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November 2021

The Relationship Between Motivation and Professional Learning for Teachers in Makkah, Saudi Arabia

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The Relationship Between Motivation and Professional Learning for Teachers in

Makkah, Saudi Arabia

by

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A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy in Curriculum and Instruction
with a concentration in Adult Education
Department of Leadership, Policy, and Lifelong Learning
College of Education
University of South Florida

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Date of Approval:
October 19, 2021

Dedication

To my parents, wife, and sons, none of this was possible without your support.

Acknowledgements

I will never forget my dad's advice that patience and hard work will be my best friends if I achieve my life's big dreams. Besides dad's recommended friends, there have always been my mom's small talks about hope. Her pieces of advice have been the north star to guide me toward my goals whenever I get lost. I want to thank my wife for all her patience and collaboration with me. My sons, Ammar and Ghassan, have always been my cheering source to remind me that life is easy and beautiful. To my aunt Alia, your inspiration and help made my research a happy journey.

I would like to be thankful to my committee members for their efforts and support throughout my dissertation. To Dr. Tan, thank you for all your suggestions and constructive criticism that put me on the right track to continue my dissertation. To Dr. McCarthy, all your feedback and suggestions were crucial to fill the gaps in writing my dissertation. To Dr. Rodriguez-Campos, you are a great educator; I learned how to look at the big picture without missing tiny details, to navigate my way to be a successful researcher and evaluator. Last but not least, Dr. James, thank you, as large as the sky, for all the support from day one when I was accepted to this program. You guided me through all the challenges and made it easy for me to focus on my dissertation.

I would like to thank my country, Saudi Arabia, for their support with this scholarship, a lifetime chance. This scholarship allowed me to continue my education and was generous support.

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Abstract

Even though, there are many studies on teacher professional learning and many studies on teacher motivation, there is a lack of research to examine the relationship between teacher professional learning and motivation. This study examined the relationship between teacher motivation and professional learning in Makkah, Saudi Arabia.

This study was conducted using two instruments. The first instrument was the Education Participation Scale (EPS) originally developed by Boshier (1991). However, the researcher used the most recent version of EPS by Richter et al. (2019). The EPS determines what factors most motivate teachers to participate in professional development. These factors are personal interest, occupational promotion, external expectations, practical enhancement, social contact, and social stimulation. The second instrument was the Teachers' Opportunity to Learn (TOTL) by Akiba (2012). The TOTL has seven factors to measure teacher professional learning. The seven factors are professional development programming, teacher collaboration, university/college courses, professional conferences, supervising, informal communication, and individual activities.

After obtaining permission from the General Authority for Education in Makkah to conduct this study, an electronic survey link was distributed to all schools in Makkah. The total number of the respondents was 228. This study had three research questions. The first research question examined the relationship between teacher motivation and professional learning of teachers in Makkah, Saudi Arabia. Pearson's

product moment correlation *r* was utilized to examine this relationship. Two of out the seven scales of the TOTL had a significant relationship with most of the EPS scales. These two scales were informal communication and individual learning activities. The second question investigated whether the demographic variables had an effect on teacher motivation. The results showed that gender and school size had an effect on most of the EPS scales. The third question also investigated whether the demographic variables had an effect on teacher professional learning. The results showed that gender and degree had an effect on only two scales of the TOTL survey, while position, work class, and schedule load had an effect on only one scale of TOTL survey.

Chapter 1

Introduction

The Kingdom of Saudi Arabia has shown a clear interest in developing

comprehensive educational policies to be compatible with economic, social, and

organizational development. The Kingdom of Saudi Arabia considers education a major

approach to develop human resources, through a variety of educational institutions.

Albarnawi and Ali (2019) stated people, who are familiar with the Saudi educational

system and its various polices, will notice the Saudi government's efforts that focus on

teacher professional development in all teaching majors and levels (e.g., elementary,

middle, and high). The Saudi teachers received special attention through constant

urging to develop their teaching skills throughout their career and not content

themselves with temporary training, because the later does not correspond to the new

changes, whether these developments are at the local or global level. Therefore, the

Saudi government evidently has improved the quality of teacher professional

development through time (Albarnawi & Ali, 2019). According to Albarnawi (2018), on

September 3, 2018, Minister of Education Al-Issa approved the new structure of the

Ministry of Education, in which the most prominent act is transferring all training and

professional development processes for teachers under a center named the National

Center for Professional and Educational Development (NCPED). The NCPED

undertakes the processes of *sustainable professional development* for teachers in all

majors and educational levels: elementary, middle, high, and university.

The NCPED (2021) shall control the quality of preparation, qualifications, and professional development of educational practitioners in the public and university educational sectors through several roles: (a) setting rules and standards related to practicing professional development and training in the various educational sectors, drafting controls that ensure implementation of these rules and standards at various levels, and preparing regulations for technical supervision of these professions in the public and private sectors; (b) setting standards and specifications related to establishing and operating professional development and training centers in the various educational sectors and preparing regulations that organize the technical supervision of these centers in the public and private sectors; (c) determining and approving the specifications and standards for programs for preparing, qualifying, and developing educational practitioners; (d) periodically reviewing and evaluating professional performance of professional development and training centers in public and private educational sectors; and (e) evaluating and approving the educational professional training programs undertaken by the training centers affiliated with the Ministry of Education or those affiliated with the private sector, and periodically reviewing the extent to which these programs meet the requirements and conditions of professional development qualifications.

According to the Ministry of Education (2003), in order for teacher professional development to be utilized more efficiently, and for the professional development process to have a good impact on the educational process, attention must be paid to building development processes based on sound foundations that reflect accurate analysis and identification of the teachers' final development needs. Professional

development is defined by various definitions considering the Saudi educational context. The Ministry of Education (2003) defined teacher professional development as planned professional development activities that aim to bring about changes in terms of information, skills, experiences, trends, performance rates, work methods, and behavior.

Al Ta'ani (2009) defined teacher professional development as organized and planned efforts to provide the target audience with innovative skills, knowledge, and expertise, which aims to bring about continuous positive changes in their experiences, attitudes, behavior, and performance. He believed that professional development is the activity that defines and helps develop teachers' core competencies, which enables teachers to perform current and future functions, through the structured learning process. In addition, The Arab Center for Gulf Countries (2008) illustrated that professional development is not limited to increasing and developing the knowledge and skills only, but rather to preparing teachers for upcoming career opportunities and future challenges in the educational organization. Therefore, as Albarnawi and Ali (2019) believed professional development is an activity based on identifying teacher needs for knowledge, skills, and trends that contribute to increasing knowledge and refining experiences. In addition, they believe this definition of professional development leads to raising efficiency and increasing productivity to make teachers more positive towards their organizations and communities.

Statement of the Problem

The educational system in Saudi Arabia motivates teachers to develop and maintain their instructional knowledge by attending teacher professional development

programs (Alamro, 2002). There are two main sequential stages of the Saudi educational system regarding teacher preparation and teacher professional development processes. The first stage of this process is related to universities and the second stage is related to the Ministry of Education. In the first stage, universities take the responsibility to prepare teachers to be ready for the profession and usually student teachers engage in 4-year programs, which include one or two semesters towards the end for training. These training programs allow students to practice and implement what they learned in classrooms at the universities in classrooms. In the second stage, the Ministry of Education is responsible for providing and conducting teacher training programs to improve their teaching skills after teachers graduate from universities (Alansari, 2004).

The roles of universities and the Ministry of Education are integrated; however, universities' roles focus on teacher academic improvement while the Ministry of Education focus is on teacher training and professional development (Alansari, 2004). Graduate teachers in Saudi Arabia teach mainly a subject specialty based on their majors. For example, graduate teachers from the Math Department will teach math, graduates from the Physics Department will teach physics, graduates from Sharia College will teach Islamic courses, and so forth. As a result, graduate teachers are highly prepared academically, on the other hand, they are weak professionally, which creates a major need for teacher PD programs that include teacher motivation in its curriculum to enhance teacher professional development and teacher learning (Alajaji, 2017). However, there is a lack of research identifying the relationship between teacher professional learning and motivation for teachers in Makkah, Saudi Arabia.

Purpose of the Study

The purpose of this study was to examine the relationship between teacher motivation and professional learning in Makkah, Saudi Arabia. This study investigated whether there was a significant correlation between teacher professional learning and teacher motivation based on participants' demographic variables, which included gender (male or female), age, the highest level of education (bachelor, master's, Ph.D.), other position(s) besides teaching, work class (public or private), years of teaching experience, and the number of periods taught per week. In addition to personal characteristics, school characteristics were collected, which included the school level (elementary, middle, high), the school size (large, medium, small), and the location characteristics of the school (urban, rural, remote). The patterns of potential correlations could shed light on ways to improve the process of teacher professional development programs as well as training centers in Makkah, Saudi Arabia. In addition, the outcomes of these patterns could be used to utilize the best practices to attract and motivate teachers to engage in teacher professional development programs. This study was the first study to correlate teacher motivation with professional learning in Makkah, Saudi Arabia.

Research Questions

To understand the relationship between teacher motivation with professional learning in Makkah, Saudi Arabia, this study answered the following research questions:

1. What is the relationship between teacher motivation and professional learning in Makkah, Saudi Arabia?

2. What are the effects of the demographic variables on teacher motivation?

3. What are the effects of the demographic variables on teacher professional

learning?

For the purpose of this study, demographic information was collected based on the personal characteristics of the participants and characteristics of the school where participants work. Personal characteristics included gender (male or female), age, the highest level of education (bachelor, master's, Ph.D.), other position(s) besides teaching, work class (public or private), years of teaching experience, and the number of periods taught per week. School characteristics were also collected: these included school level (elementary, middle, high), school size (large, medium, small), and the location characteristics of the school (urban, rural, remote).

Conceptual Framework

Teacher professional learning is seen as an essential mechanism for improving teachers' content and pedagogical content knowledge and, correspondingly, student learning success (Desimone et al., 2002; Power & Goodnough, 2018). Motivation has a direct relationship with learning and performance, while on the other hand, what learners do and learn also influences their motivation (Morris et al., 2005; Pintrich & De Groot, 2003; Schunk et al., 2008).

This study examined the relationship between teacher professional learning and motivation. It examined teacher motivation and how it was related to teacher professional learning. Partial focus in this study was on the activities related to teacher professional learning. This research also explored the context of these activities. Educator development can be described as "the process by which teachers acquire the new knowledge, skills, and values which will improve the service they provide to clients"

(Hoyle & John, 1995, p. 17). Teacher learning is strongly connected to professional goals, which require teachers to strive for continuous improvement of their teaching practices. From this principle, teacher learning is referred to as professional learning (Kwakman, 2003). Teacher professional learning can be defined as the accumulation of skills and knowledge in order to navigate the educational system and to meet the needs of students (Mushayikwa & Lubben, 2009). In her study, McCarthy (2016) concluded "continuing research on teacher professional development practices provide school districts with a clear context in which teachers choose to learn" (p.72).

