

**Factors influencing Teachers' Participation in Certification Education: A  
Special Case of Continuing Professional Development in Belize**

by

Amparito T. de J. Tun

A Thesis Submitted to the  
Graduate Faculty in Partial Fulfilment of the  
Requirement for the Degree to

**MASTER OF BUSINESS ADMINISTRATION**

Major: International Human Resource Development

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National Taiwan Normal University  
Taipei, Taiwan  
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*Dedicated to my son and daughter, Silvin and Levenia Hudson*

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## **ABSTRACT**

Belize's educational system has been evolving gradually since the early 1960's to provide quality and competent education to all students. Up to date, the struggle is still visible because the hallmark of the British colonization remains within the educational system. The practice of hiring teachers without proper certification and training in pedagogy has kept Belize disadvantageous in this field. This research intends to explore the possible factors that could be influencing teachers' participation on enrolling in a teacher certification education program in order to fill in the demands of a rapid increase of students. A quantitative study was conducted on a sample of 206 uncertified teachers' at all three levels of education. Three personal factors, two task factors and two work environment factors were selected based on the literature and previous research as the independent variables to predict the dependent variable, intention to participate in certification education. Hierarchical regression was used to test study hypotheses. Findings revealed that the personal factor, appraisal of meaningfulness, task factor, pressure of work, and the work environment factor, management support, have a positive influence on teachers' intention to participate in certification education. In addition, although not hypothesized, some demographic variables such as age, gender, tenure in current job position and highest educational qualification level, also presented influence on teachers' intention to pursue certification education. These findings have important implications for the Belizean Ministry of Education on policies related to promoting teacher certification education.

**Keywords:** continuing professional development (CPD), teacher certification, teacher.

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# CHAPTER I INTRODUCTION

This chapter offers an insight of the research groundwork which includes five sections. The first section, background of the study which pretends to give the reader an idea of the context of the study, section two states the purpose of developing the study, section three states the questions guiding the research, section four states the significance of the investigation and section five states key terms and definitions used in the investigation. All of these are to provide a comprehensive focal point of the entire research.

Furthermore, to investigate and find responses to many factors that may be affecting an essential issue presently, within the education spectrum in Belize; a small country in Central America. For many decades, the Ministry of Education (MoE), the government and policy makers have been struggling in reaching the objectives of mastering an education system with trained and qualified teachers. Due to the demand of our primary school students and the small population density, the goal of hiring fully trained and qualified teachers has been a challenge.

Through the course of time, it has been a practice to have teachers entering the profession with minimum training and qualification because of the lack of Institutions offering certified teachers education. This issue needs to be addressed and researched for the possible factors that have been influencing the population of teachers that has lead them over the years, not to aspire to continue furthering their pedagogical education and professional development.

Seeking answers to this issue will further assist the respective authorities on focusing their strategies and plans; to target appropriately the possible solutions to address the needs and viewpoints of the teachers in order to achieve, the ideal attitude of commitment and to fill the dire need of furthering their education not only in content knowledge but pedagogical and at the same time continuing professional development (CPD).

## **Background of the Study**

Continuing professional development (CPD) is an important part of a teacher's professional life. At various stages of their career, teachers undergo continuous learning to enhance their knowledge, skills and abilities and develop positive values for the benefits of students.

According to Day (1999):

CPD is the process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purpose of teaching; and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues throughout each phase of their teaching lives. (p.4).

Therefore, it is assumed that practical formal CPD in the form of being enrolled at an institution will be more helpful on enhancing learning, whereas teachers through the interaction with their colleagues, and instructors will obtain more knowledge and skills. Therefore, an effective implementation of new and diverse ideas and strategies of this changing environment needs to be addressed for the improvement of their professional career.

Continuing professional development is classified in two ways; as formal and informal. This study will focus on a special case of CPD in Belize since in my country; CPD is mainly considered and practiced in the formal way such as workshops and seminars of subject matters that need to be addressed after a review of the outcomes of the previous school years' syllabus. Therefore, this study intends to research on factors that may be influencing teachers' participation in a teacher certification education program, which is a formal CPD but not commonly considered as such since workshop and seminars are of a short term equivalence mostly used compared to a course based CPD that is of a long term equivalence which is available at an institution such as Sixth Form (Associate's Degree in Primary Education) -which is an educational institution in Belize, being a hallmark of the British colonization, where students aged 16 to 19 typically study for advanced school-level qualifications- or through a University level (Bachelor's in Primary Education). According to the Education Statistics at a glance (2011-2012) more than 44% from a total of 3,299 primary school teachers, 71% from a total of 1,420 secondary teachers are untrained and uncertified and are within the workforce. At tertiary level there exists no statistics.

Teaching has been seen as one of the most prominent and life-long professional careers needed in the world. It is an imperative factor in the economic, social, financial and human development of any particular country. Throughout the world, governments, (MoE), Non-Governmental Organizations (NGO), the International Monetary Fund (IMF), UNESCO and Teacher Unions are working diligently on achieving better solutions to the challenges of the educational system.

As it is understood, teachers are the locomotives that moves and influences the intelligence and growth of young children. They are an important factor in the foundation of

an entire generation of minds within a society. People in all works of life, be it formal or informal employment, had a teacher as an instructor in their childhood, for example presidents and leaders of all countries, doctors, bus drivers, managers, professors, scientists, lawyers, carpenters, mechanics, just to name a few. This acknowledges the role teachers play in the development of a flourishing and literate nation. Nonetheless, more emphasis is required on behalf of the educational system- policy makers, principals, teacher educators, governments and the MoE in regards to channel; suitable objectives, strategies, and planning in motivating and encouraging teachers as they are actualizing themselves in a certification education program. They all are key actors in maintaining and improving the quality of teachers through proper formal CPD especially, encouraging their teachers to enroll in primary education certification or further level (university). The transferring of knowledge and values to children are main contributors of a good education, vital for preparing them to endure their education and moreover for a future professional work life.

However, copious outcomes are expected from the teachers and active participation in their certification education in order to have improved attitude, knowledge and skills to become efficient educators and instructors in the classrooms and in students' lives.

Unfortunately, it appears that teachers are not given their deserved status and recognition within societies; such can be the case according to Osunde and Izevbigie (2006), in an empirical study held in Midwestern Nigeria about teachers' attitude towards teaching profession. Results of the empirical study demonstrated that teachers are looked down and not being paid in time as other professional workers and this causes them to become demoralized, resulting in low self-esteem and low recognition of their teaching status. Due to this situation, this may affect their motivation in furthering their education.

Assumingly, many personal, contextual and work related predictors may be the cause of such unfruitful efforts for example, teachers are not satisfied with their jobs because of family commitment; pressure of work, too many demands from the administration and the MoE in sustaining the goals of the school and Ministry's programs; the support expected from management is not that alluring to have interest in upgrading oneself. These assuming predictors can be few causes of discouragements and demotivation of teachers to enroll in a teacher certification education program (TCEP).

### **Purpose of the Study**

The purpose of this study is to investigate if there are any significant relationship between personal factors (appraisal of meaningfulness, family/work conflict and financial

constraint), task factors (pressure of work and emotional demands), and work environment factors (management support and collegial support) in respect to teachers' participation in Teacher Certification Education as a special case of CPD.

### **Research Questions**

Deriving from the research purposes, the following three questions were raised as the framework for this study:

1. Is there any significant relationship between personal factors and teachers' participation in certification education?
2. Is there any significant relationship between task factors and teachers' participation in certification education?
3. Is there any significant relationship between work environment factors and teachers' participation in certification education?

### **Significance of the Study**

This study is expected to help the government, MoE, policy makers, and principals to better understand the many factors such as personal, task, and work environment factor that maybe influencing teachers' participation in a teacher certification education program. Furthermore, this study can be used in adding significantly to the availability of literature in Belize about teachers and formal CPD advancement. Consequently, this study will assist the competent authorities in making *ad hoc* decisions in the re-adjustments of the planning and strategies used more competently, on encouraging the teachers to build up their attitudes, knowledge and skills, through the delivery of adequate support and incentives to motivate teachers on their decision to participate in certification education.

According to the Education Statistics at a glance (2011-2012), there are 68,534 students enrolled at primary school, 20,539 enrolled at secondary and no existing statistics at tertiary level. This number represents a greater challenge for the educational system high lightening more efforts and work to be expected from the MoE and school administration in order to address teachers view points and engagement in their certification education. This will enhance in teachers, the importance of actualizing their education to become better equipped to face new challenges of this demanding educational world.

## **Definition of Key Terms**

### **Continuing Professional Development**

*Continuing Professional Development* is defined as educational activities, offered through formal, non-formal or informal frameworks, targeted at adults and aimed at advancing, or substituting for, initial education and training. The purpose may be to (a) complete a given level of formal education or professional qualification; (b) acquire knowledge and skills in a new field (not necessarily for a qualification); and/or (c) refresh or update knowledge and skills. (UNESCO, 2006a, p. 418).

### **Certified Teacher**

*Certified Teacher* is defined as a teacher who is qualified for either an advanced professional certificate, a regular or standard state certificate, or a probationary certificate (all requirements satisfied except for completion of a probationary period) in the field of their main teaching assignment. (Boe, Cook, & Bobbitt, 1998).

### **Continuing Education**

*Continuing Education* is a short-term programme of study in a specific area for professional or employment or job related skills and knowledge enhancement; it can be award-bearing or non-award bearing and vocational or non-vocational (Belize Education and Training Act, 2010).

*Continuing (or further) education* a general term referring to a wide range of educational activities designed to meet the basic learning needs of adults. (UNESCO, 2006a, p. 418).

### **Principal**

*Principal* means, in relation to any school, the teacher in charge of providing educational leadership, including managing the day to day affairs of the school, to assure and improve the quality of education provided. (Belize Education and Training Act, 2010, p.127).

### **Teacher**

*Teacher* means a person employed for the purpose of instructing students. (Belize Education and Training Act, 2010, p.129).

## **Teacher Certification Education**

*Teacher certification education* is concisely defined as that component of the education system which encompasses all activities that relate to and support the professional development and growth of teachers throughout their careers. (Mark, Joseph, & Remy, 2005).

## **Trained Teacher**

*Trained Teacher* is a teacher who has received the minimum training (pre-service or in-service) normally required for teaching at the relevant level in a given country. (UNESCO, 2006a, p. 423).



## **CHAPTER II LITERATURE REVIEW**

This chapter provides a review of the previous literature relevant to this research. Firstly the trend of education in Belize will be observed. This tends to seek the possible factors influencing teachers' participation in TCE. The trend of education in Belize is introduced; followed by the definition of CPD; followed by three main topics personal factors, task factors, and work environment factors. Each of these factors mentioned are conceptualized and empirically reviewed.

### **The Trend of Education in Belize**

Belize's education system has been evolving gradually on achieving quality and competent education to all children between the ages of five to fourteen years of age since the early 1960's. In 1965, the Belize Teachers College (BTC) was established. Since then, according to Bennett (2008) cited from Samuels (2011) "the development of teacher education in Belize has been an undulating ride; from exhilaration, to crisis, to reform" (p.1).

Prior to 2004, primarily teachers who were already employed, who had some years of teaching experience were admitted to the teachers' college, the only access to teacher's certified education which was available exclusively at the Belize Teachers' College (BTC).

In 2005, the Government of Belize, through the Teacher Education Development Services (TEDS) of the MoE, extended the training of primary level teachers to four junior colleges or Sixth Forms throughout the country: Stann Creek Ecumenical Junior College, Sacred Heart Junior College, Corozal Junior College, and St. John's College Junior College, Education statistics at a glance (2011-12). Presently, formal CPD in form of seminars and workshops has been offered to primary school teachers every summer in the first two weeks of August, fulfilling 120 credit hours within a time span of five years at the initiation of their teaching career as a requirement to remain with a full teacher's licence.

According to the Minister of Education in Belize, Hon. Patrick Faber, the performance level of the Belizean children is below expectation whereas there is an extreme shortage of trained and qualified teachers at all a level of the educational system. The Minister further stated that the "Rising costs and inadequate planning and management remain significant challenges. These very same issues were lamented more than twenty years ago in 1990 by a former Minister of Education" (Education Sector Strategy 2011–2016, p.3). From this statement by the Minister, the situation has not changed over a period of more than twenty years and this leads to the question of why little has been accomplished.

Every year, the MoE has been investing on high percentages of their financial budget in the development and achievement of improved results, in respect to teachers, salary, allowances, school management funding and other formal CPD rather than finding reasons why formal CPD in the case of teacher certification education is less attractive and feasible among the uncertified teachers. Therefore, this research attempts to find out the main factors influencing teachers' decision on their participation in formal CPD in Belize.

### Continuing Professional Development (CPD)

According to Kennie and Enemark (1998), "CPD is...the systematic maintenance, improvement and broadening of knowledge and the development of personal qualities necessary for the education of professional and technical duties throughout the practitioner's working life" (p. 114) whereas, it can be classified into two different modes which are formal and informal as shown below in Figure 2.1 and Figure 2.2.

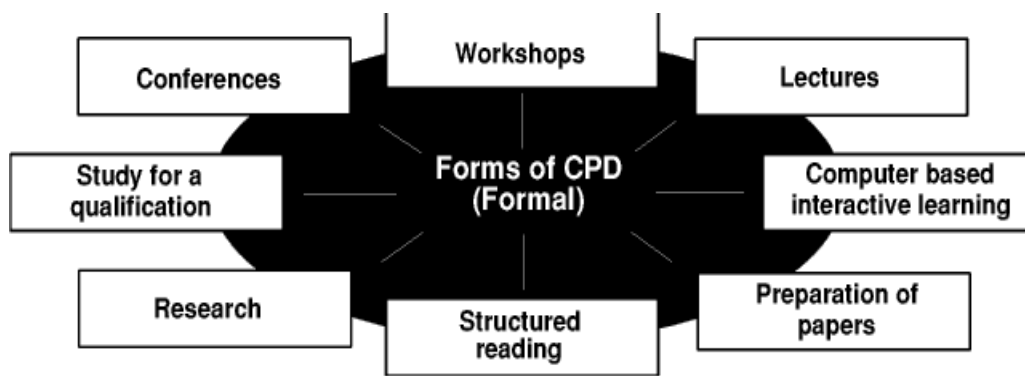


Figure 2.1. Formal modes of learning. Adopted from “the growing importance of cpd,” by Kennie, T. J. M. & Enemark, S. (1998). *Continuing Professional Development Journal*, 1(4), 114.

