores relate to subjective Likert rating scale 1-6 (never to almost always).

categories. For the availability category, males preferred the physical subcategory and females preferred the emotional subcategory. The highest means for each gender were similar at means 3.9 and 3.3, respectively, for males and females. Similarly, the lowest means, which indicated the least-preferred subcategory, for the two gender groups (means 2.7 and 2.8 for males and females, respectively) were within the cognitive subcategory.

Under meaningfulness, emotional strategies were the most-preferred subcategory of strategy, again with minimal difference between the males and females 5.4 for males and females, respectively. The male group's response rate ranged from 90% (9/10) for emotional strategies to 50% (5/10) for physical strategies. For the females, the emotional subcategory received the highest response rate of 71% (22/31) compared with the physical subcategory that yielded the lowest response rate of 29% (9/31). Once again, the least-preferred subcategory for both gender groups was cognitive.

Because only 1 male participant responded to physical strategies in the safety category, that subcategory of strategies was not considered for males. Thus, for the safety category, the most-preferred strategies were in the emotional subcategory for males (mean usage 5.7) and in the cognitive subcategory for females (mean usage 5.1). However, the low participation rate for males in the emotional subcategory (response rate of 30%) suggests that the cognitive subcategory, with a response rate of 50%, was preferred by both gender groups, in spite of its lower male mean as compared to the male mean for emotional strategies. The least preferred strategies for females were in the

physical subcategory. Because of the low participation rate by males, no determination could be made as to the least-preferred strategies for that gender group.

Overall, males and females shared a common preference for engagement strategies with *setting personal work objectives* and *sharing household duties, child or elder care*. Males also indicated top preference of *implementing new teaching strategies* and females included *eating 3-5 meals daily based upon Canada's Food Guide*. The cognitive strategies were focused on the school/workplace; in contrast, the emotional and physical strategies were home/outside work focused.

Whereas the most frequently used strategies were evident due to strategy cumulative sums, the most favoured subcategory within a main category was not always readily apparent. This ambiguity was due to widely fluctuating participant response rates for example, a range of 10% – 50% for males in safety to 29% - 71% for females in meaningfulness. The highest mean scores of these two latter categories did not necessarily reflect the overall choice of a gender group. The data suggested that some lower means with higher participant response rates were more likely to represent the preferred subcategory within a main category. It was noted that males showed a clear disinclination for the cognitive subcategory; females presented a similar outcome. In the main category of availability, there was a 100% response rate, therefore, the preferred subcategory was clear with males and females as physical and emotional, respectively. For meaningfulness and safety main categories, the data interpretation of the mean scores may need to be considered in light of the widely fluctuating participant response rates.

Comparison between School Categories of all Survey Participants

Inner city schools were not eligible for analysis as a distinct category due to a sample of one participating school with 3 respondents; hence, the inner city category was merged with the urban category for comparison purposes. For this demographic, there were 24/41 (59%) urban participants in the combined urban category (21/41 urban and 3/41 inner city) and 17/41 (42%) rural participants. The method to determine the most preferred strategy in each subcategory of the main categories (i.e., availability, meaningfulness, and safety) and the most popular subcategory by participant means was identical to the process used with gender groups. Comparison of the data was also conducted in the same manner as gender.

Regardless of subcategory, the top three strategies for the urban/inner city participants in the overall group was: *sharing household duties, child or elder care* (emotional); followed by *sleeping regular hours, as personally defined*; and, *eating 3-5 meals daily based upon Canada Food Guide.* The rural participants' top three strategies were identical: *sharing household duties, child or elder care* (emotional and physical); followed by *engaging with support network – family*; and *eating 3-5 meals daily based upon Canada Food Guide.*

The most favoured strategy in the cognitive subcategory for the urban and rural teachers was *setting personal work objectives*. Under the emotional subcategory, participants from urban and rural school sites preferred *sharing household duties, child or elder care.* The only group difference occurred in the physical subcategory, with urban preferring *sleeping regular hours, as personally defined* and rural sites again selecting *sharing household duties, child or elder care.*

Table 12

Comparison of Mean Scores between School Categories

Category	School Site	Cognitive Mean	Emotional Mean	Physical Mean	Participant Response (% Range)
Availability					
	Urban	2.8 (n=24)	3.3 (n=24)	3.3 (n=24)	100%
	Rural	2.7 (n=17)	3.2 (n=17)	3.1 (n=17)	100%
Meaningfulness					
	Urban	4.9 (n=18)	5.6 (n=17)	5.8 (n=9)	38-75%
	Rural	4.9 (n=9)	5.5 (n=14)	5.3 (n=5)	29-82%
Safety					
	Urban	5.1 (n=9)	5.0 (n=7)	4.8 (n=6)	25-38%
	Rural	5.0 (n=4)	4.5 (n=4)	4.5 (n=2)	12-24%

Note. Mean scores relate to subjective Likert rating scale 1-6 (never to almost always).

Table 12 highlights the mean scores of the rural and urban participants for each subcategory within a main category. The data under availability with 100% participant response rate (24/41 urban; 17/41 rural) indicated that the emotional subcategory was favoured by both groups as above *sometimes* usage (3.3 urban; 3.8 rural mean scores) with the urban physical subcategory minimally edging above at 3.3 mean usage. Both groups rated the cognitive subcategory with similar lowest means (2.8 urban; 2.7 rural mean scores) to indicate least preference for these strategies.

In meaningfulness, the participant response rate between both groups ranged from a low 29-38% to a high 75-82%. This is a large reduction in response from the availability category of 100% participant response. The urban group rated the physical subcategory with the greatest mean score (mean of 5.8). However, the participation rates in the urban group suggest that the emotional subcategory was the favourite with a lower mean score (5.6 mean) but with almost double the participant response rate (9/24 (38%) for physical strategies versus 17/24 (70%) for emotional strategies). The rural group clearly favoured the emotional subcategory, with a mean of 5.5 in meaningfulness with 82% (14/17) respondents. The urban group had the greatest response (18/24; 75%) to rate the cognitive subcategory as the least favoured with the lowest mean score at 4.9. The rural group also scored the lowest mean at 4.9 for cognitive with a lower respondent level at 53% (9/17).

The safety category had a low participant response rate between both groups with a range of 12-25% to 24-38%. Rural respondents posted the lowest range of participant rates. Urban group reported a high mean of 5.1 for cognitive with 9/24 (38%) responses.

Participants in the rural group had the greatest response rate at 24% (4/17) with the highest mean of 5.0 to yield a preference of cognitive strategies. The least preferred strategies for urban was physical at a mean of 4.8 with 25% (6/24) response rate; rural had the lowest scores at 4.5 mean for emotional and physical at 24% (4/17) response rates for emotional and 12% (2/17) for physical. This might suggest physical was least favoured due to lowest response rates.

Overall, both groups preferred the strategies *sharing household duties, child or elder care,* and *setting personal work objectives* with rural participants relying more upon the latter strategy. Urban participants had a broader array of strategies. All strategies were focused the same as with the genders demographic: school/workplace focus with cognitive strategies and home/outside work for emotional and physical strategies.

To determine the subcategory preference displayed in Table 12, mean scores were calculated by review of participant response rates coupled with mean scores. Cognitive was the least preferred strategy subcategory in availability and meaningfulness for urban and rural groups. Analysis of data for both sites suggests that emotional strategies were favoured. In safety where response rates were lowest, the cognitive preference by both groups was the opposite of the availability and meaningfulness preferences. The participant response dropped off markedly from 100% in availability to 29 (82%) in meaningfulness and 12 (38%) in safety. The fluctuating and low participant response rate between the main categories reduces the reliability of the mean scores for results interpretation.

Comparison between Ages of all Participants

Analysis and comparison methods of age demographics remained consistent with the other demographic groups. Due to the small sample size, the age categories were regrouped to provide useful information about the participant age groups. Specifically, the survey-defined age groups were collapsed into four groups which were defined as 29 years of age and younger (n = 4; 10%); 30 - 39 years (n = 8; 20%); 40 - 49 years (n = 11; 27%); and 50 years of age and older (n = 18; 44%). The 20-29 age group was especially difficult to analyze due to low participant numbers (4/41) and the data had limited value.

Regardless of subcategory, the top strategies of the overall 20-29 age group based upon cumulative scores were: *sleeping regular hours, as personally defined*, followed by *eating 3-5 meals daily according to Canada Food Guide*; *maintaining regular fitness at home*; *attending an annual wellness check with MD; implementing new teaching strategies*; *mentoring role to school students*; *engaging in informal conversations with colleagues for performance feedback*; *setting personal work objectives*; and *reading for pleasure.* The strategies allocated to third place were: *taking vitamin(s), iron, or calcium*; *engaging with support network – nonteachers, nonfamily*; and *self-reflecting practice.*

The top three strategies for the overall 30-39 age group: *sleeping regular hours, as personally defined*, followed by *sharing household duties, child or elder care* (both physical and emotional subcategories); and, *eating 3-5 meals daily according to Canada Food Guide.* The results of the 40-49 age group yielded the following responses as top priority strategies with: *sharing household duties, child or elder care* (both physical and emotional subcategories); followed by *reading for pleasure*; and *engaging with support*

network – family. Finally, the top three strategies for the overall 50+ age group were: *sharing household duties, child or elder care* (emotional and physical for the highly engaged subgroup; emotional for the overall group); followed by *engaging with support network – family*; and *taking vitamin(s), iron, or calcium.*

The highest summed cognitive strategies for the youngest age group (20-29 years age) were s*etting personal work objectives, implementing new teaching strategies, mentoring role to school students*, and *engaging in informal conversations with colleagues for performance feedback.* Under the emotional subcategory, this group preferred *reading for pleasure* and, under physical strategies, *sleeping regular hours, as personally defined.*

The 30-39 year age group had 8 respondents (8/41). The top-ranked strategies for the three subcategories were as follows: in the cognitive subcategory: *setting personal work objectives*; in the emotional subcategory: *sharing household duties, child or elder care*; and in the physical subcategory: *sleeping regular hours, as personally defined.*

The 40-49 year group had 11 respondents (11/41). The strategies with the highest cumulative scores were as follows: in the cognitive subcategory: *setting personal work objectives;* and under emotional and physical subcategory: *sharing household duties, child or elder care.* The final age group (50 +) with 18 respondents (18/41) indicated preferences for the cognitive subcategory strategy of *setting personal work objectives;* for the emotional subcategory strategy of *sharing household duties, child or elder care;* and for the physical subcategory strategy of *taking vitamins, iron, or calcium.*

Table 13

Comparison of Mean Scores between Age Groups

Category	Age Group	Cognitive Mean	Emotional Mean	Physical Mean	Participant Response (% Range)
Availability					
	29 yr or less	3.4 (n=4)	3.5 (n=4)	3.7 (n=4)	100%
	30-39 yr	2.9 (n=8)	3.2 (n=8)	3.4 (n=8)	100%
	40-49 yr	2.6 (n=11)	3.4 (n=11)	3.2 (n=11)	100%
	50 yr or more	2.6 (n=18)	3.1 (n=18)	3.0 (n=18)	100%
Meaningfulness					
	29 yr or less	5.7 (n=3)	5.9 (n=4)	5.5 (n=2)	50-100%
	30-39 yr	4.3 (n=4)	5.5 (n=7)	5.4 (n=3)	38-88%
	40-49 yr	5.0 (n=9)	5.7 (n=11)	6.0 (n=3)	27-100%
	50 yr or more	5.4 (n=11)	5.3 (n=10)	5.4 (n=5)	28-61%
Safety					
	29 yr or less	5.8 (n=3)	0	3.5 (n=1)	0-75%
	30-39 yr	5.0 (n=1)	4.5 (n=4)	4.5 (n=2)	13-50%
	40-49 yr	4.7 (n=3)	5.5 (n=4)	4.7 (n=3)	27-36%
	50 yr or more	4.8 (n=6)	4.3 (n=3)	5.5 (n=2)	11-33%

Note. Mean scores relate to subjective Likert rating scale 1-6 (never to almost always).

The second analysis of strategies related to preferred subcategory usage is displayed in Table 13. The availability category had a 100% participant response rate for all age groups. In this category, cognitive strategies represented the least favoured subcategory by mean score across all age groups. The 20-29 and 30-39 year age groups preferred physical strategies (mean of 3.7 and 3.4, respectively); the 40-49 and 50 + age groups rated the emotional subcategory as top choice (mean 3.4 and 3.1, respectively).