Teacher motivation is described as a reflection of teachers' context within education and their level of development (Liu et al., 2019). Teacher motivation for professional learning can be regarded an important factor for an individual's decision to participate in professional development (Kwakman, 2003; Sprott, 2019). For this research, teacher motivation to participate in professional learning measured by the Education Participation Scale (EPS) which was modified by Richter et al. (2019). The original EPS was developed by Boshier (1991). The EPS consists of six factors to examine teachers' *motivational orientations* toward professional learning. These factors are personal interest, occupational promotion, external expectations, practical enhancement, social contact, and social stimulation. This study builds on previous studies by utilizing established instruments for assessing teacher professional learning and teacher motivation.

Delimitations

There are several delimitations of this study. First, this study was limited to in-service teachers in Makkah, Saudi Arabia. Teachers in all levels of schools

(elementary, middle, and high schools) were encouraged to participate in this study because they were required to engage in formal professional development programs annually. They also had full instructional control and responsibility for their classrooms.

Second, this study was conducted in Makkah, Saudi Arabia and participation was limited to teachers who taught in Makkah city and areas that fell under the educational leadership of the General Administration of Education in Makkah Region. The reasons for selection of this location area included that the Makkah region represents a diverse population in Saudi Arabia; it also has seven teacher training centers, which were considered among the highest number of teacher training centers in Saudi Arabia; and geographically, this region was convenient for the researcher.

Third, the study used two existing instruments: The Teachers' Opportunity to Learn (TOTL) survey by Akiba (2012) and the Education Participation Scale (EPS) by Richter et al. (2019), which was a modified instrument of the original work by Boshier (1991). First, the TOTL survey instrument was used in this study because it examines teacher learning activities, which provide research-based learning categories that could be easily identified by teachers. The TOTL also provides a realistic interval scale so teachers could more effectively report the frequency of their learning activities. The TOTL was used as an established instrument in similar studies (i.e., Akiba, 2012; McCarthy, 2016). Second, the items used to measure teacher motivation were established by Richter et al. (2019), originally developed by Boshier (1991). This instrument by Richter et al. (2019) is a shortened version of the original EPS; however, it was valid and effectively collected data in a prior study, "the original contribution lies in

our utilization of the validated and reliable measurements for teacher motivation" (Richter et al., 2019, p. 4).

Fourth, for the purpose of this study, both instruments were translated into Arabic, because all participants were teachers whose native language was Arabic. For validity purposes, both instruments were translated back into English again to compare the original copy to the last copy of each instrument.

Limitations

One of the limitations of this study was that information collection depended on the accuracy of participant responses. Three factors increased the accuracy of data in this research. First, the sample represented the population of interest. Second, instruments used to conduct this study were translated into Arabic then translated back into English to confirm its validity. Participants in this study answered the Arabic version of both instruments in one combined instrument during the data collection phase. Third, there was a section on demographic information about the participants; however, their identity was anonymous, so participants should have felt comfortable in completing the instruments. Another limitation was that the participants in this study were only being sampled from the Makkah Region of Saudi Arabia. Therefore, the findings cannot be generalized beyond a Saudi context. In addition, this study was conducted during the COVID-19 pandemic, restrictions made by the Ministry of Education to limit professional learning activities to online activities only, most likely effected teacher professional learning.

Significance of Study

Although there are many studies on teacher motivation and professional learning, few studies have been conducted on teacher professional learning and motivation in Makkah, Saudi Arabia. The new teacher ranking system in Saudi Arabia focuses on placing teachers in categories depending on the teacher's experience and level of education (Bachelor, Masters, or Ph.D.). In addition, this new teacher ranking system requires a minimum of 150 hours of professional development courses/workshops to issue or renew a teacher's license. This study contributed the understanding of teacher motivation regarding teacher professional learning; therefore, it can help improve a teacher's ranking within the new system as well as allow training centers to plan, promote, and provide better professional learning programs. This study examined the relationship between teacher motivation and professional learning. Ng et al. (2010) indicated "little is known about what factors motivate teachers to engage in professional learning" (p. 279). According to Appova and Arbaugh (2018), there is "a considerable gap in the literature on this topic" (p. 6). They also stated that where there are a large number of studies on teachers' motivation, they mainly focus on motivation from the lens of educational psychology (i.e., Deci & Ryan, 1995; Goddard et al., 2000; Schunk et al., 2012). On the other hand, there is a wide body of research on teachers' learning in many fields and theories; however, teacher motivation was not the focus of these studies (see Clarke & Hollingsworth, 2002; Desimone, 2011; Garet et al., 2001; Goldsmith et al., 2014).

Definition of Terms

The terms used in this study are as follows:

Education Participation Scale (EPS)—consists of six scales "*motivational orientations*": personal interest, occupational promotion, external expectations, practical enhancement, social contact, and social stimulation (Richter et al., 2019).

Level of education—these are three levels of schools: elementary, middle, and high.

Makkah (Mecca) region—The region of Makkah Al-Mukaramah is one of the administrative regions in the Kingdom of Saudi Arabia. It is the most populous region of the Kingdom, with about 26.2% of the total population residing there.

Professional development program—Organized activities of a school or district intended to improve teacher practice and student learning (Akiba, 2012).

School location characteristic—The school characteristic based on its distance from the city.

> *Urban school*—A school that located in the city of Makkah.
> *Rural school*—A school that close to the city, but not actually in the city of Makkah.
> *Remote school*—A school that located outside the city.

School size—The number of students in a school.

> *Large school*—A school that has more than 600 students.
> *Medium school*—A school that has between 300 and 599 students.
> Small school—A school that has less than 300 students.

Teacher—The person who teaches students at school.

> *Pre-service teacher*—A graduate student who practices teaching at a school to become a teacher.

> *In-service teacher*—Anyone who is employed as an educator in the classroom.

Teacher motivation—A key to the quality development of teaching, which can make a decisive contribution to the maintaining and developing their professional skills (Mayr & Müller, 2010).

> *Extrinsic motivation*—The term extrinsic motivation refers to the performance of an activity in order to attain some independent outcome (Deci & Ryan, 2000).

Intrinsic motivation—The term intrinsic motivation refers to doing an activity for the inherent satisfaction of the activity itself (Deci & Ryan, 2000).

Teacher professional learning—The accumulation of skills and knowledge in order to navigate the educational system and to meet the needs of students (Mushayikwa & Lubben, 2009).

Formal learning—Teacher formal learning activities encompass prescribed learning frameworks, organized events, the award of credit, or external outcomes (Eraut,2000).

Informal learning—Teacher informal learning is professional learning that occurs in the workplace, including teacher reflection and collaboration—both those activities that are planned and serendipitous (Jurasaite-Harbison & Rex, 2010).

Teacher training centers—A system responsible for qualitatively raising the level of teacher performance and educational leadership and meeting the needs of educational institutions as a professional learning community and attaining a high level of student and trainee achievement (The National Center for Professional and Educational Development, 2021).

Teacher ranking system—A classification of teachers' ranks, which is defined in four categories based on qualification, years of experience, professional skills and personal initiatives.

Teachers' Opportunity to Learn (TOTL)—A realistic interval scale of professional development activities so teachers could more effectively report the frequency of their learning activities (Akiba, 2012).

Teachers' professional development—Teachers' professional development is defined as the "learning, development, socialization, growth, improvement, implementation of something new or different, cognitive and affective change, and self-study" (Richardson & Placier, 2001, p. 905).

Organization of the Study

This study consists of five chapters. The first chapter includes an introduction to the study, statement of the problem, purpose of the study, research questions, conceptual framework, delimitations, limitations, significant of the study, definition of terms, and organization of the study. The second chapter provides a comprehensive review of literature. This review includes the Saudi Arabia school system, overview of

teacher professional development, teacher professional development in Saudi Arabia,

teacher motivation, education participation for teachers, teacher professional learning,

and a summary. The third chapter discusses the research methods. It includes a

discussion of the research design, population and sample, instrumentation, variables,

data collection, and data analysis. The fourth chapter presents the research questions,

the demographic characteristics of participants, analyses related to the research

questions, and a summary. The fifth chapter includes the summary of the study,

conclusions, implications, and recommendations for future research.

Chapter 2

Literature Review

The purpose of this study was to examine the relationship between teacher motivation and professional learning in Makkah, Saudi Arabia. This chapter includes the following sections: the Saudi Arabia school system, an overview of teacher professional development, teacher professional development motivation in Saudi Arabia, teacher motivation, education participation factors for teachers, teacher professional learning, teacher motivation for professional learning, and a summary.

Saudi Arabia School System

The educational system in Saudi Arabia is a centralized system that is subordinate to the government in its administrative system. The Ministry of Education is a centralized system operating under the auspices of the Board of Ministers, which oversees the Supreme Committee for education policies. The Board of Ministers consists of the King of Saudi Arabia and the Crown Prince as well as all other ministers. This group meets once a week to discuss various issues impacting the Kingdom of Saudi Arabia. The Supreme Committee for Education Policies includes the King of Saudi Arabia, the Minister of Education, the Minister of Labor, the Minister of Haj, the Minister of Civil Service, the Minister of Islamic Affairs, and the Minister of Culture and Media. This committee sets the educational policies, which are the origination for the Saudi Arabia educational system. The educational policy is the basis for the Saudi education system, including objectives, planning, and all related provisions (Alhoqail,

2003). According to Alotaibi (2018), the Saudi educational system is characterized by centralization in education, supervision, and administration and its goals stem from the government policies.

The K-12 school system in Saudi Arabia is centralized under the supervision of the Ministry Agency for General Education (MAGE), which is one of the Ministry of Education agencies. MAGE seeks to meet the needs and requirements of the educational field by implementing several projects, activities, programs, and initiatives through its plans that stem from the Ministry of Education policies, visions, and future directions (Alhoqail, 2003). These projects, activities, programs, and initiatives are implemented through the MAGE represented by general administrations offices that continue to extend to education departments in all regions (e.g., General Educational Administration in Makkah) and are governed according to MAGE's plans, mechanisms, and procedures.

The hiring system for new teachers depends on several factors. For example, new teachers apply for teaching jobs via the Ministry of Civil Service every year after the number of vacant positions is announced by the Ministry of Education. Usually new teachers are hired to fill the vacant teaching positions resulting from the relocation of experienced teachers to other schools. Most of the time, new hiring positions are located in rural and remote areas. One of the challenges facing the Ministry of Education is that rural and remote areas lack training centers, which effect new teachers' professional development (Alharbi & Almahdi, 2012). In addition, schools in rural and remote areas usually are very small schools and lack both teachers and support staff. As a result, new teachers may teach more than one course, which is not

in their major study area. Also, due to shortages of staff, new teachers could have administrative responsibilities, such as working as principals, vice-principals, or administrators.