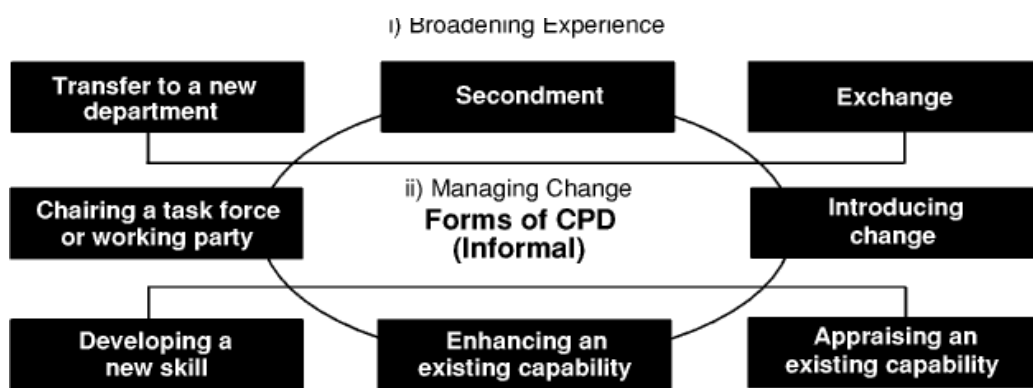
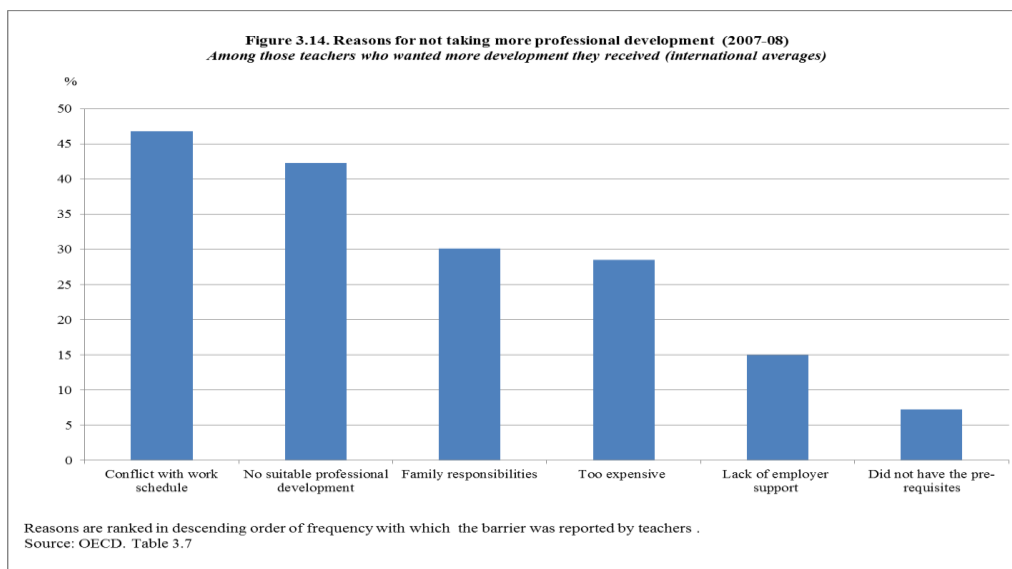


Figure 2.2. Informal structured 'development' modes of learning. Adopted from “the growing importance of cpd,” by Kennie, T. J. M. & Enemark, S. (1998). *Continuing Professional Development Journal*, 1(4), 114.

According to Earley (2010), CPD involves all formal and informal learning that allows persons to improve themselves by practicing through a reflective action designed to improve their attributes, knowledge, and skills. Whilst keeping the improvement in the growth of knowledge and skills in subject areas of teaching so that it has a positive effect on students. Through a study being held by OECD (2009) at various OECD countries on *Creative and effective teaching learning environments* shown in Figure 2.3 applied to lower secondary school teachers, it was highlighted by the study that both formal and informal CPD is essential for teachers where, study shows that Bulgaria has 50% of their teachers participating on “qualification programs” (p.58) becoming time-intensive and self-financed making the CPD more significant rather than to participate if it is less costly to free.



*Figure 2.3. Reasons for not taking professional development (2007-2008). Adopted from “Creating effective teaching and learning environments: First result from TALIS” by Organization for Economic Co-operation and Development (OECD) 2009. Copyright 2009 by the OECD.*

Hence, OECD (2009) broadly defines CPD as “activities that develop an individual’s skills, knowledge, expertise and other characteristics as a teacher.” (p.49). Within the teaching profession it is assumed that if a teacher enjoys his or her job the urge to better develop themselves will always be there.

Based on a study carried on by Desjardins (2010), findings from a large-scale survey highlighted that situational and institutional barriers are consistently found to be of crucial importance when dealing with barriers that hindrance the participation of adults in adults’ education also defined as continuing professional development (CPD). These barriers are two

of the four barriers used to assess lifelong learning which are traditionally used by Cross (1981). According to Cross (1981), situational barriers are those that arise from life's situation for example; lack of time, pressure of work, family responsibility, etc., and institutional barriers is referred to practices and procedures that hinder in participation such as fees, inconvenient schedules or locations, inappropriate courses of study, etc. (p.98).

Likewise findings from a study held by Hustler, Olwen, and Janis (2003) on behalf of the Department for Education and Skills (DfES) by Manchester Metropolitan University (MMU) and Education Data Surveys; which took place between February and July 2002 applied to 2500 teachers in primary, secondary and special schools. Obtaining a high average of returned questionnaires and their profile closely matched that of the teaching force as a whole, highlights that workload or pressure of work was most likely to inhibit access to CPD. Through personal experience, teachers' workload plays an important factor that contributes to discouragement to participate in CPD. Taking school work at home, along with day to day planning schemes, and creating visual learning materials, become too intense at a certain point in the life of a teacher.

However, a study carried out by Wan and Lam (2010) highlights that over the years and in different countries, few studies have been conducted to examine factors affecting teacher's participation in CPD activities. Likewise, another study by Lee (2002) identified a number of factors facilitating and inhibiting effective professional development in Taiwan. Among the factors inhibiting effective CPD as shown in Table 2.1 heavy workload was the most inhibiting factor affecting teachers' CPD in school A, whilst time factor was the most inhibiting factor affecting teachers' in school B. According to the literature, time and workload are associated factors leading to obstacles towards CPD (Day, Simmons, Stobart, Kingston & Gu, 2007).

Table 2.1.

*Factors Inhibiting Effective Professional Development*

Factors	Case: School A No. of responses (%)	Case: School B No. of responses (%)	Total no. of responses (%)
1. Time	12 (32.4)	13 (61.9)	25 (43.1)
2. Heavy workload	13 (35.1)	3 (14.3)	16 (27.6)
3. Financial factor	4 (10.8)	2 (9.5)	6 (10.3)
4. CPD provider	3 (8.1)	1 (4.8)	4 (6.9)

(continued)

Table 2.1. (continued)

Factors	Case: School A No. of responses (%)	Case: School B No. of responses (%)	Total no. of responses (%)
5. School factor	2 (5.4)	2 (9.5)	4 (6.9)
6. Personal factor	3 (8.1)	0 (0)	3 (5.2)

*Note.* Adopted from “The effects of agency training for taiwanese child care director professional development,” by Lee, L. (2002). (Doctoral dissertation).

Kwakman (2003) published an empirical paper describing two studies comprising the element of teacher workplace learning. The first study aimed at developing a definition of teacher workplace and exploring factors affecting their learning at their workplace. The second study aimed at answering two initial questions which were answered in form of a survey: 1) To what extent do teachers participate in professional learning activities? and 2) What factors affect this participation? Through these studies the result showed various discrepancies between the theory and practical carried out in opportunities for professional learning activities of the teachers.

These studies were conducted in the Netherlands at the brink of a large-scale educational reform whereas; major changes were going to be applied to the secondary school curriculum. The background of the curriculum renewal is much seen as a need in a modernized society where people are ready for life-long learning and ready to learn. In the literature two theoretical perspectives are prevalent that helps to understand the different approaches of teacher learning: the cognitive psychological perspective and the professional development perspective.

Due to these two perspectives, teachers view new ways of learning by practicing new ways of teaching. If it is assumed that teachers learn the same way as students, then teachers need to construct their own knowledge and direct their learning. Both perspectives value the strength of the workplace as demonstrated by the expression that schools have to develop into places for teachers to learn (Hargreaves, 1994). Nevertheless, this falls short since schools do not offer learning opportunities as expected.

Theorists who have considered cognition as established assume that learning and knowing are integrally and inherently found in everyday life of human activity. Kwakman (2003) used three learning principles based on the idea of learning as participation in daily working activities. These principles are firstly, learning as in the process of participation;

secondly, recognition that learning is not only individual but also social in nature (Jarvis, 1997); and thirdly, that it is attached to teacher learning since it is regarded necessary for teachers to develop professionally. The conclusion of these principles is that the combination of the first two helps to define learning at the workplace whilst being conceptualized as participative at individual and collaborative level.

The second part of Kwakman's study explored factors inhibiting teachers' workplace learning in order to construct an empirical model for teacher learning. Since it is not clear on what factors could be inhibiting and influencing teachers' participation in learning activities. She began with a basic model about learning at the workplace with the sole assumption that learning is influenced by personal and by contextual factors (Clardy, 2000). In order to refine the factors she researched for theories that fit the conceptualization that teachers learn as they participate in professional learning activities. Therefore, the usage of adult learning theory and social psychological theory of work were used for the purpose of this paper. Both theories helped to detect relevant factors. Five subcategories were detected as personal factors and regarding the contextual factors, apparently it had to be split into two different categories: task factors with five subcategories and work environment factors with three subcategories.

The first three personal factors were derived from the adult learning theory, according to Caffarella (1993) self-directed learning has been examined extensively with the intent to reveal learners characteristics of successful learners. According to Candy (1991) cited in Kwakman (2003), self-directed learning cannot be explained by a context-free personal characteristics such as self-directedness, as "people's willingness to participate in self-directed learning activities is shaped ... by their construction of the particular situation and circumstances" (p.156). Starting from a constructivist viewpoint of knowledge and learning, Candy argues that personal perceive and attitude of individual learners are most important to cope with, but only if they are considered to be situation-specific and contextual. Hence, Kwakman (2003) decided to select three factors that capture Candy's main idea of personal meaning and it's interactivity with the environment: professional learning and appraisals of personal learning activities. The first factor *professional attitudes* represent the significance that is connected to the new professional role that instructors ought to satisfy now-a-days along with the obligations. The second and third; *appraisal of feasibility* and *appraisal of meaningfulness* concern appraisals that are crucial in the process of meaning-making as judgements mirror how personal and situational characteristics interact (Boekaerts, 1996). The fourth and fifth factors are from the work stress theory in which it is assumed that stress and learning are mutually related, whereas, stress affect participation in learning activities (Karasek and

Theorell, 1990) the fourth and fifth factor *exhaustion* and *loss of personal accomplishment* (Schaufeli, Daamen, & van Mierlo, 1994) appeared to be most reliable in the findings and therefore, they were included in the model.

According to Kwakman (2003), from the model two different hypotheses can be deduced. Firstly, that work stress will occur when job demands are high whereas control is low and secondly, is that learning and growth will occur in situations where both job demands and control are high although little empirical evidence exist to confirm the hypothesis, it may be concluded that job demands and job control do play a role in explaining participation in professional learning activities (Kwakman, 2001).

The second factor was broken into five task factors guided by the stress theory concerning the working conditions where it is emphasized that both job demands and job control are both multi-dimensional in nature and needs to be operationalized carefully. Firstly, *pressure of work*; secondly, *emotional demands*; thirdly, *job variety*; fourthly, *autonomy*; and fifth, *participation*.

Finally Kwakman (2003) used three factors to address work environment whereas different types of support was added to this model. Firstly, *management support*; secondly, *collegial support*; and thirdly, *intentional learning support*. After an extent review of literature, the results highlighted 13 different factors: five personal factors, five task factors and three work environment factors, which do influence teachers learning at the workplace. The research model as shown in Figure 2.4 was constructed based on the outcome of the first study whereas, personal factors, task factors and work environment factors are independent variables and participation in professional learning activity is the dependent variable.

This study adopted five variables from the study of Kwakman (2003), appraisal of meaningfulness, pressure of work, emotional demands, management support and collegial support. Also two new variables: family/work conflict and financial constraint were used after previous findings from a study by Yeh and Tun (2014) about factors influencing government primary school teachers' participation in teacher certification in Belize.

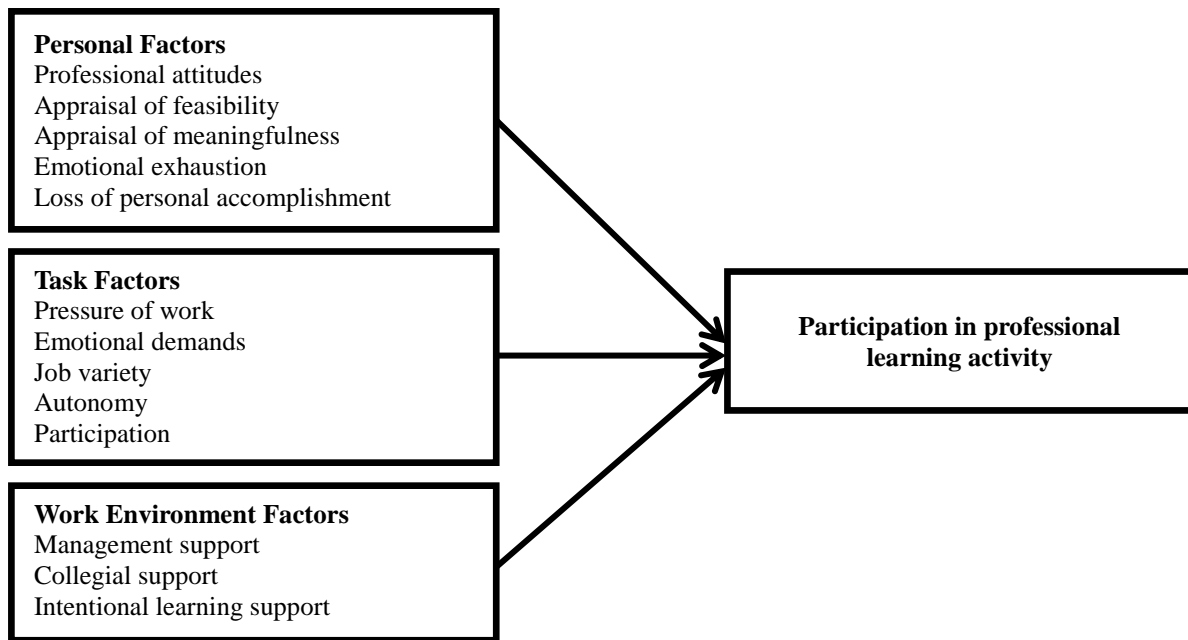


Figure 2.4. Research model of professional learning activities. Adopted from “Factors affecting teachers’ participation in professional learning activities,” by K. Kwakman 2003, *Teaching and Teacher Education*, 19 (2), p. 149–170. Copyright 2003 by Elsevier.