In the availability category, the lowest mean was attached to the cognitive score by the 50 + group. This mean is important because it was drawn from the greatest number of participants in a single group (18/41). The next highest mean availability score (3.7) was rated by the 29 or less age group in the physical subcategory. However, this group only had 4/41 participants, which represents a small portion of the participants. The highest mean overall (3.4) was also within the physical subcategory and was drawn from the 30-39 year age group (n= 8). The highest emotional mean (3.5) was drawn from the 20-29 year age group, but the low group participant number (4/41) is remarkable. The mean of 3.4 on the emotional subcategory for the 40-49 year age group was based on an n = 11 participation rate.

The meaningfulness category yielded wide diversity in respondent numbers and mean scores in the age groups. The emotional subcategory was clearly preferred across the two age groups 20-29 and 30-39 years (mean of 5.94 and 5.5, respectively) with high response levels of 100% (4/4) and 88% (7/8), respectively. For the 40-49 year age group, the highest mean (6.0) was in the physical subcategory but with a low participation rate of n=3 (27%), whereas the second highest mean (5.7) in the emotional subcategory had a

response rate of n=11 (100%). For the 50 + group, the cognitive subcategory received a lower mean (5.4) but a higher participant response rate (n=11, 61%) compared with the physical subcategory, which received a higher mean (5.4) but a lower participant response (n=5; 28%).

The least favoured subcategories had less discrepancy in means and respondents numbers. Cognitive strategies were the least favored subcategory by the 30-39 and 40-49 year age groups at 4.3 and 5.0 means, respectively, with a participant rate of 50% (4/8) and 81% (9/11), respectively. Physical strategies were least preferred by the 20-29 year (mean 5.5; n=2); however, this group only had 4 respondents. The emotional subcategory was rated lowest (mean 5.3) by the 50 + group with a respondent rate of 56% (10/18).

In the safety category, the participant response rate across the age groups was poorest with a 0-75% range. For the 29 year and less group, the cognitive subcategory had 3/4 respondents (mean of 5.8); there was one response for the physical subcategory (mean 3.5). The emotional subcategory had no responses and was omitted in analysis. The remaining groups' respondent rates ranged from 11% to 50%.

In safety strategies for the 30-39 year group, the highest rated subcategory was cognitive, with a mean of 5.0 but only 1respondent. The emotional subcategory scored a mean of 4.5 with a 50% response rate (4/8). The least preferred subcategory was the physical subcategory with the same mean (4.5) as emotional but with only two (25%) responses.

The 40-49 year group was clear for most and least preferred subcategories but with a low response range at 27% to 36%. This age group preferred emotional at 5.5

mean with 36% (n=4) response rate. The least favoured was cognitive with mean 4.7 and 27% (n=3) participant response.

The 50 + group had a response range of 11% to 33%. At n=3 (17%) the lowest mean (4.3) was in the emotional subcategory. The highest mean (5.5) was in the physical subcategory with two responses (11%). The cognitive subcategory had three times the respondents (n=6) with a 4.8 mean.

In sum, the strategy preference showed similarity to preceding demographic groups. The 20-29 age group was especially difficult to analyze due to low participant numbers (4/41). Across the age groups *setting personal work objectives* was consistently selected by each age group in the cognitive domain; *sharing household duties, child or elder care* was the sole emotional choice amongst participants at least 30 years, and *sleeping regular hours, as personally defined* was the physical choice amongst the 20-29 and 30-39 year groups. Within each age group there was variety amongst strategies, except the 40-49 year group that rated *sharing household duties, child or elder care* as top strategy in both the emotional and physical subcategories. Once again, the pattern of focus is school/workplace for cognitive strategies and home/outside work for emotional and physical strategies.

Overall, given the response rates, the data might suggest the emotional subcategory was preferred most times and the cognitive subcategory was least preferred when availability, meaningfulness, and safety means for each age group were analyzed. In availability, where the respondent rate was 100% for each subcategory, cognitive had the lowest mean with each age group while the highest means were split between

physical and emotional subcategories. Of these latter subcategories, the physical subcategory had the greater mean scores compared with emotional subcategory; hence, this subcategory was used more frequently. The 29 year and less showed similar use patterns across all three subcategories; 30-39-year-old group preferred emotional strategies 2/3 times; 40-49-year-olds exclusively preferred emotional strategies; and 50 + group favoured cognitive strategies 2/3 times. Participant response rates dropped drastically from 100% for all age groups in the availability category to well below 50% in the safety category. The data may suggest that the emotional subcategory continued to show strongly in meaningfulness and safety when viewed in context of participant rates.

Comparison between Years of Experience of all Participants

Comparison between the years of experience was conducted in the same manner as the previous groups. The survey-defined experience groups were reorganized into three groups in a process similar to the age demographic. This increased the number of participants in each group and allowed useful information to be generated. The revised experience groups were defined as 10 years experience and less (n= 18; 44%); 11-20 years (n= 9; 22%); and greater than 20 years (n= 14; 34%).

Regardless of subcategory, the top three strategies of the overall 1-10 years of experience group preferred *sleeping regular hours, as personally defined*; followed by *eating 3-5 meals daily based upon Canada Food Guide*; *sharing household duties, child or elder care* (emotional and physical); and, *maintaining regular fitness at home*. The top three overall strategies for the 11-20 years of experience group were: *sharing household duties, child or elder care* (emotional and physical); followed by *reading for pleasure*;

sleeping regular hours, as personally defined; and *eating 3-5 meals daily based upon Canada Food Guide.* The overall group for 20+ years of experience had the top two strategies: *sharing household duties, child or elder care* (emotional); followed by *engaging with support network – family* and the third preference was for *gardening.*

In the next analysis, the 1-10 years group chose the top strategies as follows: in the cognitive subcategory strategy *setting personal work objectives*; in the emotional subcategory *sharing household duties, child or elder care*; and in the physical subcategory *sleeping regular hours, as personally defined.* The 11-20 years group selected top strategies in cognitive as *setting personal work objectives;* in emotional and physical *sharing household duties, child or elder care.* The 20 years + group preferred cognitive *self reflective practice*, *setting personal work objectives* and *engaging in informal conversations with colleagues for performance feedback* as top strategies; under emotional *sharing household duties, child or elder care;* and under physical the *gardening* strategy was chosen.

The second analysis of strategies displayed in Table 14 related to preferred subcategory usage. Under availability, with 100% participant response for each experience group, the highest mean scores were rated somewhat above 3.0 for average usage. The least and most experienced groups preferred physical strategies (means 3.3 and 3.2, respectively) and rated cognitive strategies as least favoured (means 2.9 and 2.6, respectively). The middle group favoured the emotional subcategory and least favoured the cognitive subcategory. The minute difference between the physical and emotional

Table 14

Comparison between Years of Experience Categories' Mean Scores

Category	Years of Experience	Cognitive Mean	Emotional Mean	Physical Mean	Participant Response (% Range)
Availability					
	10 yr or less	2.9 (n=18)	3.2 (n=18)	3.3 (n=18)	100%
	11-20 yr	2.2 (n=9)	3.5 (n=9)	3.1 (n=9)	100%
	> 20 yr	2.6 (n=14)	3.2 (n=14)	3.2 (n=14)	100%
Meaningfulness					
	10 yr or less	5.1 (n=11)	5.7 (n=15)	5.5 (n=6)	33-83%
	11-20 yr	4.5 (n=6)	5.0 (n=6)	6.0 (n=2)	22-67%
	> 20 yr	4.9 (n=10)	5.6 (n=10)	5.5 (n=6)	43-71%
Safety					
	10 yr or less	5.3 (n=6)	4.8 (n=5)	4.5 (n=6)	28-33%
	11-20 yr	5.0 (n=4)	5.0 (n=2)	6.0 (n=1)	11-44%
	> 20 yr	4.7 (n=3)	4.8 (n=4)	4.7 (n=1)	7-29%

Note. Mean scores relate to subjective Likert rating scale 1-6 (never to almost always).

means for the 20 + years group implies that physical and emotional strategies share the most preferred subcategory ranking.

In meaningfulness, all groups selected emotional strategies with greatest means at 5.0 to 5.7, but participant rates were dramatically reduced at a range of 67% to 83%. These response rates were the highest for each group in meaningfulness. The participant response rates were similar in rating the least favoured subcategory (cognitive), with the exception of the 10 years or less group (n=11; 66%). The lowest means ranged from 4.5 to 5.1 usage. A pattern was noted between the groups with respect to most and least favoured subcategory means. The 10 years or less group had the greatest mean scores in their most and least favoured subcategories, the 11-20 years group had the lowest mean scores in their most and least favoured subcategories, while the 20 + years group had the mid-range mean scores in their most and least favoured subcategories.

Under safety, a reversal of trend was noted where the cognitive subcategory, instead of being least preferred subcategory, was preferred by the two lesser experienced groups at mean usage of 5.3; 5.0, respectively. The 20 + years group chose emotional strategies at a mean usage of 4.7. One trend continued from availability and meaningfulness where the 20 + years group still rated cognitive strategies as least preferred. Safety was the only main category where emotional and physical subcategories were rated as least favoured by a group. It was important to note that the participant response rate in safety continued to decline to a range of 7% to 44%. These rates were too low to infer reliable strategy preference.

In general, the most popularly used strategies across the years of experience groups were *setting personal work objectives* (cognitive) and *sharing household duties, child or elder care* (emotional). In the physical subcategory, the strategies were varied but with a repeat of *sharing household duties, child or elder care.* The cognitive subcategory was school/workplace focused with the remaining subcategories being home/outside work focused. The 11-20 years group emphasized usage of *sharing household duties, child or elder care.* The 20 + years group ranked multiple strategies with the top score for cognitive usage.

Overall, where participant response was greatest, that is, 100% in availability, there was a split between the emotional and physical subcategories as preferred with cognitive being the least preferred. The cognitive mean scores were well below the physical and emotional subcategories scores across all groups. In the meaningfulness category, where participant response severely dropped, the emotional subcategory was a clear favourite; the physical subcategory was deemed to be the least favoured based upon the least number of respondents posting a strategy. The participant response rate varied from 100% in the availability category to a low of 7% to 28% in the safety category (20 + years group). Overall, the 11-20 year and the 20 + years groups strongly favoured emotional strategies; and the 10 years or less group favoured each subcategory once. Further analysis of safety data was not conducted due to greatly reduced participant responses.

Strategies Used by Highly Engaged Participants

An integral study purpose was to explore the strategies used by self-rated highly engaged teachers. The data for this purpose were drawn from participants (23/41; 56%) who self-rated their engagement level from 8 to 10 on an ascending Likert scale of 1 (lowest) to 10 (highest). To analyze strategy use by this subgroup, the same methods of calculation and presentation were used as with the overall data.

Table 15 presents the demographic profile of the highly engaged participants. A comparison of highly engaged respondents to the overall group indicated the following. The highly engaged rural respondents represented 71% of the overall rural participants, whereas highly engaged urban respondents represented only 43% of all urban participants. About half of the female participants (52%) and a majority of male participants (70%) self-rated as highly engaged. In the age category, 56% of participants 50 years of age or older indicated high engagement; the lowest representation occurred in the 40-49 year age group with only 37% of that age group indicating high levels of engagement. In the 30-39 age group, 80% (6/8) indicated high engagement, and 75% (3/4) of the 20-29 age group indicated high engagement. With respect to years of teaching experience, the 1-10 years group had a 67% representation of highly engaged participants; the 11-20 years group had a low representation at 33% of participants; and the 20 + years group had 57% representation. For first and second careers, there was scant difference between highly engaged respondents compared to their overall group; the second-career highly engaged individuals came slightly higher at 58% than the first-career highly engaged participants with their groups. A slim majority of the highly

Table 15

Demographic Profile of Highly Engaged Participants

School Site	n	Gender	n	Age (year)	n	Job	n	Years of Experience	n
urban	9	female	16	<25	0	full time	22	<3 yr	3
inner	2	male	7	25-29	3	part time	1	4-10 yr	9
rural	12			30-34	4			11-15 yr	1
				35-39	2			16-20 yr	2
				40-44	3			>20 yr	8
				45-49	1				
				50 +	10				
Education	n	Career	n	Teaching Grade		n		Engagement Level	n
<bacc	1	first	15	JK/SK		6		8	12
bacc	21	second	7	Gr1-2		12		8.5	0
>bacc	1	unknown	1	Gr3-4		7		9	6
				Gr5-6		8		9.5	1
				Gr7-8		4		10	4
				Multiple Grade		7			
				Special Education		3			

engaged participants (52%) taught in grades 1 to 2 and the least number of these participants (17%) taught in grades 7 to 8 level. Just over half of the self-rated highly engaged participants (52%) scored their engagement at 8 on the maximum scale of 10.