Regarding teacher professional development, until 2019, Saudi teachers could engage in optional professional development activities four times a year, divided into two times per semester. In 2020, the Ministry of Education established a teacher's license system, which mandates teachers to take a minimum of 150 hours of training every five years (The National Center for Professional and Educational Development, 2021). The process of taking professional development programs starts when teachers choose programs related to their teaching or administrative skills. The principal of the school must approve the request for professional development programs in order to obtain substitutes for the teacher's classes, because most of the professional development programs are held during weekdays. Each of these professional development programs are conducted several times per semester to provide teachers with the flexibility to attend the sessions. Teachers are able to engage in professional development programs during either the first or the last two weeks in the summer. The outcomes of these professional development programs are certificates and points counted towards teachers' training hours (The National Center for Professional and Educational Development, 2021).

The weekly schedule for a school day starts on Sunday and continues through Thursday; the weekend days are Friday and Saturday. The school day has seven periods where the first period starts at 7:15 am and last period ends at 1:15 pm for all school levels (elementary, middle, and high). The period length of time is 45 minutes

and 5 minutes between periods (Ministry of Education in Saudi Arabia, 2020). The maximum load for a teacher's schedule is 24 periods per week and there is a minimum of one period per week. Teachers with low schedule loads are usually involved after school activities such as school trips, school contests, and so forth.

The Saudi education system is unique in that the teaching of Islamic studies and culture is compulsory at all levels of education. The general purposes of education in Saudi Arabia are to understand Islam in a correct and complete way; instill and spread the Islamic faith; provide students with Islamic values and acquire general knowledge and skills; develop constructive behavioral trends; develop society economically, socially, and culturally; and prepare the individual to be a useful member in society (Almhaidib, 2013). Education policy imposes the right to education for women in the light of Islamic law (Azazi, 2012). However, social life affects the education system in Saudi Arabia, because of tribal customs and traditions. These customs created the need for two branches within the Ministry of Education, one for males and the other for females (Alghamdi & Abduljawad, 2010). According to Alaqeel (2005), the educational policy is keen to achieve the principle of equality and justice for citizens in obtaining educational opportunities without exceptions based on the principles and foundations of Islam.

There are four school levels in Saudi Arabia, which include kindergarten, elementary, middle, and high schools. Kindergarten is a 2-year level where the acceptance age starts at 4 years of age with no separation between boys and girls. The elementary level includes grades 1-6 where the acceptance age starts at 6 years of age. Classes taught in elementary levels include Islamic studies, math, science, art,

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physical education, and Arabic language arts. In 2019, for the first time in Saudi Arabia, the educational system lifted the segregation between boys and girls for the first, second, and third grades (Early Childhood General Administration, 2019). Boys in the first, second, and third grades attend girls' schools, which are called early childhood schools, and are taught by female teachers. Fourth, fifth, and sixth graders attend separate boys' schools taught by male teachers or girls' schools taught by female teachers. Early childhood schools are under the supervision of the Early Childhood General Administration, which aims to increase enrollment in early childhood schools by 95% by 2030 and all male students in first, second, and third grades must enroll in early childhood integrated schools by 2030 (Early Childhood General Administration, 2019). The other school levels include the middle and high schools. Both levels include three years of schooling. The acceptance age in middle school starts at 12 years of age and, for high school, it starts at the age of 15 years of age. Classes taught in the middle school level are Islamic studies, math, science, computer science, art, physical education, English, and Arabic language arts. At the high school level, classes are the same as in middle school, but the science content is divided into chemistry, physics, biology, and geology.

Overview of Teacher Professional Development

In addition to teaching, one of the key tasks of teachers is to stay informed about current developments in their subject content as well as pedagogy by regularly participating in professional learning activities (Richter et al., 2019). Broadly defined, teacher professional development can be "any activity that is intended partly or primarily to prepare staff members for improved performance in present or future roles" (Little,

1987, p. 491). Teacher professional development as defined by the Organisation for

Economic Co-Operation and Development (OECD) (2009) is "activities that develop an

individual's skills, knowledge, expertise and other characteristics as a teacher" (p. 49).

This definition recognizes development can be provided in many ways, ranging from the

formal to the informal. It can be made available through external expertise in the form

of courses, workshops, or formal qualification programs, through collaboration between

schools or teachers across schools or within schools in which the teachers work

(OECD, 2009).

Studies have shown changing teaching behavior and language expression under

external compulsion can cause conflict and teacher development cannot be achieved

(Zhou, 2016). Therefore, the process of teacher professional development is a

formation process of teacher professional autonomy, which depends on teacher

autonomy rather than compulsion (Clark, 1992). Although improvement of teaching

skills can be promoted to a certain extent by enhancing teaching training and reforming

tasks, the continuity of teacher development cannot be guaranteed (Liu et al., 2019).

According to Desimone et al. (2002), there is a professional consensus on particular

characteristics of *high-quality* professional development. These characteristics include

a focus on content and how students learn. They also include in-depth, active

opportunities; links to high standards; opportunities for teachers to engage in leadership

roles; extended duration; and the collective participation of groups of teachers from

schools, grades, and/or departments. In their study, they concluded six key features of

professional development could be hypothesized as effective in improving teaching

practice. These features were divided into two categories features with three categories

under each. First, *structural features* which are (a) the form or organization of the

activity, (b) the duration of the activity, and (c) the degree to which the activity

emphasizes the collective participation of groups of teachers from many schools. The

second feature with remaining three categories are *core features*, which are

characteristics of the substance of the activity: (d) the extent to which the activity offers

opportunities for active learning—that is, opportunities for teachers to become actively

engaged in the meaningful analysis of teaching and learning. In addition, according to

Desimone et al. (2002), (e) the degree to which the activity promotes consistency in

teachers' professional development by incorporating experiences consistent with

teachers' goals, and (f) the degree to which the activity has a content focus—that is, the

degree to which the activity is focused on improving and deepening teachers' content

knowledge in their teaching areas. OECD (2009) noted on teachers' reviews that:

> Effective professional development is on-going, includes training, practice and
> feedback, and provides adequate time and follow-up support, successful
> programs involve teachers in learning activities that are similar to ones they will
> use with their students, and encourage the development of teachers' learning
> communities. There is growing interest in developing schools as learning
> organizations, and in ways for teachers to share their expertise and experience
> more systematically. (p. 49)

According to Zeng and Day (2019), there is a major shift toward school-based

learning. This development is crucial for improving student learning outcomes. The

creation of effective, on-going capacity-building teacher professional development to

enable teachers to "learn content- or skill-based information is seen as key to raising

student learning outcomes; indeed, promoting student achievement is its primary goal"

(Powell & Bodur, 2016, p. 562).

Teacher Professional Development and Motivation in Saudi Arabia

Teacher professional development is one of the priorities of the Ministry of Education in Saudi Arabia, (2020). The first teacher professional development centers, which were known as Elementary Teachers Centers (ETC), were established in 1953. The number of ETC included 36 centers that provided training to 9600 teachers (Alhoqail, 1981). In 1953, the Ministry of Education established the Night Teachers Training Centers to provide training and professional development to Saudi teachers and encourage them to be self-directed and lifelong learners (Alhoqail, 1981).

According to Bajehzer (2010), public education in the Kingdom of Saudi Arabia has experienced great development and growth in its various fields. With the increase in the number of students, the number of professors in colleges and universities increased; therefore, the need to prepare teachers in an equal educational and academic setting emerged. Numerous educational and psychological researchers have indicated the importance of continuing training for teachers after they graduate from colleges and universities. Training and continuing educational qualification in general education is a necessity imposed by many considerations (Bajehzer, 2010). Competent and committed teachers have a strong impact on the quality of academic learning opportunities (Prenzel et al., 2005). The teaching profession requires distinct capabilities and skills of teachers, which require extensive training and are one of the most important aspects that represent the basis for teacher success in their work as educators (Bajehzer, 2010). Both Borko and Putnam (1996) and Carter (1993) found teachers' lack of knowledge related directly to their lack of teacher motivation.

In the Kingdom of Saudi Arabia, education policy attaches great importance to educational training, as it is one of the pillars of the professional development of teachers. Article 195 of the educational policy stipulates priority should be given to training and innovation courses to consolidate expertise and gain information and new skills (Alkatheeri & Alnassar, 2005). Over the past years, the Ministry of Education in the Kingdom of Saudi Arabia has made great and intensive efforts in training and preparing teachers, creating conditions and facilities for this, and developing the plans and programs necessary to raise the level of the teacher's professional and educational performance (Alkatheeri & Alnassar, 2005).

According to Abalawi and Alrajeh (2021), improving teacher professional development requires the in-service training programs be based on studying the reality of teacher professional development, because it is the factor affecting the effectiveness and quality of training programs. According to Sakran (2005), the continuous evaluation of the professional development processes with objective methods and accurate and practical procedures is one of the processes of stimulating the professional development of the teacher. Jamel (2006) emphasized the importance of studying the reality of the professional development of the teacher, training them during the service and understanding its obstacles. In addition, Bajehzer (2010) recommended more scientific studies that deal with the reality of teachers in all stages of public education in order to develop it professionally. Career development is defined in most literature as professional growth. Abalawi and Alrajeh (2021) defined career development as "a set of programs and activities that are designed, constructed and implemented to enable

teachers to grow in knowledge and skills that reflect on the level of student achievement and performance" (p. 47). These programs are used in in-service teacher training.

Ibrahim (2009), defined career development as "continuous processes and activities designed to increase professional knowledge, skills, and attitudes of teachers in order to enable them to improve their teaching for quality learning" (p. 496). According to Abalawi and Alrajeh (2021), the previous definition was limited to in-service training, which is one form of professional development, while there were other forms mentioned in the literature on professional development. As Sakran (2005) believes continuous professional development means the continuous renew of knowledge, information, and trends in order to achieve the principle of lifelong learning. According to Khalifa (2005), continuous or sustainable professional development includes on-site training (schools or training centers) and personal professional development. Thus, professional development is deeper and more comprehensive than professional growth. Glatthorn (1997) defined career development as a term referring to the skills required to maintain a specific career path or the general skills that are advanced through continuing education, including the area of personal development. Training and professional development can help maintain teachers' current skills during changing practices in the profession. Thus, training, and professional development is one example to illustrate the concept of lifelong learning. It is also defined operationally as the concept of continuous learning of the activities and skills necessary for teaching, acquired through self-development sources, training programs, or other sources such as professional learning (Abalawi & Alrajeh, 2021). In addition, professional development is important to reforming education (Abalawi & Alrajeh, 2021).

The Ministry of Education in Saudi Arabia (2020) defines educational training centers in Saudi Arabia as prefabricated buildings created by the Ministry to achieve continuous professional growth for educational personnel and raise the level of their performance in the educational process. Increasing the production capacity of all workers and preparing trained national cadres in various specializations in the Ministry of Education are part of the Ministry of Education vision. Procedurally speaking, these parts of the vision established by the Ministry of Education.

In Saudi Arabia, the fifth strategic national plan specified all policies for the educational development and training systems as well as the outputs of these systems in a way that meets the changing needs of society, the labor market, and the requirements of development; and keeps pace with modern knowledge and technologies of interest in disseminating culture (Ministry of Economy and Planning, 2020). The education policy in the Kingdom of Saudi Arabia specified in several articles the importance of training. For example, Article 165 of the educational policy stated that one of the competent authorities' responsibilities is to make plans to prepare qualified teachers for all stages of education to achieve self-sufficiency.