Yeh and Tun (2014) conducted a qualitative study utilizing both the *inductive* and *deductive approach*. For the *inductive approach*, twelve people were interviewed: 3 experts, 3 principals, 3 certified, and 3 uncertified teachers. For the *deductive approach*, seven uncertified teachers were interviewed. The first approach was used to permit the research to begin with an area of study which would further allow the theory to emerge from the data (Strauss and Corbin, 1998 Cited from Thomas, 2006). The second approach utilized data analyses being selected to test whether the data were consistent with prior assumptions, theories or hypotheses developed by the researcher. Later on, the findings from the *deductive approach* confirmed the findings from the *inductive approach*.

Findings from the *inductive approach* revealed 4 of the 5 variables examined in Kwakman’s (2003) framework and the outcome of 5 new variables: 3 in personal factors: lack of motivation, family/work conflict and financial Constraint; 1 in task factors: school resources and 1 in work environment factors: political intervention to be negatively influencing teachers’ participation. Findings from the *deductive approach* confirmed the findings from the *inductive approach*.

Since in Kwakman’s (2003) framework there were many variables not suited for the sample being studied, the researcher opted to adopt five variables from her study and two of the new variables from the findings from Yeh and Tun’s (2014) study as mentioned. Following is a



complete review of the literature on the 7 variables used in the analysis and completion of this study.

## **Personal Factors**

### **Appraisal of Meaningfulness**

Adopted from (Kwakman, 2003), she defines appraisal of meaningfulness, “as meaning is situation-specific in nature, appraisals elicit the meaning teachers attach to different professional learning activities by making judgements about different features of each professional learning activity separately” (p.156).

Therefore, based on this definition teachers tend to make judgmental decisions based on the situation they are actually involved in- at the time- that is, the extent of meaningfulness that participating in a teacher certification program will represent for them at the moment. This is in respect to the formal courses and education they will be pursuing at the institution. Will this be a plus for them when they conclude their studies and return to impart classes with a broader spectrum? If the present situation lends to the significance of their participation, bearing in mind, that the present situation in the education system in Belize for the teachers whom are not qualified is in a win or lose situation. This is because if the teachers find it meaningful to further his or her education; it will now depend on how much they appraise their profession. How much meaningfulness of furthering one’s education can make a difference for the actual teacher and their teaching profession. Many teachers countrywide are participating because of the governments’ policies enforced on them which state that, teachers need to be fully certified or involved in a certification education program in order to remain in the profession by the end of June 2014.

Teachers need to be specific and sure to be doing what they believe is best, in order to find meaning to what they are accomplishing. Teachers hold as significant the aspect of the extent to which the activities in which they participate are being appraised as meaningful to meet their expectations and satisfaction. Formal courses on teacher certification mentioned before in the literature, have an impact and portrayal of the pedagogical content towards the teachers’ learning, attitude, and satisfaction.

Also, Entwistle (1988), cited from Boekaerts (1996) made a distinction between three learning orientations, or styles, including a reproducing orientation (memorization), an achieving orientation (trying to acquire higher grades), and a meaning orientation (a search for personal understanding). As teachers tend to mature in their profession, the necessity for understanding their personal growth and finding the meaning of what they are doing as

life-long learners and practitioners is indispensable. Entwistle (1988) further added that, students with a meaning orientation are intrinsically motivated. Cited from Reynolds & Aletraris (2007), employees who find their work meaningful will both work many hours and prefer to work many hours considered a classical sociological treatment of work (Blauner, 1964). In reality some teachers are intrinsically motivated because of the love and passion of their profession, making teaching more interesting and meaningful rather than a burden. Appraisal of meaningfulness will cause teachers to spend more hours at work or become more interested in participating in TCE studies and to find the real meaning to their profession that has long been battered by the government and MoE on a whole. Therefore, the following hypothesis was established:

*Hypothesis 1:* Appraisal of meaningfulness will have a positive influence in teachers' participation in teacher certification education.

### **Family/Work Conflict**

Family is an integral part of our daily lives, a group of people living together functioning as a single household. As shown on Figure 2.3 based on the TALIS (2009) report, 30% of teachers from various OECD countries highlighted that family responsibilities have been a reason for them not to participate on a CPD program within their career.

A review of literature of Work-Family Conflict (WFC) and Family-Work Conflict (FWC) has depicted that both domains affect each other at a certain time. Greenhaus and Beutell (1985) cited from Carlson, Kacmar, and Williams (2000) defines WFC as “a form of interrole conflict which the role pressures from the work and family domain are mutually incompatible in some respect” (p.77). It is assumed that a teacher encounter these types of interrole conflict to a certain degree and has not been taken into consideration on understanding the female teacher whom faces these challenges on a day to day basis. In general, women have more responsibilities at home and direct interaction with the family. Therefore, it is expected that conflict between work and family will be greater for female than male teachers; parental roles are stressful for the female spouse. Since it has been proven that most teachers are females, teachers will then avoid participating in TCE due to the family/work conflict pressures. Therefore, the following hypothesis was established:

*Hypothesis 2:* Family/work conflict will negatively influence teachers' participation in teacher certification education.

## **Financial Constraint**

Towse, Kent, and Osaki, (2002) carried out a study in Tanzania, of “non-graduate teacher recruitment and retention: some factors affecting teacher effectiveness”, where the teachers response quotes were categorized as Diploma Male (DM) and Diploma Female (DF), highlighted that, “Trained teachers do not have a good economic position compared to other professionals” (DM) and also that the “Teachers are now demoralised by the government for not paying enough salary, thus teaching work is considered a pastime” (DF) (p.645). This make evident of the dissatisfaction teachers feel when they foresee that they are underpaid and not having the necessary funds to survive satisfactorily and likewise to uplift themselves in the form of participating on a TCE since it would tend to be none beneficial to them, salary wise.

Through a qualitative study being done by the researcher, many uncertified and certified primary school teachers in the north of Belize highlighted that financial constraints has been one major factor affecting their certification education since the cost of living is too high and the grants and scholarships are limited. At the moment the cost of earning an Associate’s Degree in Primary Education for the entire two-year program at the four sixth form colleges -which is an educational institution in Belize, being a hallmark of the British colonization, where students aged 16 to 19 typically study for advanced school-level qualifications- across the country is approximately between \$2,500 to \$3,000 US dollars R. Vellos (Dean, Corozal Junior College, personal communication, October 29, 2013). In Belize, political affiliation is a prime factor of negative effects on teachers’ decision on participating in teacher certification because not all teachers are treated equally since some would receive the 80% or 100% of study leave pay normally granted by the government to teachers.

Teachers are not being paid as other professionals causing for instance in the United States of America the establishment of a vast accountability engine in regards to teachers’ salaries resources and teachers development which statistics show has steadily dropped over the last 45 years. More monies have been spent on the regulation of teachers’ in administration and staff aimed programs to monitor teachers’ work rather than teachers’ salaries for their work. According to Webb (2002), since 1950, the nation has witnessed its professional staff classified as teachers decline from 70% to 52% in 1993. Webb (2002) further notes that in 1995, the United States had the lowest ratio of teachers to administrative staff (less than 0.75:1) compared to seven other countries in the world – Belgium (the highest ratio, 4:1), Japan, Italy, Australia, Finland, France and Denmark (OECD, 1995). However, Webb (2002) also highlights that other countries spend financial resources to ensure that teachers benefit

from substantial salaries and quality professional development. Cited from Block (2008), “the teaching profession remains under siege, and more and more teachers are leaving the profession after only a few years in the school setting; those who remain in the profession work harder but too often, with less reward” (p.416).

Financial constraint by definition is the lack of monetary funding for teachers to pursue a TCEP. This may discourage teachers on a whole, due to the fact that salaries are not quite significant; moreover, grants and scholarships are limited. Therefore, the following hypothesis was established:

*Hypothesis 3:* Financial constraint will negatively influence teachers’ participation in teacher certification education.

## **Task Factors**

### **Pressure of Work**

According to Kwakman (2003) pressure of work refers to qualitative demanding aspects such as the pace of work and workload. In this study pressure of work is been taken mainly in the aspect of teachers’ workload within their daily routine at school and how this situation can become a hindrance to teachers to participate in continuing their studies. Due to the fact that teachers have other activities to be accomplished on a daily basis at school and being occupied during the entire day; this may certainly cause teachers to decline on continuing or even acknowledging the possibility of studying.

Vivekan Upadhyay a language professor at a leading University in India, cited from “Needs Improvement” (2013), commented that government teachers particularly in the rural of India are required to carry out a wide range of additional work not pertaining to the teaching profession, placing on them a high level of workload unnecessary that are not stipulated by the educational system. He further stated that, this causes a demotivation on teachers since the workload seems to be burdensome; added along to their teaching responsibilities, duties and time.

Workload in the teaching profession can become counterproductive for any MoE worldwide. As an experienced teacher in Belize, dealing with reaching the governments’ deadline to new experiments within the system, allocating time to follow a curriculum that has minor changes according to the ministry, workshops and seminars, dealing with school management, parents, colleagues and policies, not excluding the most important factor: the students and all the work it entails (lesson plans, test, quizzes, counseling, evening classes, etc.). All of these aspects would seem to be not that tedious from the view point of an outer

person not involved in the teaching world. However, it is set as vital to meet the goals of the education system and to place the countries' education level at a standard or rank within the criteria of UNESCO.

However, a study from Liang, Yin, and Guan (1985) measuring teachers' workload highlighted that most teachers consider their teaching load as only part of the workload. Nonetheless, the different workloads existing in comparison to other schools, population, location, gender etc., they saw the dire need of developing a scale to properly measure the teachers 'workload' in order to further assist the education authorities to better understand and compensate a teacher as a professional, recognizing the many efforts they live on a daily basis. Pace of work, workload or work stress among teachers is a new phenomenon throughout the world of literature, which has been resounding for answers to the outgoing pressures teachers confront within their career and professional lives.

A study carried out by Chan, Chen, and Chong (2010), based on primary and secondary school teachers in Hong Kong reported that several studies has been undertaken to examine the prevalence, level and major sources of work stress among school teachers, for example; in England, Malta, New South Wales, Pakistan, U.S., Welsh, West Indies, and Hong Kong. Findings revealed that from a random sample of 6000 teachers generated from the database of the Hong Kong Professional Teachers' Union (HKPTU) members, reaching a return of 1,710 of the applied questionnaires; heavy workload and time pressure (95.1%), education reforms (86.8%), external school review (70.1%), pursuing further education (60.9%), and managing students' behaviour, and learning (57.6%) were the most frequently reported sources of work stress. At times teachers have to go an extra mile to finish their daily work in time and work extra time to reach their goals concerning the education of their students. After facing so much work at school the option of furthering their studies becomes somewhat questionable. Due to the fact that pressure of work can demoralize teachers from participating in a TCEP the following hypothesis was established:

*Hypothesis 4:* Pressure of work will negatively influence teachers' participation in teacher certification education.

## **Emotional Demands**

Emotional demands refers to the extent to which the job requires emotional investment Kwakman (2003). Cited from Morris and Feldman (1996) sociologists and psychologists nowadays express more interest in the topic of emotions and all it entails.

Neville (2013) wrote:

Theories of teaching and learning used to ignore the role of emotions in the classroom, assuming that they were a sort of waste product that got in the way of the brain's more important functions like cognition, memory, decision-making and planning. (p.21-22).

This notion has been taken into consideration within the teaching profession since teaching requires that teachers display most of the time, emotions that are not realistic due to the demand of this profession which expects teachers to be smiling, laughing, being positive and optimistic in order to have students, parents and principal satisfied. Also, Morris and Feldman (1996) commented that it can be seen in organizations; that whenever a worker involves their inner thoughts and display their emotions, this has attracted the attention of organizational scholars during the past years due to the positive correlation that emotions have between the student and teacher, and also between the employee and the organization. Also in order to demonstrate consistency with the goals of an organization or a school; employees or teachers are expected to express certain emotions and subdue others to clients, customers, students and co-workers as part of their job.

In teaching, the teacher passes through a process that involves daily, the usage of intensive and extensive practice of emotional demands for example, smiling on the outside whilst feeling the opposite feeling in the inside. This is because of the complexity found in the classroom as challenges of dealing with students with different range of diverse motivations, personal background and different leaning capabilities. This can cause exhaustion to a teacher at the end of a working day. Through my experience, the sense of tiredness always becomes more noticeable at the end of the working day after the children leave the school compound. Cited from Flores and Day (2006), "too much investment of one's emotional self may lead to personal vulnerability" (p.221), this may involve a feeling of incompetence because of not being able to engage every student into the mode of constant learning on a regular basis, and it might cause serious malfunctioning effects on the longer run. This may cause for example the lack of involvement with colleagues, in family activities, or association with friends and possibly, health problems. It may seem that teaching is a relaxing and enjoyable job but nonetheless, it entails more mental and emotional strains; I would say, compared to other professions. Emotional demands play an important role for teachers' decision in avoiding participation in TCE. Therefore, the following hypothesis was established:

*Hypothesis 5:* Emotional demands will negatively influence teachers' participation in teacher certification education.

## **Work Environment Factors**

### **Management Support**

Management support adopted from Kwakman (2003) highlights that she applied this support because there are specifically different types of supporting factors existing which she added based on the criticism of the Karasek model for neglecting such factors (Greenglass, Burke, & Konarski, 1997). Management support or principal support is the assistance being received, emotionally, physically, psychologically, etc., from an upper authority to their subordinates, or in the case of the primary school from principal to teachers.

In spite of the numerous studies of stress along with studies of school improvement, it has been highlighted that they are related to the support of stress and learning, indicating that support may bear relevance with regard to teacher participation in professional learning activities (Greenglass et al., 1997). In other words, school has to provide an environment by which the involvement of new learning activities will generally be accepted, and therefore learning becomes intentionally stimulated.

Finding from a study conducted by Littrell, Billingsley, and Cross (1994) demonstrated that principal support is important to teachers' well-being. They found that principals who are emotionally supportive and also provides their teachers with informational support are more likely to be more satisfied with their staff outcome. In most instances, teachers would get firsthand information from their principals, a supportive principal will create an ambiance of belonging, causing teachers to become more involved in school activities and also possibly further their education. Research reveals that job satisfaction is also associated with support behaviors, such as consideration (Blase, Dedrick, & Strathe, 1986) professional growth (Conley, Bacharach, & Bauer, 1989). Being satisfied at one's work place permits that the emotional state of a teacher become more susceptible to changes and communication causing fewer health problems and promoting encouragement towards continuing learning. Moreover, one possible role of the principal is to persistently encourage teachers to upgrade and further their education. This is simply because we living in a changing world where new demands emerge and we teachers need to become more competent and effective in the education market. Likewise, the sense of being taken into consideration by ones' superior is essential for teachers to get the extra boost to participate in a learning activity.