An overall summary of the highly engaged participants' use of strategies indicated that availability strategies were most commonly and frequently used. Comparatively, there was little use of meaningfulness strategies and negligible use of safety strategies amongst the highly engaged participants, a trend similar to the overall participant group. In fact, only 5/18 (28%) meaningfulness strategies attained at least 15% participation, whereas no safety strategies (0/8) reached the 15% level of participation for the highly engaged participants.

In the availability category for the highly engaged subgroup, cognitive strategies were most commonly used (i.e., the top 3 ranking strategies in Table 16 yielded 91-96% participant use), but physical strategies had greatest average frequency use by participants (i.e., 4.9 mean in the top 10 strategies in Table 17). The strategies used by the greatest number of participants as well as used on a most frequent basis by participants were: *sharing household duties, child or elder care*; *eating 3-5 meals daily based upon Canada Food Guide*; *sleeping regular hours, as personally defined*; *engaging with support network - family*; *setting personal work objectives*; *hobby;* and *regular relaxation at home.*

Availability Strategies

To identify the preferred availability strategies used by the highly engaged participants subgroup (N = 23; 56% of sample), the availability strategies were analyzed

in the same manner as the entire sample. Table 16 presents the rank-ordered top strategies that received at least 50% *yes* responses (based upon conversion of Likert scale ratings between 3 and 6), presented in descending order to highlight the most popular or commonly used strategies. From the 80 availability strategies presented on the questionnaire, 24/80 (30%) of the strategies were used by 82% of the highly engaged participants with at least mean usage of 3.0. This represents a similar pattern to the overall sample (80% response with 24% strategy usage).

The top median of Table 16 shows that participants preferred emotional and cognitive strategies (8/20) compared with physical strategies (4/20). Further scrutiny of the top median revealed that the strategies were evenly divided between school/workplace and outside work/home locations. This subgroup placed a heavy emphasis upon cognitive strategies (8/10) for work locations with a somewhat greater use of emotional (6/10) over physical (4/10) strategies for home locations.

To calculate the top strategy results presented in Table 17, strategies were included if they attained a Likert-scale mean of at least 3 on the Likert rating scale 1 - 6. The mean frequency of use per strategy revealed the top strategies of *sharing household duties, child or elder care* remained constant between the overall sample and the highly engaged subgroup. Other similarities for high frequency use in strategy ranking of both groups include *eating 3-5 meals daily*; *sleeping regular hours as personally defined*; *engaging with support networks - family*; *setting personal work objective*; *hobby*; and *regular relaxation at home.*

Table 16

Rank Ordered Top 50% Availability Strategies for Highly Engaged Participants

Availability Strategies (41 strategies)	n/Strategy (N = 23 max)	Yes	No	Yes %	No %	Rank
Engaging with support network - colleagues	23	22	1	96	4	1
Implementing a new teaching strategy	23	22	1	96	4	1
Setting personal work objectives	23	22	1	96	4	1
Participating on a school planning team	23	22	1	96	4	1
Sharing of household duties, child or elder care – physical subcategory	22	21	1	95	5	2
Participating with school planning	23	21	2	91	9	3
Eating 3 - 5 meals daily based upon Canada Food Guide	23	21	2	91	9	3
Sleeping regular hours, as personally defined	23	21	2	91	9	3
Engaging with support network - family	23	21	2	91	9	3
Walking before or after work	23	21	2	91	9	3
Sharing household duties, child or elder care – emotional subcategory	23	21	2	91	9	3
Participating with workplace committee(s)	23	20	3	87	13	4
Regular relaxation time at home	23	20	3	87	13	4
Watching movies at home or in theatre	23	20	3	87	13	4
Assuming a leadership role in school	23	20	3	87	13	4
Engaging in informal conversations with colleagues for performance feedback	23	20	3	87	13	4
Play a music instrument/sing/listen to music/concerts	23	20	3	87	13	4
Hobby (participant to specify)	23	20	3	87	13	4
Self-reflecting practice	23	20	3	87	13	4
Attending professional development workshops	23	20	3	87	13	4
Median (top 20 strategies)	-	-	-	-	-	-
Gardening	23	19	4	83	17	5

(table continues)

Availability Strategies (41 strategies)	n/Strategy (N = 23 max)	Yes	No	Yes %	No %	Rank
Engaging with support network - nonteachers, nonfamily	23	19	4	83	17	5
Working at creative personal projects	23	19	4	83	17	5
Reading for pleasure	22	18	4	82	18	5
Maintaining regular fitness routine at home	23	18	5	78	22	6
Lunching with colleagues	23	18	5	78	22	6
Participating in seasonal sports	23	17	6	74	26	7
Self-pacing according to energy level and health status	23	17	6	74	26	7
Assisting extracurricular programs or clubs with students	23	17	6	74	26	7
Mentoring role to school student(s)	23	17	6	74	26	7
Collaborating and co-facilitating to teach a class – cognitive subcategory	22	16	6	73	27	7
Maintaining personal spirituality	23	16	7	70	30	8
Implementing a new work project	23	16	7	70	30	8
Spending time with an animal companion or pet(s)	23	15	8	65	35	8
Mentoring role to colleague(s)	23	15	8	65	35	8
Taking vitamin(s), iron, or calcium	23	15	8	65	35	8
Reading hardcopy educational or professional journals	23	15	8	65	35	8
Playing with family children at home or playground	22	14	8	64	36	8
Collaborating and co-facilitating to teach a class – emotional subcategory	23	14	9	61	39	10
Vacationing at home	22	12	10	55	45	11
Enjoying weekend get-away or day trips	23	12	11	52	48	12

Table 17

Top 50% Availability Strategies for Highly Engaged Participants Rank Ordered by Mean Response

Availability Strategies (42 strategies)	n/Strategy (N= 23 max)	Cumulative Sum	Participant Response Mean/Strategy	Rank
Sharing of household duties, child or elder care – physical subcategory	22	120	5.5	1
Sharing household duties, child or elder care – emotional subcategory	23	125	5.4	2
Eating 3 - 5 meals daily based upon Canada Food Guide	23	116	5.0	3
Sleeping regular hours, as personally defined	23	114	5.0	4
Engaging with support network - family	23	110	4.8	5
Setting personal work objectives	23	107	4.7	6
Walking before or after work	23	106	4.6	7
Hobby (participant to specify)	23	104	4.5	8
Regular relaxation time at home	23	101	4.4	9
Play a music instrument/sing/listen to music/concerts	23	101	4.4	9
Gardening	23	99	4.3	10
Subcategory Means of Top 10 Strategies: Physical 4.9; Emotional 4.7; Cognitive 4.7				
Engaging with support network - colleagues	23	98	4.3	11
Self-reflecting practice	23	98	4.3	11
Implementing a new teaching strategy	23	97	4.2	13
Maintaining regular fitness routine at home	23	97	4.2	13
Engaging in informal conversations with colleagues for performance feedback	23	96.5	4.2	14
Assuming a leadership role in school	23	95	4.1	15
Lunching with colleagues	23	94.5	4.1	16
Reading for pleasure	22	90	4.1	17

(table continues)

Availability Strategies (42 strategies)	n/Strategy (N= 23 max)	Cumulative Sum	Participant Response Mean/Strategy	Rank
Engaging with support network - non-teachers, non-family	23	94	4.1	17
Top Quartile Overall Mean			*4.5*	
Taking vitamin(s), iron, or calcium	23	93	4.0	18
Participating on a school planning team	23	93	4.0	18
Participating in seasonal sports	23	89	3.9	19
Self-pacing according to energy level and health status	23	89	3.9	19
Spending time with an animal companion or pet(s)	23	89	3.9	19
Participating with workplace committee(s)	23	86	3.7	22
Participating with school planning	23	85	3.7	23
Collaborating and co-facilitating to teach a class – cognitive subcategory	22	78	3.6	24
Assisting extracurricular programs or clubs with students	23	80	3.5	25
Mentoring role to school student(s)	23	80	3.5	25
Playing with family children at home or playground	22	76	3.5	26
Maintaining personal spirituality	23	77	3.4	27
Collaborating and co-facilitating to teach a class – emotional subcategory	23	77	3.4	27
Reading hardcopy educational or professional journals	23	76	3.3	28
Attending professional development workshops	23	74.5	3.2	29
Enjoying weekend get-away or day trips	23	71	3.1	30
Implementing a new work project	23	71	3.1	30
Vacationing at home	22	67	3.1	31
Mentoring role to colleague(s)	23	70	3.0	32
Changing classroom curriculum assignment	23	70	3.0	32

With respect to the frequency of a strategy being used, there was a focus on outside work/home strategies over the school/workplace strategies (13 strategies versus 7 strategies). The outside work/home focus revealed a fairly even split of strategies between the emotional and physical subcategories. Finally, the top quartile strategies (20/80; 25%) yielded an overall participant response mean usage of 4.5 with a minimum strategy mean of 4.1; these data are similar to the overall sample for average strategy frequency use.

To continue comparison with the overall sample, Tables 18 to 20 present in descending order the highly engaged participants' mean per strategy for the availability strategies in the cognitive, emotional, and physical subcategories. The subcategory data were drawn in the same manner as for the overall sample. Table 18 displays the cognitive strategies, Table 19 the emotional strategies, and Table 20 the physical strategies. The three top strategies from the combined tables were *sharing household duties, child or elder care* (physical; mean of 5.5); *sharing household duties, child or elder care* (emotional; mean of 5.4); and *eating 3-5 meals daily based upon Canada's Food Guide* (physical; mean of 5.0). The two top strategies *sharing household duties, child or elder care* matched the overall sample with the difference that the highly engaged subgroup had greater mean scores and reversed rank of subcategory. The third and fourth top strategies (*eating 3-5 meals daily based upon Canada's Food Guide* and *sleeping regular hours, as personally defined*) of both groups were reversed in ranking. All top rated strategies were focused outside the school/home setting.

The three lowest ranking strategies of the combined Tables 18-20 were *vacationing at home* (emotional subcategory; mean of 3.1); and *mentoring role to colleague(s)* and *changing classroom curriculum assignment* (cognitive subcategory; mean of 3.0). *Mentoring role to colleague(s)* was common to both overall and highly engaged groups. The remaining least used strategies of both groups were different but with same themes: *changing classroom curriculum* and *collaborating and co-facilitating to teach a class* (school/workplace focused; cognitive and emotional, respectively); *vacationing at home* and *enjoying weekend get-away or day trips* (outside school/home focused; emotional).

Table 18

Top Cognitive Availability Strategies for Highly Engaged Participants Rank Ordered by Mean Usage

Cognitive Availability Strategies	n/Strategy (N = 23 max)	Cumulative Sum	Participant Response Mean/Strategy	Rank
Setting personal work objectives	23	107	4.7	1
Self-reflecting practice	23	98	4.3	2
Implementing a new teaching strategy	23	97	4.2	3
Engaging in informal conversations with colleagues for performance feedback	23	96.5	4.2	4
Assuming a leadership role in school	23	95	4.1	5
Participating on a school planning team	23	93	4.0	6
Participating with workplace committee(s)	23	86	3.7	7
Collaborating and co-facilitating to teach a class	22	78	3.6	8
Mentoring role to school student(s)	23	80	3.5	9
Reading hardcopy educational or professional journals	23	76	3.3	10
Attending professional development workshops	23	74.5	3.2	11
Implementing a new work project	23	71	3.1	12
Mentoring role to colleague(s)	23	70	3.0	13
Changing classroom curriculum assignment	23	70	3.0	13

Table 19

Top Emotional Availability Strategies for Highly Engaged Participants Rank Ordered by Mean Usage

Emotional Availability Strategies	n/Strategy (N= 23 max)	Cumulative Sum	Participant Response Mean/Strategy	Rank
Sharing household duties, child or elder care	23	125	5.4	1
Engaging with support network - family	23	110	4.8	2
Hobby (participant to specify)	23	104	4.5	3
Play a music instrument/sing/listen to music/concerts	23	101	4.4	4
Regular relaxation time at home	23	101	4.4	4
Engaging with support network - colleagues	23	98	4.3	5
Lunching with colleagues	23	94.5	4.1	6
Reading for pleasure	22	90	4.1	7
Engaging with support network - nonteachers, nonfamily	23	94	4.1	7
Spending time with an animal companion or pet(s)	23	89	3.9	8
Watching movies at home or in theatre	23	88	3.8	9
Working at creative personal projects	23	87	3.8	10
Participating with school planning	23	85	3.7	11
Assisting extracurricular programs or clubs with students	23	80	3.5	12
Maintaining personal spirituality	23	77	3.4	13
Collaborating and co-facilitating to teach a class	23	77	3.4	13
Enjoying weekend get-away or day trips	23	71	3.1	14
Vacationing at home	22	67	3.1	15

Table 20

Top Physical Availability Strategies for Highly Engaged Participants Rank Ordered by Mean Usage

Physical Availability Strategies	n/Strategy (N = 23 max)	Cumulative Sum	Participant Response Mean/Strategy	Rank
Sharing of household duties, child or elder care	22	120	5.5	1
Eating 3 - 5 meals daily based upon Canada Food Guide	23	116	5.0	2
Sleeping regular hours, as personally defined	23	114	5.0	3
Walking before or after work	23	106	4.6	4
Gardening	23	99	4.3	5
Maintaining regular fitness routine at home	23	97	4.2	6
Taking vitamin(s), iron, or calcium	23	93	4.0	7
Participating in seasonal sports	23	89	3.9	8
Self-pacing according to energy level and health status	23	89	3.9	8
Playing with family children at home or playground	22	76	3.5	9

Meaningfulness Strategies

The most commonly used meaningfulness strategies were taken from the overall participant survey meaningfulness data for those participants who self-rated their engagement level at least 8 out of 10 on the Likert scale. Data analysis was completed in the same manner as the meaningfulness strategies used by all participants to ensure consistency of data presentation. Cumulative sums and participant average use per strategy are displayed in Table 21. However, the *yes/no* participant frequency count was not completed due to low response rate in this survey section.