Teacher Motivation

Teaching motivation is a key construct in understanding why people choose teaching (Tang et al., 2020). Motivation to participate in professional development was examined in empirical studies in different research areas including adult education (Boshier, 1971, 1977; Fujita-Starck, 1996) and educational psychology (Gorozidis & Papaioannou, 2014; Jansen in de Wal et al., 2014; Power & Goodnough, 2018). Both research areas have used different approaches to define and conceptualize motivation

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for professional learning (Richter et al., 2019). Motivation was defined by Liu et al. (2019) as a reflection of teachers' states and levels of development.

According to Aljassai (2011), interest in teacher motivation has emerged among many scholars, and perhaps the reason for this is that incentives of all kinds, both material and moral, are among of the most important positive independent variables that work in motivation. Herzberg's Motivation-Hygiene Theory specified motivation sources as traditional promoters (e.g., extrinsic factors) also known as Hygiene Incentives such as material incentives, which are represented by financial rewards, gifts, grades, and exceptional bonuses given to teachers for performing a distinguished job or a clear effort to advance the organization. On the other hand, intrinsic motives include things such as awareness, success, and responsibility (Herzberg, 2005). Intrinsic motivation also includes moral incentives, represented in the expressions and letters of praise, thanks and appreciation directed to the employee. While the latter example may be less effective than the previous one, but it gives the impression that there is an enhancement for all good work that the employee performs (Aljassai, 2011).

Ryan and Deci's (2017) definition included types of motivation such as intrinsic and extrinsic motivation "people are not only more or less motivated, as most motivation theories have suggested, but they can be motivated by intrinsic and by varied types of extrinsic motivations, often simultaneously" (p. 17). Understanding teacher motivation necessitates motivational factor analysis based on extrinsic and intrinsic nature of motivation (Gultekin & Acar, 2014).

Intrinsic Motivation

According to Deci and Ryan (2000), the term intrinsic motivation refers to doing an activity for the inherent satisfaction of the activity itself. Intrinsic motivation is an ideal motivation to support teachers' high-level development (Liu et al., 2019). In terms of persistence and effectiveness of teacher development, intrinsic motivation is imperative for teacher development. When teachers have strong intrinsic motivation, their main interests and attention are focused on the teaching process itself, which can continuously drive the development of teachers (Liu et al., 2019). Therefore, it is valuable to explore the developmental process and the mechanism of intrinsic motivation, which is helpful for the development of teachers (Liu et al., 2019). In addition, Gultekin and Acar (2014) found that intrinsic motivation significantly impacts the commitment to teaching. While intrinsic motivation has been documented as an important factor in the professional development of teachers, Liu et al. (2019) found that teachers' extrinsic motivation can be transformed into intrinsic motivation.

Extrinsic Motivation

According to Deci and Ryan (2000), extrinsic motivation refers to the performance of an activity in order to attain some separate outcome. Extrinsic motivation is related to the existing conditions outside the person and is influenced by general judgments of the community about the profession (Atav & Deniz Altunoğlu, 2013). Jansen in de Wal et al. (2014) defined extrinsic motivation as the "display of behavior to attain some separable outcome" (p. 28). Extrinsic motivation factors were found effective for choosing teaching as a profession (Martin & Steffgen, 2002). According to Gultekin and Acar (2014), extrinsic motivation is a result of the influence of

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external incentives, however, is not considered as an indicator of teachers' engagement in education for its own sake.

In their study, Damij et al. (2015) indicated external factors can affect individuals either negatively or positively. External factors affect all teachers, which can be internalized and accepted as positive, or can demotivate and negatively impact teacher motivation (Kunter et al., 2013).

Education Participation Factors for Teachers

Teachers' reasons for participating in professional development vary and each teacher has a different reason to participate in professional development based on their motives. According to Richter et al. (2019), teacher motivation plays a crucial role in the arrangement of the complicated factors that influence a teachers' decision to participate in professional learning. According to Richter et al. (2019), factors that influence teacher decision to participate in professional development include personal interest, occupational promotion, external expectation, practical enhancement, social contact, and social stimulation.

Teacher Personal Interest

One of the reasons motivating teachers to attain professional development is based on their personal interest. According to Kao et al. (2011), when teachers are engaged in professional development because of their personal interest, their motivation is related to their attitudes towards the content of the learning opportunity as well as their positive disposition towards the professional development activity. The desire to learn as well as preferred topics of teachers' personal interest are common motivational factors for professional development activities (Appova & Arbaugh, 2018).

According to Richter et al. (2019), in many countries, teacher professional learning is a voluntary activity, which is dependent on individual interests and needs. According to Jansen in de Wal et al. (2014), teachers prefer engaging in professional learning activities because of the personal enjoyment gained from participation in these activities. Teachers personally value their engagement in these professional learning activities, and they consider participation in these activities important to their professional goals. Theoretically, their intrinsic motivation ensures active and constant engagement in short-term, fun and interesting teacher professional learning activities, because of the previous combination of motivational dimensions (Jansen in de Wal et al., 2014). Moreover, these teachers will sustain engagement in teacher professional learning activities that are not necessarily enjoyable, because they accept these activities as personally important or as a behavioral goal (Koestner & Losier, 2002). Personal interest are very important motivators influencing teachers' choice to engage in continuing professional development (D. J. McMillan et al., 2016). Teachers whose personal interest motivate them to attend professional development activities tend to prioritize courses based on the subject-related content that is covered (Richter et al., 2019).

Occupational Promotion

Teachers' managerial orientations can be predicted by teacher motivation for professional development, especially when seeking occupational promotion (Rzejak et al., 2014). Teachers, whose interests in attending professional development are based on occupational promotion, more frequently select learning activities related to school management and administration (Richter et al., 2019). However, he suggested

occupational promotion is a less cited motivational factor, because the teaching field

often does not provide many opportunities for career advancement.

External Expectations

External expectations such as colleagues' encouragement, school culture, and

so forth, may increase teacher motivation toward professional learning. An individual

may adopt a behavior based on a willingness to feel affiliated with a group or to

enhance one's self-esteem if that behavior is endorsed by the group (Roth, 2014).

According to Deci and Ryan (2000), when teachers work in environments that support

and encourage autonomy, they can actively integrate external expectations and

transform regulations into their own professional vision and personal beliefs. McMillan

et al. (2016) found that interpersonal relations such as "peers talking about courses they

have attended and general support in school" (p. 159), are very important in supporting

teacher motivation to engage in continuing professional development.

Practical Enhancement

Regarding competence, individuals will likely engage more in activities when they

feel capable about them (Deci & Ryan, 2000; Vallerand, 1997). There are several

motivational factors for teachers who are committed to professional learning. For

example, teachers believe their continuing professional learning will improve their

students' learning in the future, increase their competence in education, and improve

accountability within education (Kao et al., 2011). Teachers who endeavor to learn and

develop professional competence, and who adapt and deal positively with the

challenges of their profession, will enjoy teaching more than teachers whose motives

are more related to avoidance of failure or the minimization of effort and investment

(Butler, 2014). Teachers, whose motivation is based on practical enhancement to attend professional development learning activities, are interested in engaging in instructional strategies activities to enhance their teaching skills; however, they are reluctant to attend professional learning activities that provide practical enhancement on subject matter and school management (Richter et al., 2019).

Social Contact

In teaching, social conditions can foster teachers' development (Power & Goodnough, 2018). As a result, teachers' purposes for attending professional development are based on making more friends with similar interests, meeting different people, changing social relationships, or exchanging ideas about teaching. In their study, Kao et al. (2011) found teachers who attended professional development programs because they enjoyed the interaction with other teachers, scored higher on the scale of social contact. In their study, Richter et al. (2019) found a teacher's job experience correlated negatively with their social contact, which indicated that teachers' motivation decreased as they stayed longer in the profession.

Social Stimulation

Teachers who feel lonely or bored in teaching or regular life participate in professional learning because they need to take a break from their routine, to have relief from boredom, to escape teaching pressure, and so forth (Kao et al., 2011). Teachers whose motivation to attend professional learning activities are based on social stimulation are interested in attending professional learning activities because they want to meet other teachers and share their struggles and problems in their social life (Kao et al., 2011). They found in their study on web-based professional development that

teachers who have advanced internet skills and high self-efficacy tend to show more inclination to participate in social interactions with other teachers during professional learning activities. In addition, this implies that greater advanced internet self-efficacy may give teachers a stronger motivation toward web-based professional development, particularly to initiate social interactions.

Teacher Professional Learning

Teacher professional learning is seen as an essential mechanism for improving teachers' content and pedagogical content knowledge, and correspondingly, student learning success (Desimone et al., 2002; Power & Goodnough, 2018). Easton (2008) clarified the criteria for professional learning includes mostly formal programs. Those programs provide meaningful time for teachers to work together, are embedded in teachers' work, and are school based to allow for ongoing support, are planned and implemented with the meaningful leadership of teachers. He also stated that these programs are effective in changing teacher behavior, school function, student behavior, and/or student achievement. Teacher professional learning is defined as the "process by which teachers acquire the knowledge, skills, and values that will improve the service they provide to their students" (Jansen in de Wal et al., 2014 p. 27).

According to Darling-Hammond and Richardson (2009), the powerful professional learning experiences for teachers who go beyond the traditional formats (e.g., one-day workshops) are required to help teachers develop the sophisticated teaching skills they need within the 21st century. Although, the characteristics that constitute effective professional learning are still unpredictable (Easton, 2008), it has been suggested that effective professional learning is dependent on teachers'

willingness to learn (Easton, 2008). In other words, teachers need to be motivated to learn before they will fully immerse themselves in learning activities (Power & Goodnough, 2018). In fact, teacher professional learning activities includes teachers' engagement in learning activities that are both formal and informal (Jansen in de Wal et al., 2014).

Teacher Formal learning

According to Richter et al. (2013), formal professional learning takes place in a structured environment, such as a mandated in-service event or graduate coursework. The results of these activities often generate grades, certificates, continuing education credits, or diplomas (Dabbagh & Kitsantas, 2012). According to Eraut (2000), formal learning activities encompass prescribed learning frameworks, organized events, the award of credit, or an external outcome.

Formal professional development can be planned at a variety of levels such as administration, schools, and teachers. Administrators can plan courses offered at the educational sector level. In Makkah, Saudi Arabia, there are five educational sectors: west educational sector, east educational sectors, north educational sector, south educational sector, and central educational sector. At the school level, principals and teachers can plan workshops. To improve the efficiency of teacher training and professional development, schools and educational sectors may also reach out to independent educational organizations to conduct specialty training as many of these organizations serve as experts on an instructional strategy or teaching philosophy (Magestro & Stanford-Blair, 2000). Teachers who are seeking to obtain a teacher's license can also take part in the formal professional development offerings from these

organizations. Regardless of the reasons and the intended outcomes of the planned

professional development programs, they serve to improve teacher quality and support

the teacher licensing system (Akiba, 2012; Cavallini, 1998; Desimone, et al. 2002a;

Desimone et al., 2002b; Young, 1998).