Other situational factors have to be considered for a school environment to become appealing and favorable for working. Stockard and Lehman (2004) in their study stated, that principal support has an impact on the ways that educators perceive their feelings in relation

to how they operate within their working environment. This is part of the teachers' emotional and psychological aspect that needs to be satisfied for the well-being of the staff in general and when communicating at work. Once teachers perceive that their principal is being supportive of their work by being flexible with their time, workload and offering them incites of the importance on furthering studies that would be beneficial to them; teachers would find themselves in a state of belonging and would consider continuing their studies. Furthermore, teachers whom have characterized his or her principal as been supportive, find their work more gratifying. This will permit teachers to interact more freely and also to encourage constructive feedbacks pertaining to everyone at school, in order to maintain an effective and also motivated work place. In the event that teachers do not sustain a positive communication with their principal as well as teachers not perceiving their principal to be supportive; could lead them to feel disappointed and insignificant causing an ordeal by creating an environment of unfriendliness and helplessness.

Furthermore, Stockard and Lehman (2004) stated, "that school management policies have influence on teachers' satisfaction especially if a teacher is employed in a school setting where they have great influence over school policy, greater control over their own classroom, if they have more effective administrators or principals" (p.745). Many a times through life experience, teachers have little contact with principals in the role of generating school policies or curriculum but in many instances have a better reachability to voice opinions, share information and recommendations at weekly meetings proposed by management. Based on a theoretical assumption which was also confirmed by an empirical finding suggests that, usually a supportive work place where a teacher for example, may be constructive and clear to express and communicate to his or her administration about how they may be feeling may assist in the diminishing of strains and stress within their profession and become a healthy practice for themselves. It has been highlighted by research that defining principal support is not an easy task due to the fact that support is really a multidimensional notion that features a wide variety of conducts. The existence of management support will certainly assist teachers' participation in TCE. Therefore, the following hypothesis was established:

*Hypothesis 6:* Management support will have a positive influence in teachers' participation in teacher certification education.



## **Collegial Support**

According to Shah (2011), “collegiality refers to the cooperative relationships among colleagues; however, its exact meaning remains conceptually vague in the literature” (p.2). This seems to fit in the ideal world where school teachers would be true colleagues working together. However, collegial support entails more than what literature assumes. Smyth (1991) asserted that collegiality is ‘not simply a matter of teachers conferring with one another’ (p.325); it is ‘much more than a desirable teacher-to-teacher relationship’ (p.327).

Johnson (1990) through the teachers’ perspective in her study, ranged collegiality from friendly staff relations to closely related co-teaching (p.156). Teachers look at their colleagues to seek personal support; social interaction, psychological support; if situation arises for example, when work-family conflict or family-work conflict interferes with their emotional state, and instructional support; seeking for the need of pedagogical support and other organizational needs in coordinating students learning. From this point of view, the satisfaction and the sense of support a teacher may receive from his or her principal or colleagues is vital for any outgoing school environment and school improvement especially, in the sense of having a teacher having the drive to uplift him or herself within the education field. If a teacher does not perceive that his or her work is being valued and literally supported by the school management, dissolution will kick in and slackness to do what is best for the students will outbreak. Due to this situation, teachers will find it awkward to participate in any formal courses to continue their development because of lack of support, support which any teacher is expecting from their school management. Despite the case that, collegiality among teachers and between teachers and administrators is recognized by many as an important source of professional growth.

The school, according to Eisner (1983) cited in Zahorik (1987) "needs to become a professional community with space enough for teachers to grow as professionals; they have much to offer each other, but these contributions are not easily made when teachers are isolated" (p.12). Teachers need to interact with each other, only through that interaction teachers will become supportive and create a notion of trust, for the sake of the students and themselves. It is healthy for any school environment to culture collegiality among the principal and staff. Teacher left in isolation will feel out of place or discouraged and will eventually decide to leave the work because of not having the support expected. However, many teachers do interact with others but most of the times prefer to remain in their classrooms where they believe they can get more of the day rather than just interacting with

their colleagues. This is seen as not a good practice to culture collegiality but due to workload, planning and dealing with student problems; teachers' vet for that action since school seems to them as, "never ending." Even though, it has been highlighted that formal programs of teacher improvement is that which incorporate teacher collegiality which consists of peer intervisitation, peer consultation, peer evaluation and peer feedback. Having these formal programs will enhance positiveness, trust and confidence amongst them.

Alfonso and Goldsberry (1982) stated that, "by developing collaborative networks among teachers and providing structured opportunities for peer review, schools can enrich the organizational climate while providing classroom teachers a potentially powerful vehicle for instructional improvement" (p.99). Although collegiality among teachers seems to have widespread support, it has not been extensively researched. Collegiality is an important factor for teachers at work, this is why this study intends to seek answers on the effect teachers collegiality might have towards their participation on TCE. Therefore, the following hypothesis was established:

*Hypothesis 7:* Collegial support will have a positive influence in teachers' participation in teacher certification education.

## **CHAPTER III METHODOLOGY**

This study used a quantitative approach as a means to measure the effect of independent variables towards dependent variables. This chapter focuses on the research methodology which includes eight sections: research framework, research hypotheses, research procedure, research design and sample, data collection, measurement, and validity and reliability.

### **Research Framework**

This research adopted some of the variables from the empirical study conducted by Kwakman (2003) on factors affecting teachers' participation in professional learning activities. These factors were shown in the qualitative findings of Yeh and Tun (2014) to be more significant to the teachers in Belize. This empirical study further researched with a different population, objective and geographic location from Kwakman (2003). This new adaptation focused on finding responses of possible factors that may be influencing teachers' decision on their participation in a teacher certification education in Belize.

For the purpose of this research one of the five variables of the personal factors from Kwakman (2003) adopted (appraisal of meaningfulness) and also two new variables found to be negatively influencing teachers participation in a previous qualitative study done by Yeh and Tun (2014) about factors influencing government primary school teachers' (family/work conflict and financial constraint), in addition to two of the five task factors (pressure of work and emotional demands) and two of the work environment factors (management support and collegial support). Teachers' daily livelihood at school are bounded with various tasks needed to be performed at a given standard or level. The way a teacher perform these tasks highlights their effectiveness both at home and at school. Work environment factors can be seen in any location where people interchange their labor for monies, notwithstanding the challenges and unconformity that may arise due to the lack of support. Therefore, Figure 3.1 will serve as the research framework for this study.

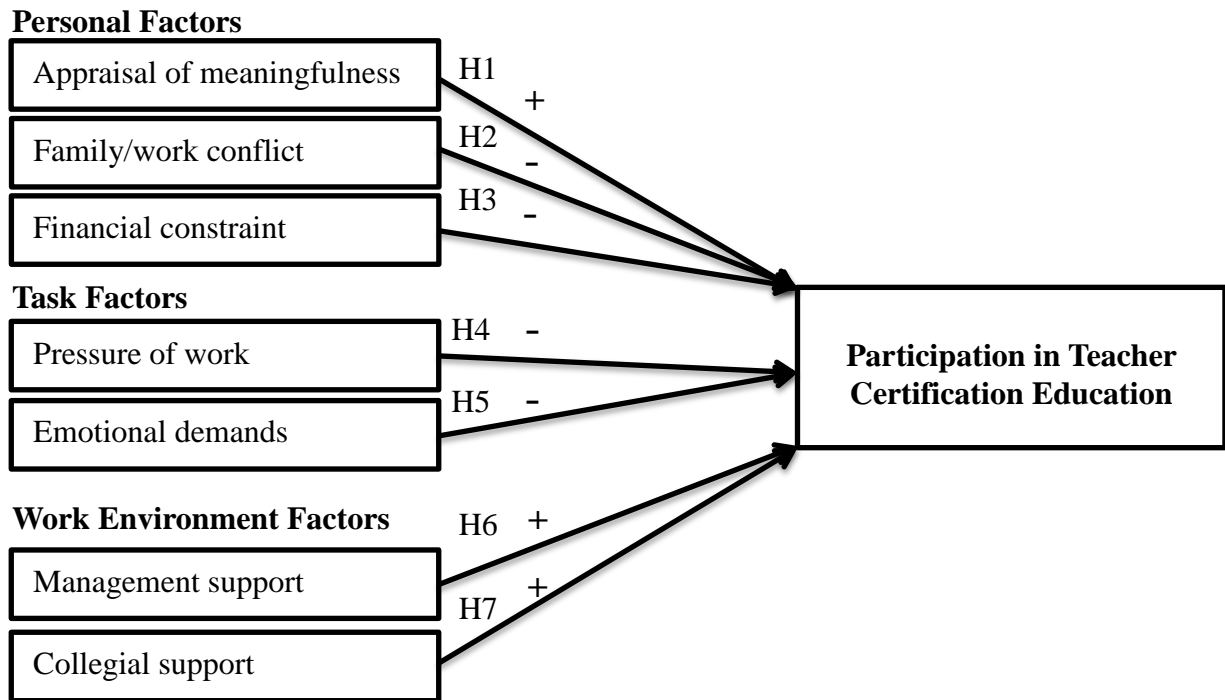


Figure 3.1. Research framework.

### Research Hypotheses

Based on research questions, literature review, and research framework, the following hypotheses were formulated:

- H1: Appraisal of meaningfulness will have a positive influence in teachers' participation in teacher certification education.
- H2: Family/work conflict will negatively influence teachers' participation in teacher certification education.
- H3: Financial constraint will negatively influence teachers' participation in teacher certification education.
- H4: Pressure of work will negatively influence teachers' participation in teacher certification education.
- H5: Emotional demands will negatively influence teachers' participation in teacher certification education.
- H6: Management support will have a positive influence in teachers' participation in teacher certification education.
- H7: Collegial support will have a positive influence in teachers' participation in teacher certification education.

## Research Procedure

This section explains the procedures taken to derive to the outcome of this research. It is shown below see Figure 3.2. The researcher adopted an explanatory study already been tested and therefore leading to the research topic. In order to sustain the research topic, an extended review of the literature on other studies being held across the academic field of the research topic was accomplished. After the reviewing of the literature the establishment of the research framework and the hypotheses were done following by the identification of the research population and sampling.

Already stating and clarifying the variables within the framework in order to confirm the relationship among them, the researcher then pursued to work on the research instrument which was procured from various empirical studies. Once the reliability and the validity of the instrument was corroborated the researcher then followed by applying a pilot test and the implementation of the survey. Thereafter, the data collection and the analysis of the data ensued arriving to the findings, conclusions and recommendations of the research. Afterwards, the researcher discussed the results, answered the research questions, made suggestions for future research and concluded the study.

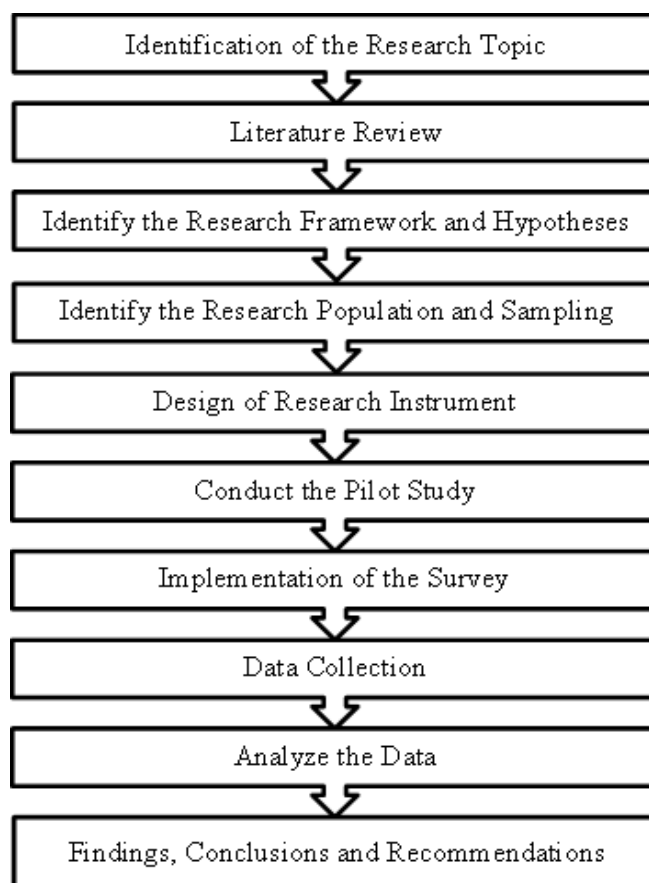


Figure 3.2. Research procedure.

## **Research Design**

This study applied a quantitative approach to provide information on factors influencing teachers' participation in certification education. It is a causal empirical research because it used previous established theories to test the cause-effect relationship between the independent variables and the dependent variable. This study used a theoretical perspective to derive the hypotheses and to define the research variables.

A self-report questionnaire was chosen as an instrument for this study and was distributed online through the Google Survey to the email accounts of all the principals and deans of the education institutions at primary, secondary and tertiary levels. These principals and deans were asked to send the survey link to uncertified teachers at their institutions. This method was used to collect data from the participants, to find out what are the possible factors affecting teachers' decision not to participate in certification education, and to ensure confidentiality of the respondents. This method of collecting data was less costly, less time consuming; in addition, it outreached the entire population of teachers in Belize. The collection of data was conducted in two ways: 1) through online Google Survey and, 2) by distributing the questionnaire via paper and pencil which the vice president of a National Teachers Union branch in the country help to administer. The researcher used this method due the fact that not all teachers have access to internet.

## **Sample**

The targeted population for this study was uncertified teachers at all three levels of the teaching profession in Belize. The census sampling was conducted by reaching all uncertified teachers via an online Google Survey link and paper and pencil survey as mentioned earlier.

The Education Statistics at a glance (2011-2012) reports that from a total number of 3,299 primary school teachers only 56.4% are trained and certified. From a total number of 1,420 high school teachers only 29.5% are trained and certified, and concerning the tertiary level teachers there are a total number of 242 in the government website but there is no statistical percentages of them being certified or uncertified. The total sample of teachers is approximately 1,440 (43.6%) at primary level, 1,001 (71%) at secondary level that are untrained and uncertified and 242 teachers at tertiary level without existing statistical data.

After the data was analyzed, the analysis highlighted that there was a response rate of 10.13% from primary, 4.9% from the secondary level and there was no statistical percentage at tertiary level. To verify whether these 206 respondents are representative of uncertified

teachers in Belize and to gauge the magnitude of non-response error, the researcher then proceeded to compare demographical differences between early and late respondents, basing on the theory that late respondents are similar to non-respondents (Wellman, Hawk, Roggenbuck, & Buhyoff, 1980). The 133 online responses were used for the analyses of t-tests and Chi-square tests to show that non-response error is minimal and that the respondents are representative to some extent. The results of these tests revealed that there were no significant differences ( $p>.05$ ) among the demographics and the variables as shown in Table 3.1 and Table 3.2. This is an indication that despite the fact of the low percentage of response rate, the 206 respondents can be seen as representative of the sample.

Table 3.1.