Strategies with only 1 response were deleted from the analysis, yielding a total of 18 strategies. For 5 of the 18 strategies (28%), at least 15% of participants responded. The strategies used by at least 15% of the respondents in descending order are: *family/children/spouse* (30%); implementing new teaching strategy/ways to implement curriculum (26%); and *rapport with students about work/emotional/behavioural issues* with *maintaining regular fitness and sleep regular hours* (both with 17%).

These strategies were further inspected to determine a school/workplace or outside school/home focus followed by subcategory (i.e., cognitive, emotional, or physical). For 3 of the 5 strategies, the focus was outside school/home and anchored in the physical and emotional subcategories. The remaining 2 strategies were school/workplace focused with emphasis upon teaching/student and in the cognitive and emotional subcategories. These results are provided in Table 22.

Table 21

Top Meaningfulness Strategies for Highly Engaged Participants Rank Ordered by Mean Usage

Meaningfulness Strategies	n/Strategy (N =23 max)	Cumulative Sum	Participant Response Mean Usage	Rank
Rapport with students about work/emotional/behavioural issues	4	24	6.0	1
Co-working/Collaborating/Co-facilitating with colleagues	3	18	6.0	1
Self-reflecting	2	12	6.0	1
Rapport with students about work/emotional/behavioural issues	2	12	6.0	1
Family/children/spouse	7	41	5.9	2
Maintaining regular fitness	4	23	5.8	3
Maintaining integrity, pride, and confidence with work	3	17	5.7	4
Personal work objectives	3	17	5.7	4
Engaging with support network (colleagues)	3	17	5.7	4
Eating well	3	17	5.7	4
Attending religious ceremonies/church	2	11	5.5	5
Volunteer/My volunteer work-using skills that I learnt in teaching but don't have a place to use in teaching; running a meeting; sending out minutes; speaking before a large group of adults (plus NRX1)	2	11	5.5	5
Engaging with support network - nonteachers	3	16	5.3	6
Sleep regular hours	4	21	5.3	7
Hobby/Recreation	3	15	5.0	8
Assuming leadership role in school	2	10	5.0	8
Implementing a new teaching strategy or ways to implement curriculum	6	28.5	4.8	9
Mentoring a colleague	2	8	4.0	10

Table 22

Meaningfulness Strategies for Highly Engaged Participants with At Least 15% Participant Response

Subcategory	Meaningfulness Strategies With At Least 15% Participant Response	n (N= 23 max)	Cumulative Sum	Mean Usage
Emotional	Rapport with students about work/emotional/behavioral issues	4	24	6.0
Emotional	Family/children/spouse	7	41	5.9
Physical	Maintaining regular fitness	4	23	5.8
Physical	Sleep regular hours	4	21	5.3
Cognitive	Implementing new teaching strategy/ways to implement curriculum	6	28.5	4.8

Safety Strategies

Analysis of safety strategies was taken from the overall sample safety data for those participants who self-rated their engagement level at least 8 out of 10 on the Likert scale. The strategies most commonly used by this subgroup were identified in the same methods as used with data for meaningfulness strategies used by highly engaged participants. Cumulative sums and participant response means per strategy are presented in Table 23; the *yes/no* frequency count was not conducted due to a very low participation rate of less than 15%.

As with the meaningfulness analysis, strategies with only 1 response were deleted from Table 23, for a total of 8 strategies. The highly engaged safety participation response for each strategy was very low (2 or 3 responses per strategy). This represented the greatest loss of participant response of the survey groups.

Table 23 displays the strategies that were used by 2 or 3 participants in the highly engaged group. The broad subjective interpretation of the survey safety definition yielded diverse strategies from *social skills development, etc.,* to *implementing new teaching strategy* and *fire drills*. The physical strategies of *fire drills* and *lock down procedures and drills* anchored the lowest positions at less than *sometimes* (less than a mean of 3.00 on the Likert scale). Whereas the overall sample entered almost 50% physical-related safety strategies, the highly engaged group yielded only 20% physical strategies (2/8) and had a higher proportion of cognitive strategies. All the strategies were found to be school/workplace focused.

Table 23

Top Safety Strategies of Highly Engaged Participants Rank Ordered by Mean Usage

Safety Strategies	n/Strategy (N = 23 max)	Cumulative Sum	Participant Response Mean Usage	Rank
Social skills development/Ensure only positive comments are made about other students in the classroom. The teacher makes positive comments or constructive comments when a change needs to be made. (plus 1-not rated)	2	12	6.0	1
Implementing new teaching strategy	2	11	5.5	2
Co-facilitating and or collaborating to teach a class	3	14	4.7	3
Continuing education	2	9	4.5	4
Reading educational books/journals to keep abreast of new ideas	2	8	4.0	5
Engaging/networking with support network - colleagues	2	7	3.5	6
Fire drills	2	6	3.0	7
Lock down procedures and drills	3	8	2.7	8

Demographic Comparisons of Strategy Use by Highly Engaged Participants

This data analysis related to a study purpose that explored preferred strategy differences in the highly engaged subgroup with reference to the demographics of gender, school site, years of teaching experience, and age. The sample yielded 23 highly engaged participants (56%; 23/41 of overall participants) who self-rated their engagement level from 8-10 inclusive. This analysis was approached in the same manner as the overall sample for preferred strategy and subcategory using the framework categories of availability, meaningfulness, and safety, and the subcategories of cognitive, emotional, and physical (Kahn, 1990). This process selected the most favoured strategy under each subcategory as the strategy that gained the highest cumulative score for each participant group of a demographic. The selection of the preferred strategy subcategory was based upon calculated means of the strategy subcategories in each main category (i.e., availability, meaningfulness, and safety) for each group in the demographic.

The highest engagement mean was reported by the highly engaged female subgroup (mean of 8.9), followed by the 30-39-year-old highly engaged subgroup (mean at 8.8), with the 20+ years of experience highly engaged subgroup following closely (mean at 8.8). A demographic profile of the most engaged individual presents as follows: a highly engaged female, in a rural setting, at 50 plus years old, and with 20 + years of experience.

Comparison between Genders for Highly Engaged Participants

Of the 23 highly engaged participants, 16/23 (70%) were females and 7/23 (30%) males. This demographic subgroup represented 56% (23/41) of the total study

participants, 52% (16/31) of the overall females, and 70% (7/10) of the overall males. The gender analysis was guided by the same process used for the overall sample in order to identify the most frequently used subcategory strategy (i.e., cognitive, emotional, or physical) of the survey and the most popularly used subcategory within each category (i.e., availability, meaningfulness, and safety).

The top three overall strategies regardless of subcategory are as follows: both genders of the highly engaged groups preferred *sharing household duties, child or elder care* (selected from emotional and physical) as the top strategy in first and second ranking. The third place ranking was: highly engaged females selected *eating 3-5 meals daily based upon Canada Food Guide*; while the highly engaged males selected *regular relaxation time at home.*

The most favoured strategy of each subcategory was identified by determining the greatest cumulative sum from each group within a demographic. Data were separated according to the two gender groups, and the respective strategies were summed for the highest cumulative totals. In the cognitive subcategory, the top strategy for females and males was *setting personal work objectives* (i.e., same choice as with overall gender groups); females also reported *implementing new teaching strategies* as sharing top rank. In the emotional and physical subcategories, males and females preferred the same top strategy with *sharing household duties, child or elder care* (i.e., same choice of both overall gender groups in the emotional subcategory and overall females in the physical subcategory).

The next part of the analysis determined the preferred strategy subcategory (i.e., cognitive, emotional, and physical) for availability, meaningfulness, and safety in the same manner as the overall sample, that is, according to the mean score with reference to participant response rate. Data were separated first according to gender group, and second according to the main category (i.e., availability, meaningfulness, or safety) and subcategory (i.e., cognitive, emotional, or physical). Mean scores were calculated as follows: each participant's total cumulative Likert Scale ratings on a specific field (e.g., physical strategies within safety category) was divided by their number of responses in that field. For each gender group, the overall mean was calculated by adding all participants' means and dividing by the number of particpants in that group to arrive at the mean score. All mean scores are reported in Table 24. Some participants did not respond to certain main and subcategories; hence, the inclusion of *n* for each field shows background response patterns.

The availability category gained 100% participant response. The males and females shared a preference for physical strategies (means of 3.3 and 3.4). The least favoured subcategory was cognitive for both genders (males at mean of 2.6; females at mean of 2.9). For the meaningfulness category, the response rate dropped a large amount to a range of 29% to 86% for males and 31% to 75% for females. Males showed a clear preference for the emotional subcategory at a mean of 5.7 with an 86% response rate in that subcategory. The females yielded a 5.6 mean for physical but with only 31% response (5/16). The high response rate (75%) for females in the emotional subcategory with a mean of 5.6 suggests that this subcategory was preferred. For the safety category,

Table 24

Comparison between Genders of Highly Engaged Participants of Availability, Meaningfulness, and Safety Categories Rank Ordered by Mean Usage

Category	Gender	Cognitive Mean	Emotional Mean	Physical Mean	Participant Response (% range)
Availability					
	Males	2.6 (n=7)	3.2 (n=7)	3.3 (n=7)	100%
	Females	2.9 (n=16)	3.3 (n=16)	3.4 (n=16)	100%
Meaningfulness					
	Males	4.2 (n=3)	5.7 (n=6)	5.6 (n=2)	29-86%
	Females	5.1 (n=9)	5.6 (n=12)	5.6 (n=5)	31-75%
Safety					
	Males	4.8 (n=3)	0	0	0-43%
	Females	5.0 (n=3)	4.3 (n=4)	4.0 (n=4)	19-25%

Note. Mean scores relate to Likert rating scale 1-6 (never to almost always).

the participant response was drastically reduced with a range from 0% to 43% for males and 19% to 25% for females. In this category, cognitive was the only subcategory to which males (43%) responded for a mean of 4. Consequently, no analysis was performed for the emotional and physical subcategories. Females responded in all subcategories; preference was attached to cognitive with a mean usage 5.0 but with a low response rate (19%). The least favoured subcategory for females was physical at a mean of 4.0. Across the entire set of strategies, the preferred strategies were similar to the overall sample where preference in both gender groups was for *setting personal work objectives* (cognitive); *sharing household duties, child or elder care* (emotional and physical). There was no difference between the gender groups for choices, save the additional choice by females for *implementing new teaching strategies.* The cognitive strategies showed a school/workplace focus, and the emotional and physical a home/outside work focus.

The general findings related to the subcategories of strategies were drawn from an interpretation of mean scores plus participant response. The pattern for both gender groups of highly engaged participants was similar. Males indicated a preference for each subcategory once, with the most valid means coming from availability where each subcategory had a 100% response rate. The response rate dropped to a level of 0% in the main category of safety for the emotional and physical subcategories. Males indicated a low preference for cognitive subcategories. Females presented a similar pattern as males for having favoured each subcategory once. As with males, the response rate severely

dropped in each subcategory of meaningfulness and safety. Females differed from males in safety due to providing responses in each safety subcategory.

Comparison between School Categories for Highly Engaged Participants

Inner city schools were not eligible for analysis as a distinct category due to one participating school with 3 respondents; hence, the 2 (2/3) inner city highly engaged participants were merged with the urban group for comparison purposes. This led to 11/23 (48%) urban and 12/23 (52%) rural highly engaged participant teachers. Comparison analysis of this demographic continued in the same manner as above gender.