Even though there is wide support for formal professional development in the

literature and legislature, many researchers indicated formal professional development

programs offered to teachers are inadequate (Ball & Cohen, 1999; Borko, 2004; Petrie

& McGee, 2012; Putnam & Borko, 1997). Educational administrations and educational

organizations have continued to stress that formal professional development can

address the need for high teaching standards. Unfortunately, many of these

organizations fail to provide a concrete plan as to how these standards can be achieved

(Borko, 2004).

Regardless of the inflexibility of formal professional development, researchers

have indicated teachers implement what they learned in the classroom better when

learning activities are designed to address specific learning goals. (Birman et al., 2009;

Dass & Yager, 2009; Desimone et al., 2002; Desimone et al., 2002; Garet et al., 2001;

Hall, 2007; Loucks-Horsley et al., 1998; Magestro & Stanford-Blair, 2000; Sparks,

2002). Cavallini (1998) argued that when formal in-service professional development is

presented correctly, it "is a vehicle for personal and professional growth" (p. 243).

Teacher Informal Learning

According to Lecat et al. (2020), some definitions state that informal learning

takes place in everyday work situations, consciously initiated by teachers. Others have

stated that professional knowledge and skills can advance both spontaneously and

unconsciously. Jansen in de Wal et al. (2014) indicated informal learning activities are not highly structured, and learners have the control of their learning activity. Other definitions highlighted the aspects of informal learning being emotional, physical, and cognitive in nature. Nevertheless, the definitions are only partly overlapping as none of the definitions are identical in terms of features mentioned. In his study, Lecat et al. (2020) considered the dimensions and features to define informal learning activities

> The learning of teachers by intentionally or unintentionally engaging in individual or collective, or non-interactive, and instructive or self-directed activities that enhances the professional development of knowledge and skills. This learning can deliberate or implicit. These activities include, but are not limited to, the activities of reflecting; reading; interacting and collaborating with colleagues; feedback giving and receiving; and the sharing of experiences and ideas. (p. 9)

The significance of this definition is that it acknowledges and takes into consideration the different activities teachers prefer to undertake including features of informal learning, thereby providing a more complete picture on teachers' informal learning experiences. While this definition is non-conclusive, it serves as a starting point for alignment and the furthering of the educational literature on teachers' informal learning (Lecat et al., 2020). According to Jurasaite-Harbison and Rex (2010), teacher informal learning is professional learning that occurs in the workplace, including teacher reflection and collaboration—both those that are planned and serendipitous. Non formal and informal professional learning is learner-centered and provides practical knowledge to participants (Strong, 2012). Even though much of informal learning is unintentional or implicit (Eraut, 2000; Tynjälä, 2008), it has been shown to affect teachers' knowledge, beliefs, and intentions for practices (Bakkenes et al., 2010).

Teacher Motivation for Professional Learning

Ng et al. (2010) reported "little is known about what factors motivate teachers to engage in professional learning" (p. 279). Understanding the motivation behind teacher professional learning is important to attract teachers to participate in professional learning activities. According to Gagné and Deci (2005), teachers do not always take advantage learning opportunities. One possible explanation could be that teachers are not motivated enough or experience a *non-optimal* type of motivation to ensure continuous professional learning.

Teacher motivation for professional learning is an important factor in a teacher's decision to participate in professional development (Kwakman, 2003; Sprott, 2019). It has been revealed motivation has a reciprocal relationship with learning and performance, while on the other hand, what learners do and learn also influences their motivation (Morris et al., 2005; Pintrich & De Groot, 2003; Schunk et al., 2008). In addition, Appova and Arbaugh (2018) found that teacher continuing professional development was strongly motivated by student learning. In educational psychology, teacher motivation has been defined as essentially cognitive theory (e.g., efficacy) and self-determination theory (e.g., intrinsic and extrinsic motivation) (Appova & Arbaugh, 2018).

Andragogy is a theory of adult learning principles popularized by Knowles (1980), who posited that adults learn differently from children, due to specific adult-based qualities such as self-directed learning, internal motivation and responsibility for learning, the need to learn, the ability to initiate learning when assuming new roles, and the ability to apply new information and knowledge immediately. There are two learning

principles that form andragogy: self-directed learning and transformative learning (Appova & Arbaugh, 2018). Transformative learning explores the way "individuals think about themselves and their world, and it involves a shift of consciousness" (Corley, 2011, p. 2). It includes relevance of the learning experiences to the learner's goals and needs; built-in time for learner's reflection and analyses of learning and progress; and learner's growth and development, which can elicit a shift of consciousness (Argote et al., 2003; Corley, 2011).

Intrinsic Motivation Effects on Teacher Professional Learning

Teachers' existing values for professional development, level of teaching practice, teachers' feelings in their development processes, and the interaction between these three aspects influence the creation of intrinsic motivation (Liu et al., 2019). Intrinsic value is the enjoyment individuals experience when performing a task. Similar to interest, intrinsic value can lead to long periods of sustained motivated behavior and persistence in the face of distraction and failure (Gniewosz et al., 2015). Watt and Richardson (2008) found teachers who had a high intrinsic value for teaching were more likely to enter the profession, because they had lofty teaching goals. These teachers wanted to make social contributions to society and shape the future of children. Teachers who entered the teaching profession with lower levels of intrinsic value were more likely to quit teaching over time (Watt & Richardson, 2008). According to Deci and Ryan (1985), individuals can make great efforts to attain mastery over their environment when they have internal locus of control, which indicates their intrinsic motivation. Thus, teachers' individual and collective sense of efficacy, strengths, and weaknesses related to their educational contexts can influence teachers' motivation to

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learn (Dzubay, 2001). In fact, teachers who believe they are in control of their success or failures are more motivated to engage in learning and expend more effort to overcome difficulties (Schunk et al., 2012).

Research on teachers' intrinsic value to implement what they learn in professional development indicates that some teachers are intrinsically motivated to learn during professional development and afterwards are intrinsically motivated to implement professional development (Visser et al., 2014). Furthermore, professional development can often involve meaningful intellectual engagement for teachers, which can be of intrinsic value for some teachers (Kennedy, 2016). Many teachers, who consider themselves *lifelong learners*, are driven by their innate curiosity, so this intrinsic value for learning supports their engagement and implantation of professional development (Cameron et al., 2013; Hodkinson & Hodkinson, 2004; Swennen et al., 2008). Other researchers have identified teachers who sought out professional development experiences because they innately enjoyed change and sought to avoid boredom (Emo, 2015; Kao et al., 2011; Richter et al., 2019). According to Ahonen et al. (2015), the engagement of pre-service teachers in developing pedagogical expertise and deep learning activities was due to their internal motivation. However, "teachers may have both intrinsic and extrinsic motivations for professional learning" (Jansen in de Wal et al., 2014). Similarly, in their study of work-related learning processes reported by experienced higher education teachers, Eekelen et al. (2005) stated that "our teachers' learning experiences are never completely self- or externally regulated" (p. 464).

Extrinsic Motivation Effects on Teacher Professional Learning

According to Radwan (2017), extrinsic motivation means external influences that motivate humans to satisfy their needs. The study of the impact of external influences such as material incentives on improving teachers' performance, including teachers professional learning, highlights the extent to which the educational system has taken the method of these external influences to determine the effects on teacher efficiency and productivity to achieve plans and ambitions of educational policies (Alzahrani, 2017). According to Boqaiee (2012), extrinsic motivation refers to the motivation in which the individual engages in an activity or task in order to achieve a goal linked to external factors, and not related to the activity or task performed. He found the level of extrinsic motivation had a moderate impact on teachers learning. In their study, Ahonen et al. (2015) found pre-service teachers with external motivation tend to engage in general academic work and superficial learning. However, findings indicate that individuals with autonomously regulated extrinsic motivation demonstrate a particularly high professional development participation (Gorozidis & Papaioannou, 2014; Livneh & Livneh, 1999). Teachers at the early stage of their careers, devote their learning efforts to the improvement of their teaching practices. Their professional development mainly focuses on increasing knowledge and improving student learning (Liu et al., 2019). Extrinsic controlled motivation consists of external regulation and introjected regulation (Richter et al., 2019). External regulation occurs when an activity is pursued to obtain a reward or to avoid a negative sanction while introjected regulation is based on the same mechanism; however, rewards or sanctions are not provided by an external agency, but through internal pressure (Richter et al., 2019). Gorozidis and Papaioannou (2014)

indicated that teachers' intention to participate in professional development can be positively predicted when teachers' autonomous motivation increased. Teachers who had externally regulated profiles possessed the least amount of motivation for teacher professional learning. Their involvement in teacher professional learning is largely fed by the incentives of others. Research states that this will lead them to be less engaged in teacher professional learning activities, both in frequency and intensity. In relative and absolute terms, this motivational profile can be considered highly unfavorable. In their study, Jansen in de Wal et al. (2014) found that teachers, whose intention to attend professional learning activities, are externally regulated (e.g., increase in salary) have a non-optimal motivation type for teacher professional learning, both in strength and quality. According to Kwakman (2003), teachers do not always make full use of the possibilities for learning provided by their environment. One possible explanation is that teachers are not motivated enough or experienced a non-optimal type of motivation to ensure continuous teacher professional learning (Gagné & Deci, 2005).

Summary

This chapter addressed literature related to teacher professional learning and teacher motivation. A review of teacher professional development in Saudi Arabia was discussed. Teacher motivation and its types (e.g., intrinsic and extrinsic) were presented. Education participation factors for teachers included personal interest, occupational promotion, external expectations, practical enhancement, social contact, and social stimulation as identified by Boshier and Richter et al. Teacher professional learning was reviewed from two parts: teacher formal learning and teacher informal learning. The last topic of this chapter was teacher motivation for professional learning,

which included two dimensions: intrinsic motivation effects on teacher professional

learning and extrinsic motivation effects on teacher professional learning.

Chapter 3

Methods

The purpose of this study was to examine the relationship between teacher motivation and professional learning in Makkah, Saudi Arabia. This chapter includes research design, population and sample, instrumentation, variables, data collection, and data analysis.

Research Design

This was a quantitative survey research study. The survey was utilized to identify the relationships between teacher professional learning and motivation in Makkah, Saudi Arabia. According to Creswell (2002), "surveys are most suitable to assess trends or characteristics of a population; learn about individual attitudes, opinions, beliefs, and practices" (p. 421). The survey was distributed electronically via email to collect information from the targeted audience, who were in-service teachers in Makkah, Saudi Arabia.

The researcher conducted cognitive interviews with a convenience sample of eligible participants (i.e., teachers, supervisors, teacher coaches, and/or principals) to further validate the content and terminology used in the survey for the intended participants and the procedures for data collection. Cognitive interviews are based on psychological method for empirically studying the ways in which individuals mentally process and respond to survey questionnaires (Willis, 2011).