*T- Test Results of Demographics for Early and Late Responses*

Variable	Group	Mean	S. D.	P-Value
Age	Early	32.46	9.414	.903
	Late	32.70	8.439	
Tenure in current job position	Early	6.18	6.289	.206
	Late	7.89	5.700	
How many years have you been working	Early	10.30	9.542	.985
	Late	10.26	8.036	

Note. N (Early) =98, N (Late) =35

Table 3.2.

*Chi-Square Test Results of Demographics for Early and Late Responses*

Variable	Category	Group Count		Pearson Chi-Square	Sig.
		Early	Late		
Gender	Male	38	11	.034	.853
	Female	60	24		
Marital Status	Single	51	13	2.504	.644
	Married	39	20		
	Divorced	4	1		
	Separated	3	1		
	Widowed	1	0		
Job Position	Teacher	86	34	2.187	.335
	Principal	7	0		
	Administrative Staff	5	1		

(continued)

Table 3.2. (continued)

Variable	Category	Group Count		Pearson Chi-Square	Sig.
		Early	Late		
School Level	Primary	74	22	4.967	.083
Teaching	Secondary	17	12		
	Tertiary	7	1		
Highest Educational	Associate's Degree	47	27	4.732	.193
Qualification Level	Bachelor's Degree	39	6		
	Master's Degree	9	2		
	Doctorate Degree	3	0		

*Note.* N (Early) =98, N (Late) =35

### Sample Profile

A total of 206 questionnaires were collected with a response rate of 10.13% from primary school teachers, 4.9% from secondary school teachers calculated by the total amount of teachers in the demographics results and dividing it by the total amount of uncertified teachers, multiplied by 100%. However, there were no statistics available for the tertiary level teachers, therefore; the researcher was unable to provide a response rate. Both the online and paper and pencil survey questionnaires were combined to compute t-test and Chi-square tests using all the demographics. This was done to ensure whether both surveys were significant or not. After the analysis the t-test results were non-significant, with the exception of tenure in current job position as shown in Table 3.4 and the results of the Chi-square were all non-significant as shown in Table 3.5.

Descriptive statistics showed that in this study the majority are female teachers (134, 65%) than male (72, 35%). This result confirms female predominance in the teaching profession especially at the primary level compared to male teachers in Belize. The percentage of teachers below 20 years are (6, 2.9%), between the ages of 21 and 30 (91, 44.1%), between 31 and 40 years (69, 33.4%), between 41 and 50 years (32, 15.5%) and more than 50 years (8, 3.8%). The findings also showed that younger teachers are more likely to continue participating in certification education compared to older teachers. This can be explained due to the fact that younger teachers may plan to remain in the profession and become the new generation of certified teachers that the MoE is expecting. Data from this study shows that the majority of teachers are single (88, 43%), almost half are married (103,



50%), divorced (9, 4.4%), separated (5, 2%) and widowed (1, .5%). This can predict that single teachers are more likely to have more time to dedicate to continuing professional development.

For job position, teachers (189, 91.7%) are obvious to be majority along with a minimum percentage of principals (11, 5.3%) and administrative staff (6, 2.9%). These teachers are the ones in most need for professional development since they possess only content knowledge education and are lacking pedagogical content knowledge; this condition is critical to both schools and the Ministry of Education in Belize. Most of these teachers, teach at the primary school level (146, 70.8%), high school (49, 23.7%) and few at tertiary (11, 5.3%). These participants are mainly holders of Associate’s Degree (118, 57.2%), Bachelor’s Degree (71, 34.4%), Master’s Degree (14, 6.7%) and a few with Doctorate Degree (3, 1.4%). The tenure in current job position of these teachers is mostly below 10 years (172, 83.4%), above 11 and 20 years (25, 12.1%), 21 and 30 years (8, 3.8 %), and more than 30 (1, 0.4%). Most of them have accumulated years of working experience in both teaching and other professional fields, below 10 years (131, 63.5%), above 11 and 20 years (48, 23.3%), 21 and 31 years (22, 10.6%) and more than 30 years (5, 2.4%). The data are also listed in Table 3.3 which shows the descriptive statistics of the sample.

Table 3.3.

*Descriptive Statistics of the Sample*

Variable	Categories	Count	Percentage (%)
Age	Below 20	6	2.9
	21-30	91	44.1
	31-40	69	33.4
	41-50	32	15.5
	More than 50	8	3.8
Gender	Male	72	35
	Female	134	65
Marital status	Single	88	43
	Married	103	50
	Divorced	9	4.4
	Separated	5	2
	Widowed	1	0.5

(continued)

Table 3.3. (continued)

Variable	Categories	Count	Percentage (%)
Job Position	Teacher	189	91.7
	Principal	11	5.3
	Administrative Staff	6	2.9
School level teaching	Primary	146	70.8
	Secondary	49	23.7
	Tertiary	11	5.3
Level of education	Associate Degree	118	57.2
	Bachelor's Degree	71	34.4
	Master's Degree	14	6.7
	Doctorate Degree	3	1.4
Tenure in current job position	Below 10	172	83.4
	11-20	25	12.1
	21-30	8	3.8
	More than 30	1	0.4
Years working	Below 10	131	63.5
	11-20	48	23.3
	21-30	22	10.6
	More than 30	5	2.4

### Data Collection

For the data collection, a pilot study was conducted first where 47 participants responded via online questionnaires sent to their respective principals and deans. To gather data information, the researcher proceeded in two stages: first, an email was sent to the Chief Education Officer and the District Education Officer from the Ministry of Education to explain the purpose of the study and to request permission and assistance to distribute the online questionnaires; and second, after receiving permission to conduct the survey, the online link were attached to the emails of all the principals and deans at the three levels of school education: primary, secondary and tertiary for further distribution. This pilot study allowed the researcher to pursue the study since the analysis of responses showed the feasibility of the study.

Data collection for the main study was administered in two phases, first via online link

following the second stage applied in the pilot study which gathered a total of 133 online questionnaires. Secondly, due to the lack of response through the online survey, the researcher further asked the vice president of a Belize National Teachers Union branch (BNTU) to apply the paper and pencil survey to teachers that fitted the criteria. A total of 73 paper and pencil questionnaires were collected. A total of 206 questionnaires collected were further used for the final analysis. Both surveys: online and paper and pencil were validated by the researcher to show that the two collection methods do not present bias in the sampling through t-test and Chi-square tests as shown in Table 3.4 and Table 3.5 respectively.

Table 3.4.

*T- Test Results of Demographics for Online and Paper and Pencil Surveys*

Variable	Category	Mean	S. D.	P-Value
Age	Online	32.92	9.156	.865
	Paper & Pencil	32.71	7.469	
Tenure in current job position	Online	7.06	6.573	.007**
	Paper & Pencil	4.84	3.114	
How many years have you been working	Online	10.65	9.266	.171
	Paper & Pencil	9.00	5.869	

Note. N (Online) =133, N (Paper and Pencil) =73

\*\* $p < .01$

Table 3.5.

*Chi-Square Test Results of Demographics for Online and Paper and Pencil Surveys*

Variable	Category	Group Count		Pearson Chi-Square	P-Value
		Online	Paper & Pencil		
Gender	Male	50	22	1.153	.283
	Female	83	51		
Marital Status	Single	62	23	8.244	.083
	Married	57	46		
	Divorced	6	3		
	Separated	4	1		
	Widowed	1	0		
Job Position	Teacher	119	70	3.825	.148
	Principal	8	3		

(continued)

Table 3.5. (continued)

Variable	Category	Group Count		Pearson Chi-Square	P-Value
		Online	Paper & Pencil		
	Administrative Staff	6	0		
School Level	Primary	97	49	1.724	.422
Teaching	Secondary	28	21		
	Tertiary	8	3		
Highest	Associate's Degree	71	47	4.130	.248
Educational	Bachelor's Degree	48	23		
Qualification	Master's Degree	11	3		
Level	Doctorate Degree	3	0		

*Note.* N (Online) =133, N (Paper and Pencil) =73

### Measurement

An online self-report questionnaire was developed for the data collection. The variables used to test this instrument as identified from the literature were measured previously with the exception of part two and part nine of the instrument, which were developed by the researcher and validated by an expert, in the absence of sufficient literature. The questionnaire consists of nine parts. Part one solicits demographic information about the teachers, part two solicits information about their participation in teachers' certification, part three contains assessment items about pressure of work, part four emotional demands, part five collegial support, part six appraisal of meaningfulness, part seven management support, part eight family/work conflict, and part nine financial constraint. The items in the questionnaire were related to all the research variables and the hypotheses of the study.

Also, the researcher used 5 point and 7 point Likert-type scale as options used by the respondents to score their answers with the exception of the demographic part.

### Demographics

The purpose of this section was to get a profile and to gather information about the respondents, the teachers in Belize. Demographic data about the characteristics of these teachers include their gender, age, marital status, job position, school level teaching, qualification level, tenure in current job position, and the number of years they have been working, as presented in Table 3.3.

## Participation in Teacher Certification Education

This variable and items were developed by the research to measure how the teachers perceive the possibility towards their participation in teacher certification education. It contained three items of 5 point Likert-type scale anchored from 1 (strongly agree) to 5 (strongly disagree). An item sample is, “I plan to participate in a teacher certification education program in the next two years.” Table 3.6 provides a summary of the items.

Table 3.6.

### *Scale for Participation in Teacher Certification Education*

Participation in Teacher Certification Education
I plan to participate in a teacher certification education program in the next two years.
I intend to participate in a teacher certification education program in the next two years.
I would like to participate in a teacher certification education program in the next two years.

*Note.* Developed for the study.

## Appraisal of Meaningfulness

Kwakman (2003) defines appraisal of meaningfulness “as meaning is situation-specific in nature, appraisals elicit the meaning teachers attach to different professional learning activities by making judgements about different features of each professional learning activity separately” (p.156). The items used to measure this variable were adopted from the personal learning dimension of the Course Valuing Inventory (CVI) from Nehari and Bender (1978). It contained nine items of 5 point Likert-type scale anchored from 1 (strongly agree) to 5 (strongly disagree). Questions were reworded to fit the study. An example of the adaptation is, from “This course had no impact on my personal growth” to “This teacher certification course will have an impact on my personal growth.” Table 3.7 provides a summary of the items.

Table 3.7.

### *Scale for Appraisal of Meaningfulness*

Appraisal of Meaningfulness
Participating in teacher certification may help me to become more aware of my own

(continued)

Table 3.7. (continued)

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Appraisal of Meaningfulness

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feelings and reactions.

The teacher certification course may have an impact on my personal growth.

The certification course may help me realize the importance of my own feelings.

I may feel more perceptive of my education now, and more sensitive to my needs.

I may understand better why to pursue my education.

In some ways I may feel good about myself to participate in the certification course.

The certification course will have no impact on my understanding of who I am or what I want to achieve.

I hope some of my values will be clarified in the certification experience...

By participating, I think I will learn to be more tolerant to my profession.

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*Source:* Nehari, M., & Bender, H. (1978). Meaningfulness of a learning experience: a measure for educational outcomes in higher education. *Higher Education*, 7(1), 1-11.  
 Copyright 1978 by Scientific Publishing Company.

### Family/Work Conflict

Greenhaus and Beutell (1985) cited from Carlson et al., (2000) define Work/Family Conflict as “a form of interrole conflict which the role pressures from the work and family domain are mutually incompatible in some respect” (p.77). The items for measuring this variable were obtained from various sources which were found in the study of Carlson et al., (2000). It contained nine items of 5 point Likert-type scale anchored from 1 (strongly agree) to 5 (strongly disagree). For instance, one of the items is, “I often bring work home to do on the evenings and weekends.” The Table 3.8 below includes a summary of the items.

Table 3.8.

*Scale for Family/Work Conflict*

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Family/Work Conflict

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My work keeps me from my family activities more than I would like.

My work keeps me from my family activities more than I would like.

On the job I have so much work to do that it takes away from my personal interests.

The demands of my job make it difficult for me to maintain the kind of relationship with

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(continued)

Table 3.8. (continued)

Family/Work Conflict
my spouse and children that I would like.
My work takes up time that I'd like to spend with family/friends.
I often bring work home to do on the evenings and weekends.
My superiors and peers dislike how often I am preoccupied with my personal life while at work.
The time I must devote to my job keeps me from participating equally in household responsibilities and activities.
In order for me to succeed at work, I must be a different person than I can be at home.
I am not able to act same way at home as I do at work.

*Source:* Carlson, D. S., Kacmar, K. M., & Williams, L. J. (2000). Construction and initial validation of a multidimensional measure of work–family conflict. *Journal of Vocational Behavior*, 56(2), 249-276. Copyright 2000 by Academic Press.

### **Financial Constraint**

Financial constraint is one of the variables that were developed for the purpose of this research because of insufficient literature. According to the research financial constraint is defined as “the lack of monetary funding for teachers to pursue a certification education.” The construct contained five items of 5 point Likert-type scale anchored from 1 (strongly agree) to 5 (strongly disagree). An item sample is, “With my teacher salary I can’t afford to participate in Teacher Certification Education Program.” The following Table 3.9 provides a summary of the items.

Table 3.9.

#### *Scale for Financial Constraint*

Financial Constraint
With my teacher salary I can’t participate in my Teacher Certification Education Program.
I can’t participate in TCEP because it is too costly.
Allocating money for my participation in TCEP has been stress-free.
I have been receiving financial assistance from the government for my TCEP.
It was necessary for me to get a loan or seek other financial assistance in order to participate in my TCEP.

*Note.* Developed for the study.

## Pressure of Work

According to Kwakman (2003) pressure of work refers to qualitative demanding aspects such as the pace of work and workload. The items used to measure this variable were developed by Gevers, Van Eerde, and Rutte (2001). It contained four items of 5 point Likert-type scales anchored from 1 (not at all) to 5 (to a large extent). An item sample is, “this week, to what extent did you feel you... had too much work to do in the time that was available?” The following Table 3.10 provides a summary of the items.

Table 3.10.

### *Scale for Pressure of Work*

Pressure of Work
This week, to what extent did you feel you...
...had too much work to do in the time that was available?
...had to work extra hard to finish your work in time?
...had to hurry to finish your tasks in time
...worked under time pressure?

*Source:* Gevers, J. M. P., Van Eerde, W., Rutte, C. G., (2001). “Time pressure, potency and progress in project groups”. *European Journal of Work and Organizational Psychology*, 10, 205-221. doi:10.1080/13594320143000636

## Emotional Demands

Emotional demands refers to the extent to which the job requires emotional investment (Kwakman, 2003). This construct was measured using the “need for recovery scale” from the questionnaire of the Dutch Institute of Working Conditions by Veldhoven and Broersen (2003). It contained eleven items of 5 point Likert-type scale anchored from 1 (never) to 5 (always). An item sample is, “I find it difficult to relax at the end of a working day.” The following Table 3.11 provides a summary of the items.

Table 3.11.