Regardless of subcategory, the top three strategies for the urban/inner city participants in the highly engaged group were: *sleeping regular hours, as personally defined*; *eating 3-5 meals daily based upon Canada Food Guide*; followed by *walking before and after work*; and, *sharing household duties, child or elder care*. The highly engaged rural participants' top three strategies were: *sharing household duties, child or elder care* (emotional and physical); followed by *engaging with support network – family*.

The most favoured strategy in the cognitive subcategory for the urban and rural participants was *setting personal work objectives* (same choice as both groups in the overall sample). Under both emotional and physical subcategories, participants in rural school sites preferred *sharing household duties, child or elder care* (same choices to the overall rural group); and urban sites chose the emotional strategy *sharing household duties, child or elder care* (same choice as overall urban group) and the physical strategy

sleeping regular hours, as personally defined (same as the overall urban group) with *eating 3-5 meals daily based upon Canada's Food Guide.*

Table 25 displays the data for the analysis of preferred subcategory in the categories of availability, meaningfulness, and safety. In availability, the participant response was 100% across the three subcategories. Urban participants favoured physical strategies at a mean of 3.5, whereas rural participants preferred emotional strategies at a mean of 3.3. Both groups rated the cognitive subcategory as least favoured with similar usage at mean scores of 3.0 urban and 2.7 rural.

Meaningfulness mean scores were higher than availability's scores, but the response rate was markedly diminished with a range of 27% to 82% respondents. Consistent with the availability category, urban and rural participants least favoured the cognitive subcategory (means of 5.1 and 4.6, respectively) with response rates of 64% and 42%, respectively. Both urban and rural groups favoured the emotional subcategory with similar scores (means of 5.7 and 5.6, respectively) and response rates (82% and 75%, respectively).

Safety continued to produce poor participant responses with a range low of 9 to 17% to a high of 25% to 36% responses. The urban group (18%) rated the physical subcategory lowest with a mean of 3.5; the urban group (17%) also rated the physical and cognitive subcategories as least favoured with a mean of 4.5. Consistent with the urban group from the overall sample, the highly engaged urban group selected the cognitive as the preferred subcategory with the greatest participant response (36% and

Table 25

Comparison between School Sites of Highly Engaged Participants of Availability, Meaningfulness, and Safety Categories Rank Ordered by Mean Usage

Category	School Site	Cognitive Mean	Emotional Mean	Physical Mean	Participant Response (% range)
Availability					
	Urban	3.0 (n=11)	3.3 (n=11)	3.5 (n=11)	100%
	Rural	2.7 (n=12)	3.3 (n=12)	3.2 (n=12)	100%
Meaningfulness					
	Urban	5.1 (n=7)	5.7 (n=9)	5.7 (n=3)	27-82%
	Rural	4.6 (n=5)	5.6 (n=9)	5.6 (n=4)	33-75%
Safety					
	Urban	5.1 (n=4)	4.0 (n=1)	3.5 (n=2)	9-36%
	Rural	4.5 (n=2)	4.3 (n=3)	4.5 (n=2)	17-25%

Note. Mean scores relate to Likert rating scale 1-6 (never to almost always).

mean of 5.1). The highly engaged rural group differed from the overall rural group in their preference for emotional strategies, with a response rate of 25% and a mean of 4.3.

Across the entire set of strategies, the preferred strategies of urban and rural highly engaged participants were similar to their respective counterpart groups in the overall sample, with preference selections of *sharing household duties, child or elder care*; *and setting personal work objectives*. Urban participants also matched preferred strategies with *sleeping regular hours, as personally defined* and had an additional strategy: *eating 3-5 meals daily based upon Canada's Food Guide.* The strategy choices continued to reflect the same focus for all groups, that is, cognitive was school/workplace focused, and emotional and physical were home/outside workplace focused.

A review of the subcategory preference also considered participant response rates; the availability response rates were highest at 100% followed by respondent range of 27% to 82% in meaningfulness. In these two main categories, both groups least favoured the cognitive subcategory, whereas the emotional subcategory was favoured the greatest amount of times. A comparison of this demographic highly engaged subgroup with their respective group from the overall sample indicated that both urban and rural participants followed similar choices as their counterparts in the overall sample for most and least favoured subcategories in main categories. As with the gender demographic, the interpretation of the data in meaningfulness and safety is affected by extremely low response rates.

Comparison between Ages for Highly Engaged Participants

Comparison between age groups was analyzed in the same manner as gender and

school category. The initially defined seven age groups were revised to four age groups as follows: 29 years of age and younger (n = 3; 13%); 30 - 39 years (n = 6; 26%); 40 - 49 years (n = 4; 17%); and 50 years of age and older (n = 10; 44%). Of the overall sample, this demographic subgroup represented 75% (3/4) of 20-29 years; 75% (6/8) of 30-39 years; 36% (4/11) of 40-49 years; and 56% (10/18) of 50 + years. The 20-29 age group was especially difficult to analyze due to low participant numbers (n=3).

Regardless of subcategory, in the 20-29 age group there were 18 strategies to receive the top three scores; for purposes of reporting the top two cumulative scores for highly engaged strategies were: *engaging in informal conversation with colleagues for performance feedback*; *self-pacing according to energy level and health status*; *sharing household duties, child or elder care*; followed by *setting personal work objectives*; *implementing new teaching strategy*; *mentoring role to school students*; *participating with workplace committee(s)*; *sleeping regular hours, as personally defined*; and *participating in seasonal sports*.

The top three strategies for the highly engaged 30-39 age group: *sleeping regular hours, as personally defined*, followed by *sharing household duties, child or elder care* (both physical and emotional subcategories); and, *eating 3-5 meals daily according to Canada Food Guide*; *hobby*; and, *play a musical instrument/sing/listen to music/concerts*. The results of the highly engaged 40-49 age group had rated the top three strategies as: *walking before or after work*; *playing with family children at home or playground* followed by *sharing household duties, child or elder care* (emotional); *lunching with colleagues*; and then *eating 3-5 meals daily based upon Canada Food*

Guide. Finally, the top three strategies for the highly engaged 50+ age group were: *sharing household duties, child or elder care* (emotional and physical); followed by *engaging with support network – family*.

In the cognitive subcategory, the youngest age group (20-29 years age) chose *engaging in informal conversations with colleagues for performance feedback* as the top strategy (one of the top choices of the overall 20-29 year age group). The remaining age groups selected s*etting personal work objectives* as the preferred cognitive strategy. In the emotional subcategory for the 20-29 year group, the top strategies were *reading for pleasure, maintaining personal spirituality, engaging with support network – family* and *engaging with support network – nonteachers; nonfamily*. The remaining age groups favoured the strategy *sharing household duties, child or elder care,* but the 40-49 year group added *lunching with colleagues* as their top strategy.

In the physical subcategory, selections varied between all age groups. The 20-29 year group allocated top place to two strategies: *self-pacing according to energy level and health status* and *sharing household duties, child or elder care.* The 30-39 year group was the only group to make the same strategy preference (*sleeping regular hours as personally defined*) as their corresponding age group in the overall sample. The 40-49 year group selected *walking before or after work* and *playing with family children at home or playground* while the 50 year + group preferred the physical strategy of sharing *household duties, child or elder care.*

The mean usage data for the subcategories in availability, meaningfulness, and safety are detailed in Table 26. In availability, all groups reported a 100% participant

Table 26

Comparison between Age Groups of Highly Engaged Participants of Availability, Meaningfulness, and Safety Categories Rank Ordered by Mean Usage

Category	Age Group	Cognitive Mean	Emotional Mean	Physical Mean	Participant Response (% range)
Availability					
	29 yr or less	3.7 (n=3)	3.8 (n=3)	4.1 (n=3)	100%
	30-39 yr	3.1 (n=6)	3.4 (n=6)	3.5 (n=6)	100%
	40-49 yr	2.4 (n=4)	3.3 (n=4)	3.0 (n=4)	100%
	50 yr or more	2.6 (n=10)	3.1 (n=10)	3.1 (n=10)	100%
Meaningfulness					
	29 yr or less	5.5 (n=2)	5.9 (n=3)	5.5 (n=2)	67-100%
	30-39 yr	5.6 (n=2)	5.7 (n=5)	5.6 (n=2)	33-83%
	40-49 yr	4.8 (n=3)	5.8 (n=4)	0	0-100%
	50 yr or more	4.4 (n=5)	5.4 (n=6)	5.7 (n=3)	30-60%
Safety					
	29 yr or less	5.8 (n=2)	0	3.5 (n=1)	0-66.7%
	30-39 yr	5.0 (n=1)	4.5 (n=2)	4.5 (n=2)	17-33%
	40-49 yr	4.0 (n=1)	4.0 (n=1)	3.5 (n=1)	25%
	50 yr or more	4.5 (n=2)	4.0 (n=1)	0	0-20%

Note. Mean scores relate to Likert rating scale 1-6 (never to almost always).

response. The physical subcategory was preferred except with the 40-49 years age group with a mean range of 3.1 (50 yr +) to 4.1 (29 or less years). The least favoured subcategory was cognitive for all age groups with mean scores ranging from a high of 3.7 (29 or less years) to a low of 2.4 (40-49 years).

In meaningfulness, the emotional subcategory was dominant for all age groups, with just below 6.0 to moderately above 5.0 mean usage. This subcategory also generated the greatest number of meaningfulness responses in each age group. The youngest age group had the greatest emotional mean score (5.9), and the 30-39 year group had the lowest mean (5.7). Cognitive was again least favoured as a subcategory, and the physical subcategory was rated by two groups with the same mean as cognitive. The 40-49 year group did not have any participant responses in the physical subcategory.

Under safety, cognitive strategies had the predominant mean scores across the age groups. The response rate was very low in the safety category with no responses recorded in the emotional and physical subcategories by two different age groups. The least favoured subcategory was physical.

Overall, the pattern emerged that highly engaged participants favoured emotional strategies in meaningfulness, followed by physical strategies in availability, and then cognitive strategies in safety. One might suggest based upon scrutiny of response rates, the youngest and oldest age groups were evenly split between the subcategories while the combined middle groups showed a tendency toward emotional strategies. This was the first demographic to report no participant responses in two subcategories

(meaningfulness and safety); the only age group to respond to each subcategory in each main category was the 30-39 year group.

Comparison between Years of Experience for Highly Engaged Participants

Comparison between the years of experience demographic was conducted in the same manner as the previous groups and parallel with the years of teaching experience group in the overall sample. The same group reassignment that was applied to the overall sample was repeated with this subgroup to yield three groups: 10 years of experience and less (n = 12; 52%); 11-20 years (n = 3; 13%); 20 years + (n = 8; 35%). This demographic subgroup represented 67% (12/18) of the overall 10 or less years experience; 33% (3/9) of the overall 11-20 years experience; and 57% (8/14) of the overall 20 years + experience group.

Regardless of subcategory, the top three strategies of the highly engaged 1-10 years of experience group were: *sharing household duties, child or elder care* (emotional and physical); and *setting personal work objectives*. The top three overall strategies for the 11-20 years of experience group were: *sharing household duties, child or elder care* (emotional and physical); followed by *walking before or after work*; *sleeping regular hours, as personally defined*; and *eating 3-5 meals daily based upon Canada Food Guide.* The highly engaged subgroup for 20+ years of experience had the top two strategies: *sharing household duties, child or elder care* (emotional); followed by *engaging with support network – family* with the third preference - *eating 3-5 meals daily based upon Canada Food Guide.*

The analysis for strategy subcategory preference resulted in the following. For the cognitive subcategory, the 1-10 years group chose the top strategy as *setting personal work objectives* (same choice as the counterpart group in the overall sample); the 11-20 years group selected *engaging in informal conversations with colleagues for performance feedback* plus *collaborating/co-facilitating to teach a class,* and the 20 + years group selected *self-reflective practice and setting personal work objectives* (matching the choice of the 20 + years group in the overall sample). In the emotional subcategory, *sharing household duties, child or elder care* received top rating by all three groups. In the physical subcategory *sharing household duties, child or elder care* was again chosen by the 1-10 year group; *sleeping regular hours, as personally defined* and *walking before or after work* were selected by the 11-20 year group, and the 20 + year group favoured *eating 3-5 meals daily based upon Canada's Food Guide.*

The preferred subcategory usage data in Table 27 reflected the following analysis. In availability, with 100% response rate, physical strategies were favoured by the 1-10 year and the 20 + year groups, and the 11-20 year group preferred emotional strategies. In meaningfulness, the participation response rate dropped significantly, but the emotional subcategory was preferred by all three groups. In safety, where the response rate was even lower, the tendency of strategy preference was toward the cognitive subcategory with some close scores to physical and emotional means. Overall, the least and most experienced group favoured each subcategory once, whereas the 11-20 year group clearly preferred the emotional subcategory.