Population and Sample

The targeted population for this study was all in-service teachers in Makkah, Saudi Arabia. The total number of in-service teachers in Makkah was approximately 26,517 teachers (Development and Training Center, 2019). Possible participants were asked to participate and complete the surveys of this study by their principals who received an electronic survey link via email from the General Administration for Education in Makkah, Saudi Arabia. This process allowed an equal opportunity for all in-service teachers to be informed about this study. According to Tabachnik and Fidell (1989), the ratio of cases-to-independent variables should ideally be 20:1. Since this study has 11 independent variables, the suggested sample size was a minimum of 220 teachers. The sample included both male and female in-service teachers in Makkah, Saudi Arabia. In addition, this study included schools in both the public and private sectors.

There was no minimum teaching experience required for participation in this study; however, it did require that all participants had to be in-service teachers. For instance, all pre-service teachers were excluded from this study, because they did not have teacher training experience. In addition, in-service teachers who were not currently teaching for any reason were excluded from this study. These reasons may have included teachers on maternity leave, study leave, and so forth. Also, for the purpose of this study, the researcher allowed teachers who had another position besides teaching to participate, for example, teachers who worked part time as a trainer, lab researcher, or other positions were eligible to participate. In addition, all

teaching majors and school levels (elementary, middle, or high) are eligible to participate in this study.

Instrumentation

This study used two instruments in an effort to accurately determine the relationships between the dependent variables in this study: teacher motivation and teacher professional learning. These instruments were the Education Participation Scale (EPS) by Kao et al. (2011), which was originally developed by Boshier (1991), and the Teachers' Opportunity to Learn survey created by Akiba (2012). The EPS by Richter et al. (2019) was revised to conduct an assessment on teachers' motivation to participate in professional development activities. See Appendix A for Richter et al.'s (2019) English version of the EPS, the translated Arabic version, and the retranslated English version. In addition, the researcher reworded Richter's (2019) instrument to assess teachers' motivation toward professional learning in Makkah, Saudi Arabia. For example, one of the items of the personal interest factor was "I participate in professional development to satisfy my curiosity", which was reworded to "I participate in professional development for personal improvement". The phrase *to satisfy my curiosity* does not necessarily have the same meaning in Arabic and could have been confusing for participants. See Appendix B for an email granting permission from Richter to adopt and retranslate Richer et al.'s (2019) EPS instrument. The researcher believed it was important for this study to reinstate Richter et al.'s (2019) sixth scale, which is external expectations. In their study, Richter et al. (2019) found external expectations could be measured with sufficient reliability. However, external expectations are important for this research, because the new educational system in

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Saudi Arabia requires, for the first time, teachers to obtain a teacher's license. A

teachers' license lasts for five years, which means teachers must renew their licenses

every five years to maintain their annual raise. One of the requirements to obtain a

teacher's license is to attend a minimum of 150 hours of training over a period of five

years. Therefore, the external expectations factor is crucial to assess teachers whose

motivation to attend professional learning activities is based on external expectations.

The external expectations questions were based on Kao et al.'s (2011) version, which

was adopted by Richter et al. (2019).

These six factors of the EPS for this study included: (a) personal interest, (b)

occupational promotion, (c) external expectations, (d) practical enhancement, (e) social

contact, and (f) social stimulation. For the personal interest factor, a high score

indicates participants were involved in Professional Development (PD) for their own

interests. Thus, they participated because of the inherent enjoyment of professional

development. One of the items to assess teacher personal interest to attend

professional learning activities is "I participate in PD because I generally enjoy learning".

Related to the occupational factor, a high score on this scale indicates

participants are involved in PD mostly because they want to maintain their current job or

get a new position or job. One of the items on this factor is "I participate in PD because

it is useful to improve job status". The external expectations factor's high score

indicates participants are involved in PD because of the expectations from someone at

work. One of the items on this scale is "I participate in PD due to others' participation".

The practical enhancement factor assesses teacher motivation for participation in

PD based on teachers' interests in developing their skills (Richter et al., 2019) in the

belief they can help their future students, identify their learning styles, and increase their own competence in education (Kao et al., 2011). A high score on this factor indicates participants are involved in PD, because they are committed to *doing good* in education. One of the items on this factor is "I participate in PD because I want to learn how to deal with struggling students in class".

Social contact factor assesses teachers' social conditions (e.g., making more friends, exchanging ideas about teaching, and so forth) to foster teachers' development (Power & Goodnough, 2018). A high score on this factor indicates participants are involved in PD because of the enjoyment of interacting with others. One of the items on this scale is "I participate in PD because I want to get to know people with similar interests".

Social stimulation factor measures motivation for teachers whose reasons to participate in PD activities are related to escaping from teaching routine, boredom, or an overloaded schedule. A high score on this factor indicates teachers are involved in PD, because they want to meet other teachers and to discuss their problems in their social life. They are usually lonely or bored in regular life or teaching (Kao et al., 2011). One of the items on this scale is "I participate in PD because I need a break from my routine".

The second instrument utilized in this study was the Teachers' Opportunity to Learn (TOTL) developed by Akiba (2012). See Appendix C for a copy of Akiba's English version of the TOTL, the translated Arabic version, and the retranslated English version. Also see Appendix D for the email granting the researcher permission to use and adapt the TOTL survey. The TOTL by Akiba (2012) has seven factors for

measuring teacher professional learning. These factors are (a) professional development programming, (b) teacher collaboration, (c) university/college, (d) professional conferences, (e) mentoring/coaching, (f) informal communication, and (g) individual activities. The TOTL was created for use with mathematics teachers. However, to answer the research questions of this study, the researcher integrated Saudi teacher professional learning contexts into a revised framework of the TOTL. Therefore, the subject content considered any course instead of just mathematics. In addition, for the purpose of this research, the fifth factor of TOTL, which was Mentoring/Coaching, was changed to Supervising to adapt to the Saudi educational context since all teachers in Saudi Arabia have supervisors, and the education system does not use the words mentors or coaches. In addition, for the purpose of this study, the researcher selected teachers from all school levels (elementary, middle, and high). See Appendix E for an email approving the use and rewording of McCarthy's (2016) format of the TOTL survey. Also see Appendix F for a copy for McCarthy's (2016) TOTL survey format.

The Saudi teacher's preparation system requires pre-service teachers to take university/college courses specifically related to teaching methods and skills during their last year in the university or college. On the other hand, there is no further college degree or courses required for professional learning after teachers are involved in the profession; however, in-service teachers wanting to continue their education can take university/college courses. As a result, the university/college factor inclusively included in-service teachers, as pre-service teachers are excluded from this research. TOTL categorizes these seven scales into formal and informal learning activities, although

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several factors are classified as both types of learning activities. Table 1 illustrates

formal and informal professional learning activities that based on McCarthy's (2016)

TOTL learning classification work.

Table 1

TOTL[a] Formal/Informal Learning Activity Classification

Professional Development Type	Formal Activity	Informal Activity
Professional Development Programming	X	
Teacher Collaboration	X	X
University/College Courses	X	
Professional Conferences	X	
Supervising	X	X
Informal Communication		X
Individual Learning Activities		X

Note. [a] TOTL = Teachers' Opportunity to Learn.
Based on McCarthy's work with permission (2016).

All Saudi teachers have individual professional accounts, called *Fares Accounts*,

that save their history of their professional development information such as training

courses, workshops, certificates, and so forth. As a result, it was convenient and

accurate for participants to report all their formal learning activities. Therefore, to use

the TOTL survey accurately, the length of time for all scales was adjusted from 12

months to 24 months since throughout the last year (2020) all Saudi teachers were not allowed to attend in-person professional development programs or any in-person activities, which might have affected their formal learning and development, because of the COVID-19 pandemic. Therefore, where the original TOTL begins by asking the participants if they have participated in any learning activities within the last 12 months, the time period was changed to 24 months. Each of the seven factors has an initial question asking whether the teachers participated in that factor by responding yes or no. If the answer was yes, then participants could choose from several options related to how often they participated in specific learning activities. If the answer was no, the participant was asked to skip that factor and move to the next factor. The last factor, individual learning activities, does not follow the same pattern.

Akiba (2012) established the frequency intervals for the seven scales from the results of a pilot study of 114 middle school mathematics teachers as well as teacher interviews. To obtain the most accurate responses from the participants in this study, there were two frequencies regarding the amount of time spent on learning activities: an hourly total for a typical month and an hourly total for the past 24 months. For activities related to professional development categories, the participants were asked about the total hours they were involved in professional development in the past 24 months. These categories included professional development programming, teacher collaboration, and professional conferences. On the other hand, for activities related to informal learning, the participants were asked to indicate how many hours they engaged in learning activities in a typical month. These categories included supervising, informal communication, and individual learning activities.

According to Akiba (2012), the instrument was designed to have participants report the latest activities as a monthly total, because past studies concluded that teachers were involved in these activities more often than other types of activities. Participants were more likely to recall their participation in these activities more accurately, if they been asked to report monthly total participation instead of annual total participation (McCarthy, 2016).

Reliability and Validity

According to VandenBos (2007), reliability is defined as "the trustworthiness or consistency of a measure; that is, the degree to which a test or other measurement instrument was free of random error, yielding the same results across multiple applications to the same sample" (p. 902). The internal consistency reliabilities were assessed by calculating Cronbach's alpha for each subscale of the EPS and TOTL. Cronbach's alpha is one of the most commonly used measures of reliability for instruments. According to VandenBos (2007), Cronbach's alpha measures the average strength of the correlations between all pairs within a set of items. Alpha ratios range from +1 to -1, where +1 indicates strong positive consistency between pair of items in a subscale and 0 indicates there is no internal consistency among a pair of items. On the other hand, -1 indicates a negative association among items. Subscale items with alphas greater than .7 were considered reliable indicators (Schafer & Graham, 2002). Correlation coefficients were calculated for both instruments that were utilized in this study. The overall reliability for the EPS version utilized in this study was strong (.89). The reliability for the EPS scales were generally strong. The EPS had six scales and the correlation coefficients for each scale items were as follow: personal interest (.86),

occupational promotion (.86), external expectations (.86), practical enhancement (.87), social contact (.87), and social stimulation (.91). The second instrument was utilized in this study was TOTL which had seven scales. The overall reliability of TOTL was (.60) which was modest according to Cohen et al., (2011). The correlation coefficients for the seven scales of TOTL were as follow: professional development programming (.57), teacher collaboration (.56), university/college courses (.59), professional conferences (.58), supervising (.56), informal communication (.54), and individual learning activities (.53).

The researcher consulted three experts in teacher professional development, evaluation, and adult education to ensure items of both instruments would be specific to Saudi teachers' professional development and accurate to answer the research questions. Both surveys were translated into Arabic, since it was the native language of the participants in this study. To convey the appropriate meaning in Arabic, the original survey was literally as well as conceptually translated from English into Arabic and retranslated into English. The researcher followed the back-translation procedure as described by Vallerand and Halliwell (1983). To follow this procedure, the researcher found two different authorized translating agencies. The first agency translated both instruments into Arabic and the second agency re-translated both instruments back to English. To make sure that instruments were valid for the Saudi educational context, the researcher reviewed the instruments' content with a validity panel consisting of two supervisors, the head manager of Makkah's Teacher Training Center, and two teachers. All versions of both instruments are presented in Appendices A and C.