### *Scale for Emotional Demands*

Emotional Demands
I find it difficult to relax at the end of a working day.
By the end of the working day, I feel really worn out.
Because of my job, at the end of the working day I feel rather exhausted.

(continued)



Table 3.11. (continued)

Emotional Demands
After the evening meal, I generally feel in good shape.
In general, I only start to feel relaxed on the first non-working day.
I find it difficult to concentrate in my free time after work.
I cannot really show any interest in other people when I have just come home from school.
Generally, I need more than an hour before I feel completely recuperated after work.
When I get home from work, I need to be left in peace for a while.
Often, after a day's work I feel so tired that I cannot get involved in other activities.
A feeling of tiredness prevents me from doing my work as well as I normally would during the last part of the working day.

*Source:* Veldhoven, M. van., & Broersen, S. (2003). Measurement quality and validity of the “need for recovery scale”. *Occupational and Environmental Medicine*, 60(suppl 1), i3-i9. doi:10.1136/oem.60.suppl\_1.i3

### Management Support

Management support or principal support is the assistance being received, emotionally, physically, psychologically, etc., from an upper authority to the subordinates, or in the case of the primary school from principal to teachers. This construct was measured using the quality of leadership dimension of the Copenhagen Psychosocial Questionnaire by Kristensen and Borg (2003) which is found in the second edition of the original version. It contained eight items of 5 point Likert-type scale anchored from 1 (to a very small extent) to 5 (to a very large extent). The items were changed with suitable wording for the study. An item sample is from, “To what extent would you say that your immediate superior... appreciates the staff and shows consideration for the individual?” to “To what extent would you say that your principal... appreciates the staff and shows consideration for the individual teacher?” Table 3.12 provides a summary of the items.

Table 3.12.

#### *Scale for Management Support*

Management Support
To what extent would you say that your principal...
...appreciates the staff and shows consideration for the individual teacher?

(continued)

Table 3.12. (continued)

Management Support
To what extent would you say that your principal...
...make sure that every individual teacher on staff has good development opportunities on their certification education?
...gives high priority to further training and teacher development?
...gives high priority to on job training while continuing studying?
...is good at encouraging teachers towards teacher certification?
...is good at allocating time for teachers to study?
...is good at persuading teachers to continue teacher certification education?
...is good at communicating with the staff the teacher certification programs offered by the Ministry of Education?

*Source:* Kristensen, T. S., & Borg, V. (2003). Copenhagen Psychosocial Questionnaire (COPSOQ). A questionnaire on psychosocial working conditions, health and well-being in three versions. Unpublished manuscript, National Institute of Occupational Health, Denmark. Retrieved from: <http://www.arbejdsmiljoforskning.dk/~media/Spoergeskemaer/copsoq/english-copsoq-2-ed-2003-pdf.pdf>

### Collegial Support

According to Shah (2011), “collegiality refers to the cooperative relationships among colleagues; however, its exact meaning remains conceptually vague in the literature” (p.2). Items for this variable were adopted from the Demonstrating Mutual Support trust (DMS) dimension from the Teacher Collegiality Scale (TCS) developed by Shah (2011). It contained seven items of 5 point Likert-type scale anchored from 1 (strongly agree) to 5 (strongly disagree). An item sample is, “Teachers provide strong social support for colleagues.” The following Table 3.13 provides a summary of the items.

Table 3.13.

#### *Scale for Collegial Support*

Collegial Support
Teachers provide strong social support for colleagues.
Professional interactions among teachers are cooperative and supportive.
There is a feeling of trust and confidence among staff members.

(continued)

Table 3.13. (continued)

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Collegial Support

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I can count on most of my colleagues to help me out anywhere, anytime even though it may not be part of their official assignment.

Teachers in this school hide their failures and mistakes.

Teachers consider their colleagues as their friends.

Teachers in this school do not respect the professional competence of their colleagues.

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*Source:* Shah, M. (2011). The dimensionality of teacher collegiality and the development of teacher collegiality scale. *International Journal of Education*, 3(2). p.7. Copyright 2011 by Macrothink Institute

### **Control Variables**

Gender and age were controlled for. According to a study carried out by Lardinois (2011) on learning "while" working: success stories on workplace learning in Europe, she found out that gender and age do play an important effect on adult learners since the older an adult become, it is less likely to continue learning.

### **Validity and Reliability**

Once the instrument was completed, to ensure the content validity of the items and the reliability of the research instrument, a pilot study was conducted on a sample of 47 teachers. The pilot test was done in two phases. Firstly, the questionnaire was tested with 5 researcher's peers, who are master's degree students in human resource development to ensure that all the variables were clearly covered, that item statements were clearly understood. Secondly, the survey questionnaire was administered to 47 teachers similar to the ones used in the final survey.

Exploratory factor analysis (EFA) was conducted on the data collected to refine the new scales based on the instructions of Hinkin (1998). Specifically, the participation in teachers' certification education and financial constraint scales. After factor analysis none of the items were deleted.

To confirm the validity and reliability of the research instrument, cronbach's alpha and factor analysis were used. Validity of the instrument is the degree to which scales measure what researchers claim they measure (Williams & Monge, 2001). Cronbach's alpha is one of the most important and mostly used statistics in research for test construction and use (Cortina, 1993). Cronbach's alpha should be greater than 0.7. Exploratory factor analysis was

used to assess the quality of the factor structure providing more evidence about the construct validity of the new measure.

## **Exploratory Factor Analysis (EFA)**

SPSS software was used for the exploratory factor analysis (EFA) which starting point is a correlation matrix, in which the intercorrelations between the studied variables are presented. According to Field (2000) the dimensionality of this matrix can be reduced by “looking for variables that correlate highly with a group of other variables, but correlate very badly with variables outside of that group” (p.424).

Before factor analysis, two analyses are required to test the assumptions. Firstly, the Kaiser-Meyer-Olkin (KMO) which measures the sampling adequacy value to indicate the use of factor analysis on the data. The closer KMO is to 1.00, the better factor extracted from the data will account for the variance in the data (Friel, 2010). KMO greater than .80 is considered excellent, as it indicates that the factor component will be useful for the variables. If the value is above .70, it can also be accepted but if less than .50, corrective action needs to be taken either by deletion or by including other variables related to the offenders. The KMO results for the exploratory factor analysis is .851

Secondly, the Bartlett’s Test for Sphericity reports whether or not the correlations between variables happened by chance. A small *p*-value which is less than .05 confirms that the factor analysis will be useful with the data gathered. The Bartlett’s Test of Sphericity results had a *p*-value of .000.

In this study, factors with eigenvalue larger than 1 were used, seven factors were extracted with communalities of these items all above .5, which reaffirms that each item shared some common variance with other items. The Harmon’s one-factor test showed that the first unrotated factor only accounted for 25.4% of variance which minimizes the concern of common method variance (Podsakoff, Mackenzie, & Podsakoff, 2003). The cumulative total variance explained by all factors was 78.9%. The varimax rotation method was used (Kinnear & Gray, 2000).

Initially the items for pressure of work (TFPW) and participation in teacher certification education (PTCE) all loaded on their intended component. Financial constraint (PFFC) loaded in two different components, management support (WEFMS), family/work conflict (PFFWC), and collegial support (WEFCS) loaded in three different components, and appraisal of meaningfulness (PFAM) loaded into four different components. The emotional

demands (TFED) items dispersed among all the other components and were excluded from the study.

After running factor analysis several times, these items were deleted due to cross loadings within 0.2 differences: for financial constraint items, 1 and 2, for family/work conflict, items 1, 2, and 7 and for collegial support, item 5. For those items that were still loading into different components the researcher proceeded by deleting items from the largest factors; items deleted were: for family/work conflict, items 1 and 2, for management support, items 1 and 2, for collegial support, items 1, 2, and 7, for appraisal of meaningfulness, items 1, 2, 7, and 9. After examining the questionnaire using EFA to ensure that the items loaded on their intended component of the measurement scale, the following EFA results shown on Table 3.14 was prepared.

Table 3.14.

*Final Exploratory Factor Analysis Results*

Variable	Item	Loading
Management Support	WEFMS6- To what extent would you say that your principal... [...is good at allocating time for teachers to study?]	.904
	WEFMS5- To what extent would you say that your principal... [...is good at encouraging teachers towards teacher certification?]	.903
	WEFMS7- To what extent would you say that your principal... [...is good at persuading teachers to continue teacher certification education?]	.903
	WEFMS8- To what extent would you say that your principal... [...is good at communicating with the staff the teacher certification programs offered by the Ministry of Education?]	.884
	WEFMS4- To what extent would you say that your principal... [...gives high priority to on job training while continuing studying?]	.881
	WEFMS3- To what extent would you say that your principal... [...gives high priority to further training and teacher development?]	.783

(continued)

Table 3.14. (continued)

Variable	Item	Loading
Appraisal of Meaningfulness	PFAM5- [I may understand better why to pursue my education.]	.889
	PFAM6- [In some ways I may feel good about myself to participate in the certification course.]	.888
	PFAM4- [I may feel more perceptive of my education now and more sensitive to my needs.]	.869
	PFAM3- [The certification course may help me realize the importance of my own feelings.]	.848
	PFAM8- [I hope some of my values will be clarified in the certification experience.]	.781
Family/Work Conflict	PFFWC4- [My work takes up time that I'd like to spend with family/friends.]	.824
	PFFWC9- [I am not able to act same way at home as I do at work.]	.816
	PFFWC5-[I often bring work home to do on the evenings and weekends.]	.771
	PFFWC3- [The demands of my job make it difficult for me to maintain the kind of relationship with my spouse and children that I would like.]	.768
	PFFWC6- [My superiors and peers dislike how often I am preoccupied with my personal life while at work.]	.761
	PFFWC8- [In order for me to succeed at work, I must be a different person than I can be at home.]	.749
Pressure of Work	TFPW3- This week, to what extent did you feel you... [...had to hurry to finish your tasks in time]	.880
	TFPW2- This week, to what extent did you feel you... [...had to work extra hard to finish your work in time?]	.869
	TFPW1- This week, to what extent did you feel you... [...had too much work to do in the time that was available?]	.831

(continued)

Table 3.14. (continued)

Variable	Item	Loading
	TFPW4- This week, to what extent did you feel you... [...worked under time pressure?]	.817
Participation in Teacher Certification	PTCE3- I would like to participate in a teacher certification education program in the next two years	.877
	PTCE2- I intend to participate in a teacher certification education program in the next two years	.858
	PTCE1- I plan to participate in a teacher certification education program in the next two years	.850
Financial Constraint	PFFC4- [I have been receiving financial assistance from the government for my TCEP.]R	.898
	PFFC3- [Allocating money for my participation in TCEP has been stress-free.]R	.879
	PFFC5- [It was necessary for me to get a loan or seek other financial assistance in order to participate in my TCEP. ]	.680
Collegial Support	WEFCS3- [There is a feeling of trust and confidence among staff members. ]	.831
	WEFCS4- [I can count on most of my colleagues to help me out anywhere, anytime even though it may not be part of their official assignment.]	.817
	WEFCS6- [Teachers consider their colleagues as their friends.]	.752

### Internal Consistency Reliability

The reliability of the scales was then tested by using SPSS software and the Cronbach's Alpha of each of the variables of the questionnaire was then calculated to check the reliability of each scale after deletion of items. The value of the reliability test, should be greater than .70 (Nunnally, 1978) for it to be accepted. The reliability for PFAM was .933, for PFFWC .885, for PFFC .790, for TFPW .913, for WEFMS .948, for WEFCS .874 and for PTCE .874 as shown in Table 3.15.

Table 3.15.

*Reliability Results for All Variables*

Variable	Cronbach's Alpha
Appraisal of Meaningfulness	.933
Family/Work Conflict	.885
Financial Constraint	.790
Pressure of Work	.913
Management Support	.948
Collegial Support	.874
Participation in Teacher Certification	.954



## CHAPTER IV DATA ANALYSES AND RESULTS

This chapter presents the data analysis and results of the study. First, the T-test and ANOVA were presented. Also, the mean and standard deviation of major research variables were calculated along with the correlation between each pair of variables. Later on, the hypotheses were tested using hierarchical regression in SPSS software.

### T-test and ANOVA

T-tests were used to measure the influence that gender and marital status had on participation in teacher certification education (PTCE). One-way ANOVA tests were used to measure the influence that school level teaching and highest educational qualification level had on participation in teacher certification education (PTCE). Later, a Post Hoc test of Scheffe's was conducted after examining the test results of the one-way ANOVA. These tests were done to provide more insight to the MoE when making policies, and also to add valuable contribution to the research on factors influencing PTCE. Results of the t-test were all non-significant as shown in Table 4.1.

Table 4.1.

#### *T- Test Results for Demographics' Effects on PTCE*

Variable	Category	N	Mean	S. D.	P-Value
Gender	Male	72	3.56	1.461	.087
	Female	134	3.89	1.168	
Marital Status	Single	88	3.95	1.291	.137
	Married	103	3.66	1.321	

The test results of the one-way ANOVA was highly significant ( $p < .001$ ) among the comparisons of categories of the highest educational qualification level tested, while comparison of the school level teaching appeared to be not significant as shown in Table 4.2.

Table 4.2.

#### *One-way ANOVA Test Results for Demographics' Effects on PTCE*

Variable	Category	N	Mean	S. D.	P-Value
School Level	Primary	146	3.79	1.314	.057
Teaching	Secondary	49	3.39	1.179	
	Tertiary	11	2.91	1.076	

(continued)

Table 4.2. (continued)

Variable	Category	N	Mean	S. D.	P-Value
Highest Educational Qualification Level	Associate's Degree	118	4.01	1.223	.000***
	Bachelor's Degree	71	3.66	1.236	
	Master's Degree	14	2.79	1.231	
	Doctorate Degree	3	2.00	1.732	

Note.

\*\*\* $p < .001$ .

Subsequently, a Post Hoc analysis was conducted to the variable, highest educational qualification level, which indicated that two of the four categories have a significant difference in the mean score of PTCE ( $p < .01$ ): Associate's Degree and Master's Degree qualifications, as shown in Table 4.3 where the Post Hoc results of Scheffe's test are presented. Teacher's with an associate's degree had a higher intention to participate in teacher certification education (M= 4.01, SD= 1.22) than teachers with a master's degree did (M= 2.79, SD= 1.23)

Table 4.3.

*Post Hoc Results of Scheffe's Multiple Comparison for Highest Educational Qualification Level Effects on PTCE*

Variable (I)	Category (J)	Mean Difference (I-J)	Std. Error	P-Value
Highest Educational Qualification Level	Associate's Degree	1.220	.349	.008**
	Master's Degree			

Note.

\*\* $p < .01$ .