Table 27

Comparison between Years of Experience of Highly Engaged Participants of Availability, Meaningfulness, and Safety Categories Rank Ordered by Mean Usage

Category	Years of Experience	Cognitive Mean	Emotional Mean	Physical Mean	Participant Response (% range)
Availability					
	10 yr or less	3.1 (n=12)	3.3 (n=12)	3.5 (n=12)	100%
	11-20 yr	2.6 (n=3)	3.4 (n=3)	3.0 (n=3)	100%
	> 20 yr	2.6 (n=8)	3.2 (n=8)	3.3 (n=8)	100%
Meaningfulness					
	10 yr or less	5.4 (n=5)	5.8 (n=10)	5.5 (n=4)	33-83%
	11-20 yr	4.7 (n=2)	5.7 (n=2)	0	0-67%
	> 20 yr	4.4 (n=5)	5.4 (n=6)	5.7 (n=3)	38-75%
Safety					
	10 yr or less	5.5 (n=3)	4.5 (n=2)	4.0 (n=4)	17-33%
	11-20 yr	4.0 (n=1)	4.0 (n=1)	0	0-33%
	> 20 yr	4.5 (n=2)	4.0 (n=1)	0	0-25%

Note. Mean scores relate to Likert rating scale 1-6 (never to almost always).

Summary

The data analysis addressed the study questions to identify preferred cognitive, emotional, and physical strategies to generate a sense of availability, meaningfulness, and safety and identification of differences between the demographic groups for the overall sample and the highly engaged subgroup.

Findings from availability regarding preferred cognitive, emotional, and physical strategies were based upon how many participants used a particular strategy and how frequently a particular strategy was used by participants. Participant responses were 100%; these data indicated that the strategies used by the greatest number of the overall participant sample (95%) were s*leeping regular hours, as personally defined*; *engaging with support network - family*; and, *setting personal work objectives;* a mix of physical, emotional, and cognitive subcategories. Yet, the top 3 strategies to receive highest frequency use (5.3 to 5.0) were *sharing household duties, child or elder care* (from emotional and physical subcategory) followed by *sleeping regular hours, as personally defined*. Furthermore, with the top 10 most frequently used strategies, the preferred subcategory was physical (used at 5.0 usage) followed by the emotional subcategory (4.6 usage). These two subcategories yielded a dominant strategy theme that was based in home/outside work.

For the highly engaged sample (56% of the overall sample), the overall strategies with the greatest number of participants usage (96% participant usage) were *engaging with support network - colleagues*; *implementing a new teaching strategy*; *setting personal work objectives*; and, *participating on a school planning team* - primarily

cognitive based. In contrast, the most frequently used strategies (5.0 to 5.5 usage) were the same as the overall sample group with the inclusion of *eating 3 - 5 meals daily based upon Canada food Guide*. As with the overall sample, the same preferred subcategories of the top 10 frequently used strategies were physical (4.9 mean usage) followed by emotional (4.7); a noted difference being the lower frequency of usage scores and a much smaller difference between the three subcategories scores of the highly engaged subgroup compared with the overall sample. The preferred strategies of the highly engaged subgroup were focused upon a home/outside work theme which matched the overall sample.

All data from meaningfulness and safety regarding strategy preference were difficult to interpret due to the low participant response; for example, only 9 strategies in meaningfulness and 6 strategies in safety received between 15% to 27% participant responses.

To analyze for demographic differences between genders, school sites, years of experience, and age of participant, the self-rated engagement data were sorted by respective category and average mean scores were determined. This allowed comparison between the categories of the overall participant sample and the highly engaged sample. The means comparison between the overall and highly engaged group of a demographic indicated small differences for strategy usage; one might suggest, in general, there was comparable strategy usage. Variance between strategy usage means for the overall and highly engaged subgroup in a demographic was observed in meaningfulness and safety;

however, the participant response rates widely fluctuated so that reliable comparisons were very difficult to make.

Addressing the study questions for differences within a demographic of the overall sample and highly engaged subgroup proved to be difficult due to inconsistent participation rates; availability was the only category to receive 100% participant response. Meaningfulness and safety main categories yielded widely fluctuating participant response rates which made the data very difficult to interpret. The pattern of participation yielded similar response rates across the demographics of the overall sample and the highly engaged subgroup with poor to very poor in the latter two categories.

This summary presents the most preferred strategies used by the overall group and highly engaged subgroup. The most popular emotional and physical strategy was *sharing household duties, child or elder care* with the preferred cognitive strategy as *setting personal work objectives*. The most frequently used strategies based upon the highest cumulative scores regardless of subcategory differ from the top subcategory preferences. The remainder of this summary will present an overview of the most frequently used strategies. It often occurred that multiple strategies were rated the same top cumulative score. Both overall and highly engaged participants' responses showed a clear disinclination for the cognitive subcategory and a preference for physical and emotional subcategories. In addition, this preference tended to demonstrate a general strategy theme for a home/outside work focus. It was found that several demographics

(rural; 30-39 years and 50+ years age; 11-20 and 20+ years of experience) matched all top strategy preferences between the overall group and highly engaged subgroup.

The data revealed the overall preferred single strategy across the demographics was *sharing household duties, child or elder care.* Based in the subcategories, the preferred strategies across the demographics were *sharing household duties, child or elder care* in the physical and emotional subcategories, and *setting personal work objectives* in the cognitive subcategory; however, it was rare for a cognitive strategy to present as a preference. The exception occurred with the 20-29 year age group, where cognitive strategies were a primary subgroup. S*leeping regular hours, as personally defined* and, or *eating 3-5 meals daily based upon Canada Food Guide* were very commonly selected after the top *sharing household duties, child or elder care* amongst the demographic groups.

A comparison between the overall group and highly engaged subgroup in a demographic indicated one demographic (rural) had matching top three overall strategy preferences; several demographics were similar in strategy preference, the 30-39 year age; 50+ year age; 11-20 years of experience; and, 20+ years of experience, with overall and highly engaged participants. Further comparison of demographic groups revealed diverse strategy preference in gender; 40-49 year age; and, 1-10 years of experience groups. An interesting inverse strategy preference was noted in the urban/inner city participants demographic between the overall and highly engaged subgroup.

The demographic profile to emerge based upon self-rated engagement levels reflected that the most engaged participant was likely a female to be 50+ years old, who

had been teaching greater than 20 years and reporting to be in a rural school. The least engaged participant was most likely to be a male, of 40-49 years and teaching in an urban school with 11-19 years of experience in the field. The following chapter will discuss the findings of the data analysis, suggest further query for investigation, and implications of this study for teachers, principals, and school boards.

CHAPTER FIVE: SUMMARY, DISCUSSION, AND IMPLICATIONS

The purpose of this investigation was to explore personal motivation strategies used by elementary school teachers to maintain engagement in their work. This topic is important given the pivotal role that teachers play in the lives of their students and by that extension into the lives of families and the community at large. In fact, teacher influence may affect the future foundation of society: the cultural patterns, productivity, economics, and political choices. It is believed to be society's best interest to have school teachers who are highly engaged and happy in their work. The study was based loosely upon Kahn's (1990) engagement framework using a quantitative survey that offered qualitative options from voluntary teacher participants of randomly selected urban, rural, and inner city schools within a large school board.

This chapter sets out to discuss the finding of data analysis. The discussion will include the primary contributions of this study to the knowledge base on teacher motivation. Implications for further study may generate ideas to be taken forward for others to consider with their studies.

Summary of the Study

Kahn's (1990) framework addresses the key factors that influence a person's motivation at work. The purpose of this study was to explore the strategies, categorized by Kahn's framework, which teachers used to be engaged in their work. These strategies were explored in terms of teachers' availability (i.e., on cognitive, physical, and emotional levels) for their work, the meaningfulness that teachers took from their work, and their personal sense of safety in their work. Data analysis was limited to descriptive statistics due to the small return on surveys and the survey design. Responses to the

availability category were robust enough to conduct analyses of the preferred strategies, but responses to the meaningfulness and safety categories were too limited to gain insights into the preferred strategies for those categories. Comparisons between groups could not be made due to low response rates. In spite of these structural limitations, insights into key strategies, strategy themes, and demographics show some trends.

Emotional and physical strategies factored prominently in the availability category, which refers to the energy that the teachers brought to their work. This trend was predominant across all participant and highly engaged demographics: gender, school site, age (except the 20-29 year old group who equally favoured cognitive strategies with physical and emotional items), and years of experience groups. The key strategies used most frequently by both overall and highly engaged groups suggested the importance of life at home, outside the work place, in that the preferred physical and emotional strategies were personal and/ or home based. In fact, for both groups, the list of top 10 strategies receiving the greatest frequency rating had only one work-related strategy: *setting personal work objectives*. It is worthwhile to note that this result aligns with Carbonneau, Vaillerand, Fernet, and Guay's (2008) finding that teachers who work in harmonious passion are engaged in work with life balance and at less risk of burnout.

The particular strategies that participants identified as most important were: *sharing household duties, child or elder care* (prevalent strategy in both physical and emotional subcategories) followed closely by *sleeping regular hours, as personally defined, eating 3-5 meals daily based upon Canada Food Guide,* and *engaging with support network - family*. The consistent importance of *sharing household duties, child*

or elder care was a surprising trend. It was used by 90% of the participants and with the greatest frequencies to place as the top two rankings of all strategies. It is worthwhile to note the recognition and reliance by at least 93% of the teachers upon health habits to help maintain a core foundation to support one's motivation. Rounding out the balanced wellness approach to maintaining motivation was another acknowledgement of family support by 95% of the participants.

Discussion

Although there was equal representation between the three subcategories for the strategies used by at least 90% of participants, cognitive strategies were much less well represented than physical and emotional strategies in the most frequently used strategies. This indicates that although some cognitive strategies were used by as many participants as some physical and emotional strategies, they were used less often. This trend occurred across all demographics although the 20-29-year-old group did report cognitive strategies in their top ranked frequency usage list. The observation is interesting because the teaching profession is cognitive based and, yet, the teachers clearly preferred noncognitive strategies to address their professional engagement.

The subcategory preferences coupled with the actual preferred strategies and themes suggest that support for these teachers' work life was not primarily derived from the organization. This finding is interesting in light of the revelation in the literature review that many of the reasons for teachers' departure from the profession were related to the organization, such as unsatisfactory remuneration, high stress levels, student discipline and lack of administrative support, lack of mentoring, lower job satisfaction,

overwhelming workload, and lack of community/media respect. In this study, strategies relating to these complaints were not raised by participants in the comments or free text sections of the questionnaire; therefore, no conclusions can be drawn as to whether the participants were upset with their organization. However, their failure to draw on their organization for motivational support is noteworthy.

The lack of participants' presenting strategies, complaints, or comments relating to the major reasons cited in the literature review for leaving the profession may have been influenced by the participants' self-rated engagement level. The overall participant group presented as a moderate highly engaged teacher body with an average self-rated engagement level of 7.7 (out of a possible 10), and the highly engaged teacher subgroup had an average engagement level of 8.6; this high level of engagement may have impacted upon their preferred strategies. For example, the aspect of mentoring was given as one reason for teachers leaving the profession (McIntyre, 2006); however, it was raised numerous times, directly and indirectly, as pro-offered strategies on the survey. Yet, the item dealing specifically with mentoring did not emerge as a key motivational strategy. Strategies that were more commonly used were *engaging with support network - colleagues, engaging in informal conversations with colleagues,* and *collaborating and co-facilitating to teach a class*. These strategies reflect the principle of mentoring but are not a formalized one-to-one arrangement between colleagues. This result is consistent with Leithwood and McAdie's (2007) finding that collaboration amongst teachers is a key workplace factor in establishing a positive school culture for teachers.

The secondary focus of the study was to explore for differences across demographic groups. From the overall group, the participant profile with the highest engagement rating was rural-based female or male of 30-39 years age and 1-10 years of experience; from the highly engaged subgroup, the participant profile with the highest engagement rating was rural-based female of 30-39 years of age with 20+ years of experience. The commonality that emerged was working in a rural school and being 30-39 years old. At the lower engagement level, in the overall group, the least likely engaged was a 40-49-year-old urban teacher with 11-20 years of experience. The observation that an urban school setting was not part of the highly engaged demographics is not a surprise given Leithwood and McAdie's (2007) finding that, in Canada, "relatively small schools located in suburban rather than urban locations" (p. 43) were preferred working conditions.