Variables

Demographic information of the participants of this study included personal characteristics and school characteristics. Personal characteristics included gender (male or female), age, the highest level of education (bachelor, master's, Ph.D.), other position(s) besides teaching, years of teaching experience, work class (public or private), and number of periods taught per week. School characteristics include school classification level (elementary, middle, high), size of school (large, medium, small), and the location characteristics of school (urban, rural, remote). Demographic variables were divided into two groups: numerical and categorical variables. Numerical variables included age, years of teaching, and number of periods per week. Age and years of teaching are continuous variables, while the number of periods taught per week is a discrete variable. The categorical group consists of gender, the highest level of education, other positions besides teaching, school classification level, teacher's academic major, courses taught other that teacher's major area, school size, and school demographic characteristics. Categorical variables were further divided into two groups: nominal and ordinal. The nominal group consists of gender, other positions besides teaching, teacher's academic major, and different courses taught other than teacher's major area. The ordinal variables are the highest level of education, school classification, school size, and school location characteristics.

Teacher motivation and professional learning were the dependent variables, and the demographic information were the independent variables in this study. The ESP, which measured teacher's motivation, has six independent variables: (a) personal interest, (b) occupational promotion, (c) external expectations, (d) practical

enhancement, (e) social contact, and (f) social stimulation (Boshier, 1991). The TOTL, which measured teacher professional learning, has seven independent variables: (a) professional development programming, (b) teacher collaboration, (c) university/college courses, (d) professional conferences, (e) supervising, (f) informal communication, and (h) individual learning activities (Akiba, 2012).

Data Collection

The researcher collected data and conducted this study in Makkah, Saudi Arabia. Permission to conduct this study was obtained from the General Administration for Education in Makkah, Saudi Arabia. The researcher was asked to provide an official letter from the Saudi Cultural Mission to the United States of America. This letter indicated that the researcher had acquired all permissions to conduct this study in Makkah, Saudi Arabia. See Appendix G for a copy of the approval letter from the General Administration for Education in Makkah.

The researcher acquired permission from the Institutional Review Board at the University of South Florida to send an electronic survey link via email to all participants. To encourage participation in this study the General Administration for Education in Makkah sent an email reminder, two weeks after sending the first email, to all participants to enhance the opportunity for participating in this study. See Appendix H for the email reminder that was sent to participants. A Qualtrics survey was used, because it provides support for descriptive text and multiple-choice accessibility for screen-reading programs and can function on both computers and smartphones (Qualtrics, n.d.). The participants began taking the survey by answering the demographic questions and then completing the EPS and TOTL instruments.

The order of the EPS and the TOTL was reversed for 50% of the email links. When sending out emails to participants, the first 50% of the links had a different order of questions for both surveys than the other half of the links. However, all links started with the demographic information. The TOTL questions remained in the same order as the original Akiba (2012) version for both links since the questions investigated a progression from formal to informal learning and changing the question order could interrupt to flow the information being studied. On the other hand, to ensure no response bias, the researcher followed a different procedure for the adaptation of Richter et al.'s (2019) EPS questions. This procedure started by asking the first question from each of the seven factors then the second question from each factor, and so forth. To avoid any missing answers, all answer fields were labeled as required.

Data Analysis

The EPS measures six factors across 29 items and the TOTL measures seven factors across 22 items. To answer the research questions of this study, the following statistical methods were conducted. For the first research question, Pearson's product-moment correlation coefficient (Pearson's r) was conducted since the outcomes of the EPS and TOTL are continuous. Pearson's r is an index of the degree and direction of linear association between two continuous variables (Walk & Rupp, 2012). The correlation analysis was utilized to examine the relationship between the responses on the EPS and TOTL. The second and third research questions of this study examined the effects of demographic variables on teacher motivation and professional learning. A regression analysis was used to explain the effects of number of continuous and/or categorical independent variables on the two continuous dependent variables in the

second and third questions of this study (Tabachnik & Fidell, 1989). According to

Harlow, (2014), multiple regression equation consists of a combination of independent

variables correlated with a continuous outcome. Thus, multiple regression analysis

provides an overall view of how the correlation level between the independent variables

to the outcome and how each independent variable effects the outcome.

In addition, the researcher examined the participants demographic information

using descriptive statistics. According to Gall et al. (2007), when reporting quantitative

data, descriptive statistics are an efficient method. Therefore, the descriptive statistics

of the participants were reported based on gender (male or female), age, the highest

level of education (bachelor, master's, Ph.D.), other position(s) besides teaching, years

of teaching experience, work class (public or private), and number of periods taught per

week. School characteristics include school classification level (elementary, middle,

high), size of school (large, medium, small), and the location characteristics of school

(urban, rural, remote).

Chapter 4

Findings

The purpose of this study was to examine the relationship between teacher motivation and professional learning in Makkah, Saudi Arabia. This chapter includes the following sections: research questions, participant demographics, analysis of research questions, and a summary.

Research Questions

This study had three questions to address its main purpose. These questions were as follows:

1. What is the relationship between teacher motivation and professional learning in Makkah, Saudi Arabia?

2. What are the effects of the demographic variables on teacher motivation?

3. What are the effects of the demographic variables on teacher professional learning?

Participant Demographics

The data of this study were collected in Makkah, Saudi Arabia. The targeted population was teachers in Makkah, Saudi Arabia. The total number of teachers in Makkah was 25,468. There were 13,246 (52%) female teachers and 12,222 (48%) male teachers. In the first week of the Fall semester 2021, the survey was distributed to all schools by the General Administration for Education in Makkah, Saudi Arabia. The total number of respondents was 431 teachers, but the number of teachers who

completed the entire survey was 228 teachers, which included 60 (26.3%) female

teachers and 168 (73.7%) male teachers. At the beginning of the survey, respondents

answered questions to collect demographic information, which included personal

characteristics and school characteristics. The sample used for this study was a

convenience sample. The General Administration for Education in Makkah sent an

electronic survey link via email to all schools in Makkah. The principals of these schools

then sent this survey link to teachers at their schools using social media such as

WhatsApp.

Personal characteristics included gender (male or female), age, the highest level

of education (bachelor, master's, Ph.D.), other position(s) besides teaching, years of

teaching experience, teacher academic major, different courses taught other than

teacher's major area, and the number of periods taught per week. In addition to

personal characteristics, school characteristics were collected which included school

classification level (elementary, middle, high), school size (large, medium, small), and

the location characteristics of school (urban, rural, remote).

Personal Characteristics

The first demographic variable in this study was gender. As this study was

conducted, the teacher population in Makkah was about 25,468 teachers, which

consisted of 52% female teachers ($n = 13,246$) and 48% male teachers ($n = 12,222$).

The sample size that was required based on the ratio of cases-to-independent variables

should ideally be 20:1 by T& F (1989) in this study was a minimum of 220 teachers;

however, after the data were collected, 228 teachers participated in this study and

completed the survey. Female teachers accounted for 26.31% ($n = 60$) and males 73%

(*n* = 168). The age of the participants was normally distributed (*SK* = .03, *KU* = -.18)

and the mean score was 42.97 years old (*SD* = 6.67). The mean age for female

teachers was 41.7 years old and 43.4 years of age for male teachers. See Figure 1 for

a bar chart illustrating the distribution of the ages of the respondents.

Figure 1

Age Distribution of Respondents
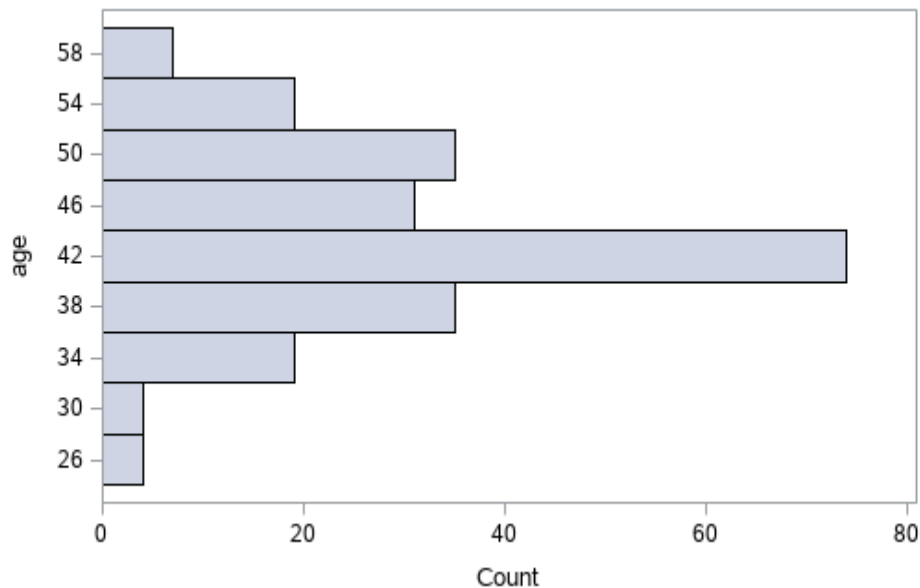
Note. N = 228

The level of education of the respondents differed based on their highest degree.

Most of the teachers who completed the survey held bachelor's degree in their major

area 83.3% (*n* = 190). The Master's degree holders were next 14.9% (*n* = 34). Only

few of the respondents had a Ph.D. degree 1.8% (*n* = 4).

Almost 92% (*n* = 209) of the respondents did not have another position beside

teaching, that included 55 female teachers (24%) and 154 (67.5%) male teachers.

Years of teaching experience for respondents was normally distributed (*SK* = .19, *KU* = -.49) and the mean score was *M* = 17.44 (*SD* = 7.6). Teacher schedule load was between 1 and 24 periods per week in Makkah, Saudi Arabia. In this study, most of the respondents 85.5% (*n* = 195) were teaching more than 10 periods per week; however, 50% (*n* =114) of the teachers' scheduled load was between 20 to 24 periods per week.

School Characteristics

Through a personal communication with staff (A. Alzahrani, personal communication, August 18, 2021) in the Planning and Developing Department at the General Administration for Education in Makkah, Saudi Arabia, the researcher obtained the most recent report that included all school statistics needed for this study. When this study was conducted, there were 1,284 schools in Makkah, Saudi Arabia. This number was divided into 632 schools for girls and 652 schools for boys. Regarding the school level, there were 629 elementary schools which divided into 324 elementary schools for girls and 305 for elementary schools for boys. At the middle school level, there were 385 middle schools with 192 for girls and 193 for boys. In addition, the number of high schools was 270 with 136 high schools for girls and 134 for boys.

The total number of elementary school teachers in Makkah was 13,102 teachers. 6,854 female teachers constituted 52.3% of the teacher population, while 6,248 (47.7%) were male teachers. The number of middle school teachers was 6,333. The number of female teachers included 3244 teachers (51.2%), while 3089 (48.8%) were male teachers. The total number of teachers in high schools was 6033. There were 3148 (52.2%) female teachers and 2885 (47.8%) male teachers. Table 2 illustrates more details about school statistics at all school levels in Makkah, Saudi Arabia.