Teachers with Associate's Degree were more propelled to participate in certification education. The tendency within the Associate's Degree teachers could be explained due to that in Belize, sixth form level equivalent to an Associate's Degree is the most common level

a student would tend to aspire due to lack of financial assistance to continue studying. Therefore, most teachers would have finished a content knowledge education, for example, an Associate's Degree in Business Administration, accounting, economics etc., and would decide to enter the teaching profession because of the lack of other employment opportunities and also due to the scarcity of teachers, they would easily become accepted in the field.

Due to the implementation of the reinforcement of the education policy for all teachers to become certified and trained by June 2014, the majority of these Associate Degree's teachers are being compelled in a certain way due to the reinforcement of the policy to participate in certification education.

### **Correlation Analysis**

A Pearson product-moment coefficient was computed to analyze the direction and strength of linear relationship between the variables. Values of the Pearson correlation coefficient are always between -1 and +1. A correlation coefficient of +1 indicates that two variables are perfectly related in a positive linear sense; a correlation coefficient of -1 indicates that two variables are perfectly related in a negative linear sense, and a correlation coefficient of 0 indicates that there is no linear relationship between the two variables.

As was expected in the hypothesis, almost all of the variables showed significant correlations. For the personal factors, appraisal of meaningfulness had a significant positive correlation with PTCE ( $r=.568, p<.01$ ). Financial constraint had a significant negative correlation with PTCE ( $r=-.153, p<.05$ ) and family/work conflict had no significant correlation with PTCE. For the task factors, pressure of work had a significant positive correlation with PTCE ( $r=.245, p<.01$ ). For the work environment factors, management support had a significant positive correlation with PTCE ( $r=.270, p<.01$ ), and collegial support had a significant positive correlation with PTCE ( $r=.215, p<.01$ ).

For the control variables, gender had no correlation with PTCE; age had a significant negative correlation with PTCE ( $r=-.394, p<.01$ ); and tenure in current job position had a significant negative correlation with PTCE ( $r=-.308, p<.01$ ) as shown in the correlation analysis output in Table 4.4.

### **Hierarchical Regression Analysis**

After the model was validated and estimated as reliable, hypothesis testing was conducted to answer the research questions. The research hypothesized as found in the literature that personal (appraisal of meaningfulness, family/work conflict, financial

constraint), task (pressure of work), and work environment factors (management support and collegial support) would either positively or negatively influence teachers' decision to participate in a certification education.

Hypotheses 1, 2, 3, 4, 5, and 7 were tested, noting that hypothesis 6 was taken out of the study as explained in the EFA results. In the hierarchical regression reported in Table 4.5, gender, age and tenure in current position were entered as control variables into model 1. Then the main effects: appraisal of meaningfulness (PFAM), family/work conflict (PFFWC), financial constraint (PFFC), pressure of work (TFPW), management support (WEFMS), and collegial (WEFCS) were entered into model 2 as independent variables.

Hypothesis one stated that: Appraisal of meaningfulness will have a positive influence in teachers' participation in teacher certification education. As depicted in Table 4.5 under model 2, appraisal of meaningfulness had a positive significant effect on PTCE ( $\beta=.404$ ,  $p<.001$ ) leading to the acceptance of this hypothesis. Hypothesis two stated that: Family/work conflict will negatively influence teachers' participation in teacher certification education. The results showed that PFFWC had a negative but not significant relationship with PTCE ( $\beta=-.003$ ) leading to the rejection of this hypothesis. Hypothesis three stated that: Financial constraint will negatively influence teachers' participation in teacher certification education. The results showed that PFFC had a negative but not significant relationship with PTCE ( $\beta=-.054$ ) leading to the rejection of this hypothesis. Hypothesis four stated that: Pressure of work will negatively influence teachers' participation in teacher certification education. The results showed that TFPW had a positive and significant relationship with PTCE ( $\beta=.176$ ,  $p<.01$ ) but in a different direction. Hypothesis six stated that: Management support will have a positive influence in teachers' participation in teacher certification. Results showed that WEFMS had a positive and significant relationship with PTCE ( $\beta=.192$ ,  $p<.01$ ) leading to the acceptance of this hypothesis. Hypothesis seven stated that: Collegial support will have a positive influence in teachers' participation in teacher certification. Results showed that WEFCS had a negative and non-significant relationship with PTCE ( $\beta=-.058$ ) leading to the rejection of this hypothesis.

The regression highlights an acceptable power of the model to explain PTCE ( $F=15.694$ ,  $p<.001$ ), which explains 42% of the variance of PTCE ( $R^2=0.419$ ) with a significant  $R$  squared changed in model 2 after adding the independent variables ( $\Delta R^2=0.236$ ,  $p<.01$ ). The summary of hierarchical regression is shown in Table 4.5 and the overview of hypotheses testing shown in table 4.6.

Table 4.4.

*Correlation Analysis Results*

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10
1. Age	32.9	8.578										
2. Gender- female	0.65	0.478	.049									
3. Tenure in current job position	6.27	5.69	.601**	.060								
4. PFAM-appraisal of meaningfulness	3.70	1.047	-.481**	.001	-.353**	(.933)						
5. PFFWC- family/work conflict	3.02	1.030	.118	.073	.175*	.094	(.885)					
6. PFFC- financial constraint	2.82	1.198	.092	-.008	-.022	-.165*	-.023	(.790)				
7. TFPW- pressure of work	3.29	1.009	.131	.033	.034	.175*	.426**	-.187**	(.913)			
8. WEFMS- mgmt. support	3.54	1.060	-.113	-.006	-.329**	.188**	-.048	.069	.089	(.948)		
9. WEFCS- collegial support	4.50	1.412	-.175*	.009	-.259**	.246**	-.031	-.117	.072	.600**	(.874)	
10. PTCE- participation in teacher certification	3.77	1.283	-.394**	.119	-.308**	.568**	.088	-.153*	.245**	.270**	.215**	(.954)

*Note.* Numbers in the brackets represent the Cronbach's Alpha of the variables. Gender is coded as dummy variable male=0, female=1. Age and Tenure in current job position are coded as continuous variable.

\* $p < .05$ . \*\* $p < .01$ .

Table 4.5.

*Summary of Hierarchical Regression Analysis for Variables Predicting Participation in Teacher Certification Education*

Variables	Model 1	Model 2
<i>Control Variables</i>		
Gender- female	.143*	.126*
Age	-.329***	-.208**
Tenure in current job position	-.119	-.006
<i>Main Effects</i>		
PFAM- appraisal of meaningfulness		.404***
PFFWC- family/ work conflict		-.003
PFFC- financial constraint		-.054
TFPW- pressure of work		.176**
WEFMS- management support		.192**
WEFCS- collegial support		-.058
<i>R</i> <sup>2</sup>	.183	.419
<i>ADJ.R</i> <sup>2</sup>	.171	.392
$\Delta R^2$	.183***	.236***
<i>F</i>	15.109***	15.694***

Note: Gender coded as dummy variable male=0, female=1

\*  $p < .05$     \*\* $p < .01$     \*\*\* $p < .001$

Table 4.6.

*Overview of Hypotheses Testing*

Hypothesis	Result
H1: Appraisal of meaningfulness will have a positive influence in teachers' participation in teacher certification education.	Supported
H2: Family/work conflict will negatively influence teachers' participation in teacher certification education.	Not supported
H3: Financial constraint will negatively influence teachers' participation in teacher certification education.	Not supported
H4: Pressure of work will negatively influence teachers' participation in teacher certification education.	Not Supported
H6: Management support will have a positive influence in teachers' participation in teacher certification education.	Supported
H7: Collegial support will have a positive influence in teachers' participation in teacher certification education.	Not supported

## Discussions

First, a brief discussion will be conducted on all the independent variables, and secondly, on all three demographics used as control variables to measure the extent of influence they had on teachers' participation in certification education. In addition, highest educational qualification level which showed some influence on PTCE will also be discussed.

In Belize, teachers' perception of certification is being appraised as meaningful as it adds value to their professional work life. Appraisal of meaningfulness was highly correlated to PTCE and had a very significant influence on PTCE according to the regression results in Table 4.5, model 2. Meaningfulness is situation-specific in nature, and appraisals elicit the meaning teachers attach to different professional learning activities (Kwakman, 2003). Teachers may find their job to be highly meaningful therefore they would like to engage themselves in PTCE in order to become better equipped to the new challenges within the teaching profession.

According to the results of a study carried out by Yeh and Tun (2014), if teachers do not receive financial support from their Ministry of Education to invest in their preparation in a formal certification education they would find it difficult to engage in such an activity since the cost of living and further education costs are elevated. In this study financial constraint had a negative significant correlation with PTCE as hypothesized but it showed a non-significant coefficient in the regression results as seen in Table 4.5, model 2. This variable had a smaller effect on PTCE compared to the other factors and also compared to results of other studies with a different population and area.

Previous studies of the TALIS (2009) reported that 30% of OECD countries stated that family responsibilities has been a hindrance for them to participate in certification education, this did not appear to be an obstacle to the teachers in this study since the family/work conflict variable had no correlation with PTCE and had a low coefficient value in the regression results as shown in Table 4.5, model 2.

Nowadays pressure of work has been seen as a heavy burden within the work tasks of most professionals, this being the case in Belize. Teachers tend to feel that the teaching profession has a quantitative demand of workload and also pace of work (Kwakman, 2003). Pressure of work had a significant positive correlation with PTCE with a different direction as hypothesized. Furthermore, it had a significant value with PTCE as shown in the regression results in Table 4.5, model 2.

The new changes and challenges for the Ministry of Education in Belize has stipulated

and mandated the reinforcement of the education policy to all teachers at all levels. This process is expecting the outcome of proper certification of teachers in pedagogical content knowledge, rather than only a content knowledge education. The reinforcement of this policy will become effective on June of 2014, causing teachers to participate in a certification education albeit the circumstances that they are confronting pressure of work. However, this situation of feeling pressured to continue their studies in the pedagogical field will further on become beneficial to them knowledge and financial wise.

Receiving any form of assistance emotionally, physically, psychologically or financially from the principal or administration is rewarding; it will foster trust, understanding and participation between staff and management. Principal support is important to teachers' well-being (Littrell et al., 1994). This will enable them to perceive that their work and dedication has been acknowledged and, furthermore, allow the ambiance of inclusion and ownership within the process of the achievement of goals of the institution to become a success. Management support was highly correlated to PTCE and also had a high significant value in the regression results as shown in Table 4.5, model 2. Teachers perceived that by having full support from their principal they would participate in certification education.

Lastly, despite previous studies supporting that collegial support will influence the participation of teachers in certification education. In this study collegial support had a significant correlation with PTCE but was non-significant in the regression results as shown in Table 4.5, model 2. This variable had little effect on PTCE compared to the other factors.

With regards to the review of the demographics that were used as control variables: age, gender, and tenure in current job position, age had a significant negative correlation with PTCE and also a significant negative value as a predictor of PTCE as shown in the regression results in Table 4.5, model 2. According to a study carried out by Lardinois (2011) on learning "while" working: success stories on workplace learning in Europe, age and gender do play an important effect on adult learners since the older an adult is, the less likely they will continue learning. This study revealed that age has a significant negative effect PTCE which denotes that the younger the teacher is, the more likely they will participate in certification education. This could be an important finding for the MoE, to consider focusing the certification policy on younger teachers since they are more enthusiastic to learn and to remain in the system, bearing in mind that age tends to lower the intention of teachers' participation in further learning. This is especially true when they become closer to the age range of 55-64 years (Eurostat, 2009a). The MoE is trying to minimize the problem of uncertified and untrained teachers; therefore, it may be effective to target the younger



teachers who seem to be more willing to participate than the older ones. Lardinois (2011) further stated that participation in continuing learning decreases with age, particularly, in countries that have an overall lower average of participation of adult learners. Perhaps this is not the case in Belize, thus the reason, that age is a good indicator for the authorities to start working on plans and strategies to motivate these young teachers to participate in certification education.

Gender had a positive but non-significant correlation with PTCE but showed a significant effect on PTCE in the regression results as shown in Table 4.5, model 2. This reveals that in Belize female teachers have a higher intention to participate in certification education than males.

Tenure in current job position had a significant negative correlation with PTCE but showed no significant effect on PTCE in regression. Limited literature was found on tenure in current job position affecting teachers' participation in certification education. However, the OECD (2006) reported that the occurrence of adults participating in learning decreases with age and that the expected pay-back period on training investments is shorter for the older workers. This seems to suggest that age is a better indicator than tenure in predicting PTCE.

Finally, the findings of the one-way ANOVA test on the highest educational qualification level variable indicated that there was a significant difference on PTCE scores among the four categories. Furthermore a Post Hoc test revealed that two categories, Associate's Degree and Master's Degree showed a strong significant difference in the comparisons of the PTCE mean scores, which means teachers with an associate's degree were more willing to participate in certification education than teachers with a master's degree. Most teachers in Belize hold an associate's degree only in content knowledge education. Results confirm that these teachers are more propelled to participate in certification education due to the fact of their previous qualification.



## **CHAPTER V CONCLUSIONS AND SUGGESTIONS**

This chapter presents the conclusions based on the previous analysis of the data studied. It also includes research implications, practical implications, limitations and future research suggestions.

### **Conclusions**

The aim of this study was to examine some possible factors such as personal (appraisal of meaningfulness, family/work conflict, and financial constraint), task (pressure of work), and work environment (management support and collegial support) that could be influencing either positively or negatively, teachers' participation in teacher certification education in Belize. These variables have been proven in literature as having an impact on teachers' decision to participate in learning activities.

As highlighted in Kwakman's (2003) framework these factors had an effect on her previous study and this study adopted those variables that were significant in her study. However, the findings of this research when applied to a different population and area prove differently compared to her outcomes. Only three of these variables, one from each personal and contextual factor had an effect on teachers' participation in certification education in Belize.

Firstly, appraisal of meaningfulness had the most significant value within the teaching force. It seems that teachers value their profession and are willing to continue studying for their benefit, financially and knowledge-wise, and also to improve students' performance. Secondly, pressure of work had significant effect on teachers but in a positive direction contrary to what was hypothesized. This scenario is possibly due to the reinforcement of the education policy for teachers to become certified and trained or to be enrolled in a program towards certification education before the end of June 2014; this is a requirement for them to remain in the teaching force. Thirdly, management support had a significant effect on teachers. This implies that having principals that are more supportive to their staff, it is more likely that their teachers will participate in certification education.

Similarly findings from Yeh and Tun's (2014) qualitative study held in Belize about factors influencing government primary school teachers' participation in CPD revealed that appraisal of meaningfulness and management support positively influences teachers' decision to participate in certification education. However, contrary to the findings of this study, pressure of work was found to negatively influence their decision.

With regards to the demographic variables – age, gender, and tenure in current job position – which were used as controlled variables, it was found that age had a strong negative influence on teachers' PTCE. This can be explained that in Belize there are a number of young teachers that are working with only content knowledge education. Perhaps considering their profession to be meaningful and causing an urge in them to become prepared in certification education to enable their work to be more effective and efficient will produce positive results in children's performance as is expected.