Preceding studies linking age and years of experience with engagement have yielded conflicting results. In an American study, Mertler (2002) found that middle-career teachers were least motivated; it was the youngest and oldest teachers who reported being most engaged. However, another American study indicated that younger and older teachers were leaving the profession (Ingersoll, 1999). Ontario studies indicate that a large number of teachers, and a large majority of teachers less than 50 years of age, expect to be practicing in the following 5 years (COMPAS, 2003, 2004; Ontario College of Teachers, 2004). McIntyre (2003), who conducted a 5-year study on behalf of the Ontario College of Teachers, found that an expected loss of new teachers within 2 years did not occur; in fact, by 2005, only 8% of new teachers had left the College. While no

clear conclusion may be taken from this study, the trend was that the highest self-ratings of engagement were reported by the least and most experienced teachers. Furthermore, no participant in this study expressed an expectation to leave the profession. These results seem to reflect the outcome of the studies by COMPAS and Ontario College of Teachers.

It was not decisive in the overall participant group that one gender was more engaged than the other in this study. While Mertler's (2002) American study found males in middle and high school to be more satisfied with their work than females, in Ontario "male teachers may be slightly more alienated than females" (COMPAS, 2004, p. 18) Although this study did find that males self-rated as less engaged than females, the difference in the level of engagement was negligible. However, in the highly engaged subgroup a greater proportion of males (70%) than females (52%) self-reported as highly engaged. Although the male participant numbers were too small to support any conclusion, it is interesting that the female group with the overall larger numbers did not yield the same highly engaged numbers as the male group.

Implications

The study reported in this document was based on Kahn's (1990) framework that describes motivation as depending on the personal availability or energy (i.e., cognitive, emotional, and physical) that people bring to their work, the meaningfulness they find in the work, and the sense of safety they feel in the workplace. This framework is a reasonable presentation of professional motivation. May et al. (2004), using Kahn's framework, found in their study of a large insurance company that "all three

psychological conditions are important in determining one's engagement at work" (p. 30) and pointed out that further study was needed in "other organizational settings as the determinants of the psychological conditions may vary in their importance in the model" (p. 32). Despite the low participant numbers, the study did capture a sense of the strategies that were important to teachers for engagement. In a career that relies heavily on cognition, the teachers appeared to favour engagement strategies that would promote life balance by predominantly using physical and emotional components.

It is possible that the design of the questionnaire failed to present Kahn's (1990) framework in an accessible manner. A further study could be conducted with a survey instrument designed to make the framework more accessible to participants, which could generate more useful data for analysis. It also is possible that Kahn's motivation framework was not as relevant to teachers as initially expected. Further inquiry using a more accessible survey tool may be beneficial to investigate the fit between the framework and this profession. For example, this study may have tried to accomplish too much by incorporating the entire framework within one survey. Increased participant responses and survey completion rates may have occurred if one category was explored per survey, such as availability with the cognitive, emotional, and physical subcategories, with an option to return with a survey for each remaining category (i.e., meaningfulness and safety). Another potential advantage of exploring one category with the subcategories per questionnaire is to reduce the possibility of underreporting strategy usage given that one large comprehensive survey incorporating the entire framework may be overwhelming.

This study suggests further investigation into motivation strategies for teachers that keep them engaged. Advancement in this field of study can help teachers remain engaged or reengage in their profession, thereby reducing the number of teachers suffering burn-out, requiring leave of absence, or leaving this career. According to Csikszentmihalyi (1990), employees attain greatest flow at work, as opposed to home. Basom and Frase (2004) found that flow "when applied to classrooms have the potential of enhancing teachers' work environments and increasing their effectiveness, thereby increasing student achievement" (p. 241). Similarly, Morgan et al. (2007) found that the events in the classroom and school have great influence upon teacher motivation and recommend attention made at the school level to focus upon teacher engagement by creating positive experiences at that level. These various findings, consistent with the results of this study, confirm the importance of school administrators to develop policies that will facilitate engagement and to promote a workplace environment that supports the strategies that increase or maintain teacher engagement.

For practicing teachers, the results of this study have the potential to create awareness amongst teachers of their current engagement level and to evaluate the efficacy of their strategies. This self-reflection may lead to new strategy choices that are more effective for teachers at a particular time in their personal life and work life. Ideally, this topic is of sufficient interest among teachers that they can begin a discourse that leads to an increased supportive work culture and shared strategy ideas. This condition is important because collegial support and dialogue has been found to promote engagement (MacTavish & Kolb, 2006). In addition, teacher evaluations may be of

greater meaning when based upon colleague input as well as principal observation (Basom & Frase, 2004). In the classroom, increased teacher engagement may lead to increased enthusiasm where students, as well as the teacher, will receive direct benefit with engaging education. One might expect further outcomes of higher student performance, personal growth, and academic achievement.

For administrators, the practice implications of having more staff engaged and at higher levels may result in fewer staff leaving the profession, more stable daily staffing, less absenteeism from work, and less teacher movement within and outside a school board. In addition, the relationship between administration and the teaching staff may alter, creating a school culture that is infused with motivation, energy, and enthusiasm. Policy development via human resources and/ or union endorsement may be implemented that actively supports and promotes teacher engagement in the school, such as inclusion of engagement self-reflection activities during professional development days. Basom and Frase (2004), for example, have noted the integral leadership role that principals play in establishing an environment that reduces stressors and distractions and increases teachers' sense of self-efficacy, all of which foster workplace engagement and flow. Such a working environment should support and/or increase teachers' energy level and reduce energy drain, so that personal reenergizing activities are a habitual practice by teachers to be in 'harmonious passion' (Carbonneau et al., 2008) with their work.

In addition, preservice students gain an opportunity for invaluable personal and professional growth, through their field placements, because they would have exposure to more engaged teachers. Preservice student teachers could begin to consider their

personal engagement, as they discuss with their teacher associates how to maintain, support, evaluate, and rebuild their career when engagement fluctuations may occur. This candid exposure to the reality of work life in the profession may help to reduce burnout and leaving the profession if preservice students had rudimentary awareness and skill to deal with engagement.

The data for this study were gathered in June 2007 before a major global economic downturn; it is not known how society and school culture at that time may have influenced strategy preference, resources, and personal/family habits. Morgan et al. (2007) indicate the importance of considering the interval of the study since experience and events can change in a teacher's life not only over a broad span of time, such as a year, but even within a day. It is important to repeat the engagement studies because contemporary society, the school culture, and a teacher's personal life are likely to influence strategy preference. In other words, stress in the workplace may be influenced by outside factors as much as by internal factors.

A potentially useful question to investigate would be whether strategies are preferred based upon the theme of school/workplace versus outside school/at home. The school/workplace theme may include incentive based strategies, such as acknowledgement for teaching innovation and excellence (MacTavish & Kolb, 2006) to further create a culture of engagement. Some literature was found that discussed the importance of classroom and school culture (Leithwood & McAdie, 2007; Morgan et al., 2007), and Mertler (2002) briefly described "school-based factors ...such as school leadership, school climate and school infrastructure" (p. 51) that can impact motivation.

Yet, this study noted the overwhelming importance of support or sharing household chores, child, and elder care. A survey that is designed specifically to compare in-school and out-of-school strategy use would be helpful for building engaging workplaces where administration develop strategic plans around teacher retention, engagement, and positive workplace cultures. Literature has been clear on the effectiveness of such a working environment for teachers and students. It is possible that the most engaging workplace incorporates key outside school/at home strategies (e.g., on-site child care) with school based strategies.

Cognitive strategies were offered on the survey but were neither most popular among the study participants, nor were they rated with high frequency of usage. Teachers are accountable to the school system and government to meet expectations relating to student performance on testing standards, which means that their work is cognitive in nature. To foster teacher engagement to create a classroom learning environment that leads to optimal student performance, MacTavish and Kolb (2006) and Leithwood and McAdie (2007) suggest effective strategies are principal and teacher leadership which also entails mentoring and self-reflecting, teacher involvement with decision making at a school level, and teachers working together collaboratively and with a continuous learning philosophy. They found that these elements contribute to meaningful work because they underlie desirable working culture and conditions. It would be interesting to study this line of query to gain an understanding regarding the lack of these strategies reported being used in this study and, secondly, how the teachers would recommend creating such an environment; this may provide useful data and insights for principals,

school administrators, and teachers to improve teacher engagement and attain higher student performance outcomes.

Personal Learning

This study provided an enormous opportunity for researcher growth. From this work, I gained a great appreciation for others' contributions. Specifically, gratitude is extended to the participants who generously gave of their time and input. For me, this is humbling; I have become more sensitive to fellow researchers and willing to participate in their research. Furthermore, I have gained a greater respect for the process, skill, and expertise required to conduct reliable and valid research that makes a contribution to its field. Last, the benefit, and at times necessity, of academic and collegial support for a researcher during a study cannot be overstated. This experience provided the opportunity to gain further insights into the generosity of the human spirit. Also, I gained an appreciation of fine researchers and their work as well as a crucial reminder of the integrity of mentorship.

A lot was also learned from my challenges, specifically in relation to the study design/process and the survey tool. Working with organizations for access to participants relinquishes some researcher control and can present challenges when timelines for a study are restrictive. This study design encountered a major challenge with timing of the survey; the data collection would have been better to be postponed to the fall term when more school principals might have granted access and more teachers might have participated. The number of school sites and returned surveys was clearly suboptimal.

The survey tool was problematic in design; this emerged after data collection and upon data cleaning. Several issues emerged such as the inconsistent approach to data collection and poor reliability and validity. An insight gained was the attempt to accomplish too much in one survey. The survey tool design flaws now appear so evident and may have been avoided had I taken closer critique and deeper review beyond the pilot and review that I did conduct. In addition, the survey instrument was developed to be a quantitative but was not designed with respect to statistical analysis.

Going forward in lessons learned is a realization that design issues may arise during a study with some being preventable while others may not be foreseen. A more careful scrutiny at all times in my study, coupled with more consultation with my advisor, may have reduced some design issues that occurred. My research experience has begun to build preliminary skill and confidence in a number of areas, from identification of study challenges that are evident in the design, to increased flexibility in the study process, and development of problem-solving skills and a resources base. A major example of resource development is computer technology; the skills that were lacking at the onset of this study yielded a learning pathway that was intimidating and most difficult at times as I learned to use Excel and then SPSS databases and navigate computer crashes. It is advisable to have working skills of these basic databases before a research project and, or access to a knowledgeable resource person. Undoubtedly, there are other skills that are yet developed in research. These various skills and resources are a sample of the required skill set that are crucial for a study to prevent and, or reduce study weakness.

My study design problems impacted upon the analysis that the data could support. I was limited to descriptive statistics which allowed observations to be made but no conclusions to be drawn about the data.

Final Thoughts

Teachers serve as powerful role models in various capacities, and engagement is a fundamental underpinning of a teacher's work. This study indicates that a diverse arsenal of strategies, physical, emotional, and cognitive, is important for workplace engagement. It also is important for individual teachers to have supports, other people, plus simple, uncomplicated health habits to support good physical and emotional health, to stay engaged. Kahn's (1990) framework for engagement remains exciting and worthy of further investigation with teacher engagement.

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Appendix A

Study Package Guidelines for Survey Completion

1. Please read the consent form and include signature: with date at the bottom. The form may be returned with your completed survey. After completing the survey and the token of appreciation form, please seal the three documents in the study envelope and place the sealed envelope in the return school-identified study envelope.

2. Please complete the survey questions by selecting the choice that best matches how often you use the stated motivation strategy. **The following definitions** are guidelines for completing the survey.

Cognitive or psychological motivators refer to activities that create a sense of availability to engage in your work. These activities produce intellectual energy to perform your work (Kahn, 1990).

Emotional motivators refer to activities that create a sense of availability to engage in your work. These activities produce emotional energy to perform your work (Kahn, 1990).

Physical motivators are activities that create your sense of availability to engage in your work (Kahn, 1990). These activities produce physical energy to perform your work (Kahn, 1990).

Meaningfulness is defined as a sense of return on personal investment and effort given in your work (Kahn, 1990). Motivators are activities that maintain or increase the value that you give to your job.

Safety is defined as feeling able to be oneself without fear of negative effect to self-image, status, or career (Kahn, 1990). Motivators are activities that achieve emotional and, or physical wellbeing in the workplace.

I respectfully ask for completed consent forms and surveys to be returned within 10 days.

Thank you,

Cindy Spong, H.B.Sc.N., MEd (cc), Researcher

Motivation Strategies for Work Engagement Paper Copy Questionnaire

Survey #

This questionnaire is 10 pages and takes 15 - 20 minutes to complete. Please read each item carefully and refer to definitions as needed.

Section 1: Demographic Information
Please put a checkmark in the appropriate box for each item.

Gender

☐ Male ☐ Female

What is your job classification?

☐ Full Time ☐ Part Time ☐ Casual

Age

☐ Less than 25 years
☐ 25 - 29 years
☐ 30 – 34 years
☐ 35 – 39 years
☐ 40 – 44 years
☐ 45 – 49 years
☐ 50 + years

How many years have you worked in education?

☐ 3 years or less
☐ 4 - 10 years
☐ 11 - 15 years
☐ 16 - 20 years
☐ More than 20 years

What is the highest level of post secondary education you have completed?

☐ Some university education
☐ Baccalaureate degree
☐ Master or Doctorate degree

Classroom teaching curriculum assigned:

Which program do you work in? (Check all that apply)

☐ JK/SK
☐ Grades 1 - 2
☐ Grades 3 - 4
☐ Grades 5 - 6
☐ Grades 7 - 8
☐ Split Grades (please specify)
☐ Special Education

Is this your first career or subsequent career?

Developed by Cindy Spong, Brock University, Faculty of Education, November 2006
This research received ethics clearance through Brock University's Research Ethics Board (file #06-249)

Section 2. The following statements indicate cognitive motivation strategies. Please choose a number from 1 to 6 to indicate how often you use the strategy. Cognitive or psychological motivators are activities that create a sense of availability to engage in your work (Kahn, 1990).

Never 1	Rarely 2 A few times a year or less	Sometimes 3 Once a month or less	Often 4 A few times a month	Very often 5 Once a week	Almost always 6 A few times a week					
1	Reading hardcopy educational or professional journals				1	2	3	4	5	6
2	Reading e-journals - education or professional				1	2	3	4	5	6
3	Writing article(s) for educational or professional publication				1	2	3	4	5	6
4	Attending professional development workshops				1	2	3	4	5	6
5	Developing a work project				1	2	3	4	5	6
6	Implementing a new work project				1	2	3	4	5	6
7	Journaling for personal development or leisure				1	2	3	4	5	6
8	Self-reflecting practice				1	2	3	4	5	6
9	Setting personal work objectives				1	2	3	4	5	6
10	Changing classroom curriculum assignment				1	2	3	4	5	6
11	Changing grade				1	2	3	4	5	6
12	Changing school				1	2	3	4	5	6
13	Implementing a new teaching strategy				1	2	3	4	5	6
14	Attending union meetings				1	2	3	4	5	6
15	Participating with union committees				1	2	3	4	5	6
16	Mentoring role to school student(s)				1	2	3	4	5	6
17	Mentoring role to teaching pre-service student(s)				1	2	3	4	5	6
18	Mentoring role to colleague(s)				1	2	3	4	5	6

Comments regarding cognitive strategies:

Section 3. The following statements indicate emotional motivation strategies. Please choose a number from 1 to 6 to indicate how often you use the strategy. Emotional motivators are activities that create a sense of availability to engage in your work. (Kahn, 1990)

Never 1	Rarely 2 A few times a year or less	Sometimes 3 Once a month or less	Often 4 A few times a month	Very often 5 Once a week	Almost always 6 A few times a week					
1	Working at creative personal projects				1	2	3	4	5	6
2	Hobby (please specify): _____				1	2	3	4	5	6
3	Reading for pleasure				1	2	3	4	5	6
4	Creative writing				1	2	3	4	5	6
5	Playing a musical instrument, singing, listening to music, attending concerts				1	2	3	4	5	6
6	Watching movies at home or in theatre				1	2	3	4	5	6
7	Attending live theatre				1	2	3	4	5	6
8	Spending time with an animal companion or pet(s)				1	2	3	4	5	6
9	Meditating strategies, such as yoga				1	2	3	4	5	6
10	Sharing household duties, child or elder care				1	2	3	4	5	6
11	Regular relaxation time at home				1	2	3	4	5	6
12	Vacationing at home				1	2	3	4	5	6
13	Enjoying weekend get-aways or day trips				1	2	3	4	5	6

Section 2. Continued. The following statements indicate cognitive motivation strategies. Please choose a number from 1 to 6 to indicate how often you use the strategy. Cognitive or psychological motivators are activities that create a sense of availability to engage in your work (Kahn, 1990).

Never 1	Rarely 2 A few times a year or less	Sometimes 3 Once a month or less	Often 4 A few times a month	Very often 5 Once a week	Almost always 6 A few times a week					
19	Participating with workplace committee(s)				1	2	3	4	5	6
20	Participating on a school planning team				1	2	3	4	5	6
21	Planning a student class trip				1	2	3	4	5	6
22	Collaborating and co-facilitating to teach a class				1	2	3	4	5	6
23	Participating in education research				1	2	3	4	5	6
24	Participating in education research				1	2	3	4	5	6
25	Conducting education research				1	2	3	4	5	6
26	Continuing education with personal interest courses				1	2	3	4	5	6
27	Continuing education with career advancement courses				1	2	3	4	5	6
28	Assuming a leadership role in school				1	2	3	4	5	6
29	Having a personal mentor				1	2	3	4	5	6
30	Engaging in informal conversations with colleagues for performance feedback				1	2	3	4	5	6
31	Seeking performance feedback via formal performance appraisals				1	2	3	4	5	6

Please indicate other <u>cognitive</u> strategies you use and rate frequency use with above scale :

Section 3 Continued: The following statements indicate emotional motivation strategies. Please choose a number from 1 to 6 to indicate how often you use the strategy. Emotional Motivators are activities that create a sense of availability to engage in your work (Kahn, 1990).

Never 1	Rarely 2 A few times a year or less	Sometimes 3 Once a month or less	Often 4 A few times a month	Very often 5 Once a week	Almost always 6 A few times a week					
14	Vacationing away from home				1	2	3	4	5	6
15	Participating with professional organizations				1	2	3	4	5	6
16	Assisting extracurricular programs or clubs with students				1	2	3	4	5	6
17	Volunteering with community groups				1	2	3	4	5	6
18	Attending religious ceremonies				1	2	3	4	5	6
19	Maintaining personal spirituality				1	2	3	4	5	6
20	Maintaining ethnic traditions in home				1	2	3	4	5	6
21	Attending cultural events in the community				1	2	3	4	5	6
22	Attending personal counseling				1	2	3	4	5	6
23	Lunching with colleagues				1	2	3	4	5	6
24	Engaging with support network - family				1	2	3	4	5	6
25	Engaging with support network - colleagues				1	2	3	4	5	6
26	Engaging with support network - non-teachers, non-family				1	2	3	4	5	6
27	Participating in teacher exchange programs				1	2	3	4	5	6
28	Participating with school planning				1	2	3	4	5	6
29	Planning and attending student class trip - day or extended				1	2	3	4	5	6
30	Collaborating and co-facilitating to teach a class				1	2	3	4	5	6

Please indicate other emotional strategies you use and rate frequency of use with above scale:

Comments regarding emotional strategies:

Section 4. The following statements indicate physical motivation strategies. Please choose a number from 1 to 6 to indicate how often you use the strategy. Physical motivators are activities that create a sense of availability to engage in your work (Kahn, 1990).

Never 1	Rarely 2 A few times a year or less	Sometimes 3 Once a month or less	Often 4 A few times a month	Very often 5 Once a week	Almost always 6 A few times a week

1	Sleeping regular hours, as personally defined	1	2	3	4	5	6
2	Eating 3 - 5 meals daily based upon Canada Food Guide principles	1	2	3	4	5	6
3	Taking vitamin(s), iron or calcium	1	2	3	4	5	6
4	Taking herbal supplement(s)	1	2	3	4	5	6
5	Participating on sports team (recreationally or competitively)	1	2	3	4	5	6
6	Walking during lunch or recess	1	2	3	4	5	6
7	Walking before or after work	1	2	3	4	5	6
8	Playing with family children at home or playground	1	2	3	4	5	6
9	Gardening	1	2	3	4	5	6
10	Maintaining regular fitness routine at home	1	2	3	4	5	6

Section 4 Continued. The following statements indicate physical motivation strategies. Please choose a number from 1 to 6 to indicate how often you use the strategy. Physical motivators are activities that create a sense of availability to engage in your work (Kahn, 1990).

Never 1	Rarely 2 A few times a year or less	Sometimes 3 Once a month or less	Often 4 A few times a month	Very often 5 Once a week	Almost always 6 A few times a week					
11	Maintaining regular fitness routine with a gym membership				1	2	3	4	5	6
12	Actively participating with school or community youth sports teams during skill development or practice games				1	2	3	4	5	6
13	Attending an annual wellness check with family physician				1	2	3	4	5	6
14	Attending massage therapy				1	2	3	4	5	6
15.	Self-pacing according to energy level and health status				1	2	3	4	5	6
16.	Sharing of household duties, child or elder care				1	2	3	4	5	6
17.	Receiving an influenza vaccination annually				1	2	3	4	5	6
18.	Practicing Eastern meditative practices, such as Tai Chi, yoga				1	2	3	4	5	6
19.	Dancing in any form (recreational, studio, etc)				1	2	3	4	5	6
20.	Participating in seasonal sports, such as winter skiing, skating, outdoor swimming or bicycling				1	2	3	4	5	6

Please indicate other physical motivation strategies you use and rate frequency of use with above scale:

Comments regarding physical strategies:

Section 5. Please list motivation strategies that you use to create meaningfulness in your work and indicate the frequency of usage. Meaningfulness is defined as a sense of return on personal investment and effort given in your work (Kahn, 1990).

Never	Rarely	Sometimes	Often	Very often	Almost always
1	2	3	4	5	6
	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week

Please list strategies from the previous lists which contribute most to your sense of meaningfulness and choose a number from 1 to 6 to indicate how often you use the strategy.

_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6

Please list strategies not provided on the previous lists which contribute most to your sense of meaningfulness and choose a number from 1 to 6 to indicate how often you use the strategy.

_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6

Please list strategies not provided on the previous lists which contribute most to your sense of meaningfulness and choose a number from 1 to 6 to indicate how often you use the strategy.

_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6

Comments regarding meaningfulness strategies:

Section 6: Please list motivation strategies that you use to create a sense of safety in your workplace and indicate the frequency of usage. Safety is defined as feeling able to be oneself without fear of negative effect to self-image, status or career (Kahn, 1990).

Never	Rarely	Sometimes	Often	Very often	Almost always
1	2	3	4	5	6
	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week

Please list strategies from the previous lists which contribute most to your sense of safety and choose a number from 1 to 6 to indicate how often you use the strategy.

_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6

Please list strategies not provided on the previous lists which contribute most to your sense of safety and choose a number from 1 to 6 to indicate how often you use the strategy.

_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6

Comments regarding safety strategies:

Section 7. What does the word "engagement" in the workplace mean to you?

How would you rate your current level of engagement on a scale from 1 to 10?

Thank you for completing this questionnaire.

Appendix B

Research Ethics Board Clearance Letter

Brock University
Office of Research Services
Research Ethics Office
St. Catharines, Ontario, Canada L2S 3A1
T: 905-688-5550, Ext. 3035/4876 F: 905-688-0748
www.brocku.ca

DATE: March 30, 2007

FROM: Linda Rose-Krasnor, Chair
Research Ethics Board (REB)

TO: Coral Mitchell, Education
Cindy SPONG

FILE: 06-249 SPONG

TITLE: Investigation of Motivation Strategies Used by Engaged School Teachers for Workplace Engagement

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The Brock University Research Ethics Board has reviewed the above research proposal.

DECISION: **Accepted as clarified; however, you may want to clarify on the consent form that participants who respond electronically still need to mail a hard copy of the consent for, if this is the case.**

This project has received ethics clearance for the period of March 30, 2007 to July 1, 2007 subject to full REB ratification at the Research Ethics Board's next scheduled meeting. The clearance period may be extended upon request. ***The study may now proceed.***

Please note that the Research Ethics Board (REB) requires that you adhere to the protocol as last reviewed and cleared by the REB. During the course of research no deviations from, or changes to, the protocol, recruitment, or consent form may be initiated without prior written clearance from the REB. The Board must provide clearance for any modifications before they can be implemented. If you wish to modify your research project, please refer to http://www.brocku.ca/researchservices/forms to complete the appropriate form **Revision or Modification to an Ongoing Application.**

Adverse or unexpected events must be reported to the REB as soon as possible with an indication of how these events affect, in the view of the Principal Investigator, the safety of the participants and the continuation of the protocol.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and clearance of those facilities or institutions are obtained and filed with the REB prior to the initiation of any research protocols.

The Tri-Council Policy Statement requires that ongoing research be monitored. A Final Report is required for all projects upon completion of the project. Researchers with projects lasting more than one year are required to submit a Continuing Review Report annually. The Office of Research Services will contact you when this form ***Continuing Review/Final Report*** is required.

Please quote your REB file number on all future correspondence.

LRK/bb