The findings also highlighted that gender had a significant positive influence on female teacher's participation in certification education. The population of teachers is not only young in age but also is significantly represented by females. Based on the researcher's personal experience as a teacher, females tend to be more tolerant to the pressure generated by the day to day activities at school. Even so, many of the female teachers were enrolled in a certification education program rather than male teachers. Nonetheless, due to the implementation of the reinforcement of the education policy, this situation is causing a higher impact on younger teachers both females and males. These teachers will become part of the new generation of certified and trained professional within the educational field.

Finally, this study found no significant effect of tenure in current job position on teachers' participation in certification education.

An interesting finding of this research is that teachers with an associate's degree from the demographic variable, highest educational qualification level which was not controlled for, had a higher intention of upgrading their education in pedagogy than the group of teachers with a master's degree.

### **Research Implications**

This study highlights that existing personal and contextual factors are important in teachers' participation in certification education. As previously researched, personal factors appear to be more significant in teachers' participation in learning activities than task and work environment factors. Likewise, this study found that in Belize, teachers appraised the meaningfulness of continuing professional development to add to their well-being as a teacher. Over the years it has been noted that once a teacher enters the profession, they learn as they gain experience and tend to remain in the profession.

Similarly, contextual factors such as task and work environment also had significant effect on teachers' participation in certification education as shown in the results of the correlation and the regression analysis. This concurs with the previous study of Kwakman

(2003), which found that task and work environment factors to an extent affect teachers' participation in an indirect manner and in accordance with the existing personal factor. Pressure of work appeared to be positively significant to PTCE in a different direction reaffirming that the implementation of the reinforcement of the education policy has been a success in motivating teachers to further their education in pedagogical content knowledge despite a hectic work schedule. As reported previously, management support had a significant effect on PTCE as stated in a previous study of Stockard and Lehman (2004) that teacher's school management with more effective principals influences their participation and satisfaction, based on the school settings that they are employed in. As a result they can have greater time control, participation in decision making, and a sense of inclusion and ownership than those that are not.

After an extended analysis of the demographics, only age, gender and highest educational qualification level had a significant effect on PTCE. Mainly young female teachers are interested in participating in a formal CPD, majoring in pedagogy. For the variable highest educational qualification level, the significant differences between associate's degree and master's degree teachers reveal that, there is the need for the establishment of more educational institutions across the country, especially, to offer pedagogical studies or an Associate's Degree in Primary Education as being required as an upgrade for all those teachers that only possess an associate's degree in other disciplines.

### **Practical Implications**

In Belize the percentages of uncertified and untrained teachers are 43.6% and 71% at primary and secondary level respectively, with non-existing data at tertiary level education. This is an alarming indication for the Ministry of Education (MoE) and school principals to be concerned with. As the findings of this study reveals, only three of the six personal and contextual factors and three demographics: age, gender and highest educational qualification level studied, significantly affects teachers' decision on their participation in certification education.

In addition, this study is among the first of its kind when it comes to studying teachers and factors affecting them, to answer the question proposed by the MoE of why teachers do not feel the urge to uplift themselves from a content knowledge to a pedagogical content knowledge prospective.

Furthermore, these teachers appraised their profession as meaningful are more likely to continue studying. This may be a turning point for the MoE to find measures to assist these

teachers to uplift their education level. Pressure of work in the sense of daily workload at school was shown to have a positive influence on teachers' participation in certification education, despite the workload they face. This response could also be due to the implementation of the reinforcement of the education policy in reference to proper teachers' certification. However, if the government formulates an incentive plan or schedule a time during the normal school year allowing teachers to participate in certification education then, this reinforcement of the policy will become productive. In addition, the support of the school management concerning principals set a communication channel between themselves and teachers and MoE and teachers. Encouraging dialogue facilitates the route to certification since all parties will be working towards the same goal.

Moreover, the indication of the results of the influence that the demographics: age, gender and highest educational qualification level have on PTCE, certainly indicates to the MoE to work on making policies that will suffice their needs of young female teachers that are not fully equipped in the profession. By doing so it is likely that the percentage of uncertified teachers will decrease and there will be an influx of vibrant professionals.

Extended from the aforementioned, additional suggestions include the following. Firstly, it would be beneficial for the MoE through the government to establish a unit for professional development to combat the problem of uncertified and untrained teachers. Secondly, it can create a link between professional growth and development through a quality assurance mechanism for those teachers with content knowledge education. Thirdly, it can provide time for teachers to participate in professional development activities. Fourthly, it can allocate more financial and material resources for professional development at schools. Lastly, as this is a continuous problem the MoE is facing, standardizing the entrance of teachers within the profession would decrease this situation to a more suitable expectation.

This accountability of actions to a certain extent will reap the benefits of a lower percentage of uncertified and untrained teachers throughout the country, with well prepared and satisfied teachers and a growth of expected performance level of students.

### **Limitations**

Firstly, the use of online survey as one of the methods of collection was somewhat not effective since internet access was not available as predicted by the researcher. Secondly, the researcher faced limitation with the distance between her location (Taiwan) and the country of origin of the sample (Belize). Thirdly, the availability of literature on Belize's education

both on writing and on the internet was limited causing the study to become a challenge. Due to lack of the above mentioned, the sample size of the population was limited since not all uncertified teachers throughout the country have been reached as expected by the researcher. Therefore, the findings of this research may not be generalized to all teachers in Belize.

Lastly, using data from a self-report survey may cause a common method variance problem but through the Harmon's one-factor test which showed that the largest factor in the EFA has only accounted for 25.4% of the variance, CMV was minimized.

### **Suggestions for Future Research**

The independent variables selected by this study only represented 42% of the effects on the dependent variable, which means that there may be other personal and contextual factors affecting teachers' decision on participating in certification education. Therefore, future studies on teachers' participation should be explored with different factors besides the ones in this study and previous studies. The research method should use a paper and pencil survey adapting to the Belizean culture. Due to the lack of studies conducted in the Central American Region considering the problem of factors influencing teachers' participation in certification education, it would be interesting to make a comparison within countries in this region.

After knowing which factors are affecting teachers' participation in certification education in Belize, further research could be conducted on how to formulate better strategies and plans to master this problem from a teachers' perspective.





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## APPENDIX A: QUESTIONNAIRE

This study seeks to explore the factors associated with professional development in the teaching profession in Belize, teachers' participation in teacher certification education is considered as a form of teacher professional development. This questionnaire has a total of 56 items. If you have any questions or concern feel free to contact me at my email address [amparotun@hotmail.com](mailto:amparotun@hotmail.com). Thank you for your participation.

### **Part I**

**Please answer the following demographic questions.**

**Your answers will only be used in statistical analysis and reported in aggregate form. All individual information collected through this questionnaire will be kept in strict confidentiality.**

1. Gender: Male\_\_\_\_ Female\_\_\_\_
2. Age: \_\_\_\_\_
3. Marital status: Single\_\_\_\_ Married\_\_\_\_ Divorced\_\_\_\_ Separated\_\_\_\_  
Widowed\_\_\_\_
4. Job position: Teacher\_\_\_\_ Principal\_\_\_\_ Administrative staff\_\_\_\_
5. School level teaching: Primary \_\_\_\_\_ Secondary:\_\_\_\_ Tertiary:\_\_\_\_
6. Tenure in current job position (in years):\_\_\_\_\_
7. How many years have you been working? \_\_\_\_\_
8. What is your highest educational qualification?  
Associate Degree\_\_\_\_ Bachelor's Degree \_\_\_\_\_ Master's Degree\_\_\_\_  
Doctorate Degree\_\_\_\_\_

## **Part II**

Below are a number of statements that describe the probability of you participating in a teacher certification program. The higher scores you give represent a more frequent occurrence of probability.

<b>Strongly disagree (1)</b>	<b>Neither agree or disagree (3)</b>	<b>Strongly agree (5)</b>
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1	I plan to participate in a teacher certification education program in the next two years.	1	2	3	4	5
2	I intend to participate in a teacher certification education program in the next two years.	1	2	3	4	5
3	I would like to participate in a teacher certification education program in the next two years.	1	2	3	4	5

## **Part III**

Below are a number of questions that describe different feelings that you might have felt at work during the week. The higher scores you give represent a more frequent occurrence of the feeling.

<b>Not at all (1)</b>	<b>Hardly (2)</b>	<b>Somewhat (3)</b>	<b>To a considerable extent (4)</b>	<b>To a large extent (5)</b>
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<b>This week, to what extent did you feel you...</b>						
4	...had too much work to do in the time that was available?	1	2	3	4	5
5	...had to work extra hard to finish your work in time?	1	2	3	4	5
6	...had to hurry to finish your tasks in time	1	2	3	4	5
7	...worked under time pressure?	1	2	3	4	5

## **Part IV**

Below are a number of statements that describe different feelings that you might have felt at work during the week. The higher scores you give represent a higher agreement with the statement.

<b>Never (1)</b>	<b>Seldom (2)</b>	<b>Sometimes (3)</b>	<b>Often (4)</b>	<b>Always (5)</b>
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8	I find it difficult to relax at the end of a working day.	1	2	3	4	5
9	By the end of the working day, I feel really worn out.	1	2	3	4	5
10	Because of my job, at the end of the working day I feel rather exhausted.	1	2	3	4	5
11	After the evening meal, I generally feel in good shape.	1	2	3	4	5
12	In general, I only start to feel relaxed on the first non-working day.	1	2	3	4	5

13	I find it difficult to concentrate in my free time after work.	1	2	3	4	5
14	I cannot really show any interest in other people when I have just come home from school.	1	2	3	4	5
15	Generally, I need more than an hour before I feel completely recuperated after work.	1	2	3	4	5
16	When I get home from work, I need to be left in peace for a while.	1	2	3	4	5
17	Often, after a day's work I feel so tired that I cannot get involved in other activities.	1	2	3	4	5
18	A feeling of tiredness prevents me from doing my work as well as I normally would during the last part of the working day.	1	2	3	4	5

**Part V**

Below are a number of statements that describe how much support you receive from your colleagues. The higher scores you give represent a higher agreement with the statement.

<b>Strongly disagree (1)</b>	<b>Neither agree or disagree (4)</b>	<b>Strongly agree (7)</b>
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19	Teachers provide strong social support for colleagues.	1	2	3	4	5	6	7
20	Professional interactions among teachers are cooperative and supportive.	1	2	3	4	5	6	7
21	There is a feeling of trust and confidence among staff members.	1	2	3	4	5	6	7
22	I can count on most of my colleagues to help me out anywhere, anytime even though it may not be part of their official assignment.	1	2	3	4	5	6	7
23	Teachers in this school hide their failures and mistakes. “(R)”	1	2	3	4	5	6	7
24	Teachers consider their colleagues as their friends.	1	2	3	4	5	6	7
25	Teachers in this school do not respect the professional competence of their colleagues. “(R)”	1	2	3	4	5	6	7

**Part VI**

Below are a number of statements that describe the value and meaningfulness of participating in a teacher certification education program, and its effects perceived by the teacher. Please respond to the statement by indicating how much you agree/disagree using the following scale:

<b>Strongly disagree (1)</b>	<b>Neither disagree nor agree (3)</b>	<b>Strongly agree (5)</b>
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26	Participating in teacher certification may help me to become more aware of my own feelings and reactions.	1	2	3	4	5
27	The teacher certification course may have an impact on my personal growth. “(R)”	1	2	3	4	5

28	The certification course may help me realize the importance of my own feelings.	1	2	3	4	5
29	I may feel more perceptive of my education now, and more sensitive to my needs.	1	2	3	4	5
30	I may understand better why to pursue my education.	1	2	3	4	5
31	In some ways I may feel good about myself to participate in the certification course.	1	2	3	4	5
32	The certification course will have no impact on my understanding of who I am or what I want to achieve. “(R)”	1	2	3	4	5
33	I hope some of my values will be clarified in the certification experience...	1	2	3	4	5
34	By participating, I think I will learn to be more tolerant to my profession.	1	2	3	4	5

### **Part VII**

Below are a number of questions that describe how much support you receive from your principal. The higher scores you give represent a more frequent occurrence of the support.

<b>To a very small extent (1)</b>	<b>To a small extent (2)</b>	<b>Somewhat (3)</b>	<b>To a large extent (4)</b>	<b>To a very large extent (5)</b>
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<b>To what extent would you say that your principal...</b>						
35	...appreciates the staff and shows consideration for the individual teacher?	1	2	3	4	5
36	...make sure that every individual teacher on staff has good development opportunities on their certification education?	1	2	3	4	5
37	...gives high priority to further training and teacher development?	1	2	3	4	5
38	...gives high priority to on job training while continuing studying?	1	2	3	4	5
39	...is good at encouraging teachers towards teacher certification?	1	2	3	4	5
40	...is good at allocating time for teachers to study?	1	2	3	4	5
41	...is good at persuading teachers to continue teacher certification education?	1	2	3	4	5
42	...is good at communicating with the staff the teacher certification programs offered by the Ministry of Education?	1	2	3	4	5

### **Part VIII**

Below are a number of statements that describe the probability of your work interfering in your personal life. The higher scores you give represent a more frequent occurrence of probability.

		<b>Strongly disagree (1)</b>			<b>Neither agree or disagree (3)</b>			<b>Strongly agree (5)</b>		
43	My work keeps me from my family activities more than I would like.	1	2	3	4	5				
44	On the job I have so much work to do that it takes away from my personal interests.	1	2	3	4	5				
45	The demands of my job make it difficult for me to maintain the kind of relationship with my spouse and children that I would like.	1	2	3	4	5				
46	My work takes up time that I'd like to spend with family/friends.	1	2	3	4	5				
47	I often bring work home to do on the evenings and weekends.	1	2	3	4	5				
48	My superiors and peers dislike how often I am preoccupied with my personal life while at work.	1	2	3	4	5				
49	The time I must devote to my job keeps me from participating equally in household responsibilities and activities.	1	2	3	4	5				
50	In order for me to succeed at work, I must be a different person than I can be at home.	1	2	3	4	5				
51	I am not able to act same way at home as I do at work.	1	2	3	4	5				

### **Part IX**

Below are a number of questions that describe different feelings towards the financial constraint you encounter during your studies. The higher scores you give represent a more frequent occurrence of the feeling.

		<b>Strongly disagree (1)</b>			<b>Neither agree or disagree (3)</b>			<b>Strongly agree (5)</b>		
52	With my teacher salary I can't participate in my Teacher Certification Education Program.	1	2	3	4	5				
53	I can't participate in TCEP because it is too costly.	1	2	3	4	5				
54	Allocating money for my participation in TCEP has been stress-free. "(R)"	1	2	3	4	5				
55	I have been receiving financial assistance from the government for my TCEP. "(R)"	1	2	3	4	5				
56	It was necessary for me to get a loan or seek other financial assistance in order to participate in my TCEP.	1	2	3	4	5				