Table 2

Schools Statistics by School Level

School level	Schools		Students		Teachers		Classrooms	
	F	M	F	M	F	M	F	M
	n	n	n	n	n	n	n	n
Elementary	324	305	97,357	96,320	6,854	6,248	3,985	3,860
Middle	192	193	46,092	47,178	3,244	3,089	1,589	1,735
High	136	134	42,033	40,909	3,148	2,885	3,469	2,531

Note. F = Female, M = Male.

Table 3 illustrates the number of schools by size and type at all levels in Makkah, Saudi Arabia. The number of public schools in Makkah included 632 schools for boys and 652 schools for girls. In addition, the number of private schools in Makkah included 100 schools for boys and 194 schools for girls. The total number of teachers in the public sector was 23,719 including 12,853 (54.2%) female teachers and 10,866 (45.8%) male teachers. In the private sector, the total number of teachers was 2,762, there were 1,406 (50.9%) female teachers and 1,356 (49.1%) male teachers.

For the purpose of this study, the size and type of schools were included in the survey questions to examine if school size and type could effect teacher motivation and professional learning. The school size was categorized into three groups (small, medium, large) while school type was categorized into two groups public schools and private schools. For small schools, there were 289 small elementary schools with 244 public schools and 45 private schools. At the middle school level, there were 208 small middle schools with 149 public schools and 59 private schools. At the high school level,

there were 130 small high schools with 97 public schools and 33 private schools. For

medium schools, there were 287 medium elementary schools with 279 public schools

and 8 private schools. At middle school level, there were 97 medium middle schools

with 97 public schools and zero private schools. At the high school level, there were 68

medium high schools with 60 public schools and 8 private schools. For large school,

there were 179 large public schools with 94 elementary schools, 36 middle schools, and

49 high schools. The number of large private schools was zero at all school level.

Table 3

Statistics by School Size and Type in Makkah, Saudi Arabia

School Type Level	Small [a]				Medium [b]				Large [c]			
	Public		Private		Public		Private		Public		Private	
	F	M	F	M	F	M	F	M	F	M	F	M
	n	*n*	*n*	*n*	*n*	*n*	*n*	*n*	*n*	*n*	*n*	*n*
Elementary	134	110	22	23	195	84	0	8	43	51	0	0
Middle	75	74	33	26	57	40	0	0	13	23	0	0
High	46	51	18	15	38	22	0	8	22	27	0	0

Note. [a]Large school has more than 600 students. [b] Medium school has between
599 and 300 students. [c]Small school has less than 300 students.

The location characteristics of schools were included in this study to examine the

impact on teacher motivation and professional learning. The school's location was

categorized into three sectors: urban, rural, and remote. Urban schools were in the city

of Makkah, while rural schools were in the suburbs of Makkah, and lastly, remote

schools were in remote areas outside Makkah. Schools in remote areas were the only

category where teachers had some additional incentives because they work in less-than-ideal situations. some of the incentives an 8% increase in salary, low load schedule, and sometimes not a full week's work, according to a report obtained from the Planning and Developing Department at the General Administration for Education in Makkah, Saudi Arabia (A. Alzahrani, personal communication, August 18, 2021).

Analysis of Research Questions

This study had three research questions. The first question examined the relationship between teacher motivation and professional learning. To answer the first question, Pearson's Product Moment (r) was applied. The second and third questions examined demographic variable effects on teacher motivation and professional learning. Therefore, a multiple regression analysis was conducted to examine the effects of the demographic variables on teacher motivation and professional earning.

Research Question One

The first research question sought to examine the relationship between teacher professional learning and motivation in Makkah, Saudi Arabia. The dependent variable was teacher professional learning, which was measured by using TOTL by Akiba (2012). The associated predictor in this study was teacher motivation, which was measured by utilizing the modified version of the EPS by Richter et al. (2019). Both variables were continuous, hence Pearson's r was utilized. According to Walk and Rupp (2012), Pearson's r is an index of the degree and direction of linear association between two continuous variables. Pearson's r values fall between -1 and 1. Negative values indicate that an increase in one of the variables causes a decrease in the other variable. Positive values of r, on the other hand, indicate that both variables' values

increase together. According to Shavelson (1996) and Taylor (1990) there are four levels of correlation. The interpretation of Pearson's r result is not significant when the r value falls between 0 to ± 0.20, weak when r value falls between ± 0.21 to ± 0.35, moderate when the r value falls between ± 0.36 to ± 0.67, strong when the r value falls between ± 0.68 to ± 0.90, and when the r value falls between ± 0.91 to ± 1.00, which is rare in social science (Prion & Haerling, 2014). TOTL survey mean scores were as follows: on professional development programming (M = 4.63, SD = 2.04), teacher collaboration (M = 2.28, SD =1.62), university/college courses (M = 15.02, SD = 6.89), professional conferences (M = 5.12, SD = 2.44), *supervising* (M = 1.71, SD = 1.14), informal communication (M = 2.35, SD = 1.3), and individual learning activities (M = 15.21, SD = 5.93). Table 4 presents the descriptive statistics for all the TOTL activities.

Table 4

Descriptive Statistics for TOTL by Activity

Activity Type	n	M	SD	SK	KU
Professional Development Programming	177	4.67	2.04	.09	-.72
Teacher Collaboration	126	2.28	1.62	1.75	3.37
University/College Courses	55	15.02	6.89	.37	-.25
Professional Conferences	59	5.12	2.44	.6	1.44
Supervising	52	1.71	1.14	1.66	2.37
Informal Communication	93	2.35	1.3	.83	-.43
Individual Learning Activities	228	15.21	5.93	1.35	1.83

Note. N = 228

Table 5 presents the descriptive statistics for the EPS by activity. The mean and standard deviation scores for all scales of the EPS were as follows: personal interest (*M* = 3.01, *SD* = .77), occupational promotion (*M* = 2.81, *SD* = .82), external expectations (*M* = 2.59, *SD* = .77), practical enhancement (*M* = 3.18, *SD* = .82), social contact (*M* = 2.60, *SD* = .97), and social stimulation (*M* = 2.50, *SD* = .97). Analysis showed different interpretations of normality, homoscedasticity, and linearity. Normality is addressed in Appendix I. See Appendix I for all normality models. The skewness and kurtosis values are included in Table 5.

Table 5

Descriptive Statistics by EPS Scales

Scale	*M*	*SD*	*SK*	*KU*
Personal interest	3.01	.77	-.58	-.29
Occupational promotion	2.81	.82	-.33	-.72
External expectations	2.59	.77	.08	-.53
Practical enhancement	3.18	.82	-.97	.24
Social contact	2.60	.97	-.75	-1.18
Social stimulation	2.50	.97	.04	-1.14

Note. *N* = 228. Number of items (questions) of all scales was 3 except external expectations which had 4 items.

Table 6 addresses the correlation between EPS and TOTL scales. Each scale of the TOTL, which had seven scales, was considered as a dependent variable and was correlated with the six scales of the EPS. The first scale of TOTL was *professional development programming*, which had a significant positive relationship with personal interest (r(218) = .17, p = .008). It also had a similar relationship with practical enhancement (r(218) = .17, p = .011). The second dependent variable was *teacher collaboration*, which had a significant relationship with only two of the six scales of the EPS: external expectations (r(218) = .16, p = .017) and social contact (r(218) = .16, p = .018). The third scale was *university/college courses* which had a significant positive relationship with social contact (r(218) = .18, p = .006), personal interest (r(218) = .18 p = .007), and occupational promotion (r(218) = .15, p = .022). The fourth scale, *professional conferences,* had a significant positive relationship with three independent variables: personal interest (r(218) = .18, p = .007), occupational promotion (r(218) = .17, p = .009), and practical enhancement (r(218) = .14, p = .04). The fifth scale was *supervising*, which had a significant positive relationship with two independent variables: occupational promotion (r(218) = .20, p = .003), personal interest (r(218) = .17, p = .009), and social contact (r(218) = .13, p = .049). The sixth scale was *informal communication*, which had a significant positive relationship with four scales of the EPS: occupational promotion (r(218) = .27, p <.0001), practical enhancement (r(218) = .24, p = .0002), personal interest (r(218) = .24, p = .0003), and external expectations (r(218) = .15, p = .02). The last scale of TOTL was the *individual learning activities*, which had significant positive relationships with personal interest (r(218) = .28, p <.0001), occupational promotion (r(218) = .26, p <.0001), practical enhancement (r(218) = .23, p

= .0004), external expectations (r(218) = .23, p = .0005), and social contact (r(218) =

.17, p = .008). This last scale had the highest r ratios of all the other scales, which

indicated that respondents relied heavily on individual learning activities as a method to

be involved in professional development. One of the reasons for this high correlation

was that the COVID-19 pandemic affected the delivery of the entire education system.

However, it was considered a weak relationship. The rule of thumb for interpreting

Pearson's r is that r values, which fall between |.21| to |35| should be considered to be a

weak correlation (Shavelson, 1996; Tylor, 1990). Table 6 shows correlation coefficients

between TOTL and EPS by scale.

Table 6

Correlations between EPS and TOTL Scales

TOTL scale	EPS scale					
	[a] PI r	OP r	EE r	PE r	SC r	SS r
Professional Development Programming	**.17***	.11	.09	**.17***	.05	-.05
Teacher Collaboration	.11	.14	.16*	.09	.16*	.01
University/College Courses	**.18***	**.15***	.12	.11	**.18***	.12
Professional Conferences	**.18***	**.17***	.10	**.14***	.09	.05
Supervising	**.17***	**.20***	.10	.09	**.13***	.05
Informal Communication	**.24***	**.28****	**.15***	**.24***	.1	.03
Individual Learning Activities	**.28****	**.26****	**.22***	**.23***	**.17***	.08

Note. *p < .05. **p < .01. [a] PI = Personal interest. OP = Occupational promotion. EE = External expectations. PE = Practical enhancement. SC = Social contact. SS = Social stimulation.

Research Question Two

This research question addressed the effects of personal and school characteristics of the respondents on teacher motivation. Multiple regression (MR) analyses were utilized to analyze the data from the completed surveys by teachers from schools in Makkah, Saudi Arabia. The sample size was $N = 228$ where the number of female teachers was 60 (26.3%) and 168 (73.7%) were male teachers. This research question was based on a conceptual framework regarding the factors contributing to teacher motivation from 10 demographic variables representing personal and school characteristics. Therefore, the dependent variables were each scale of the EPS, and the independent variables were the demographic variables of the respondents. Examination of all possible models was conducted to determine which model(s) best fit the regression equation. The mean scores of all six scales of the EPS had moderate to high interpretation on a Likert scale that extended from 1 (low) to 4 (high). Teachers had the highest mean scores on practical enhancement ($M = 3.18$, $SD = 8.2$) and personal interest ($M = 3.01$, $SD = .77$), which indicated that teachers in this sample were mostly involved in professional development based on these two motives. In addition, teachers' mean scores on the remaining scales showed medium agreement on what motivated them to participate in professional development. For instance, teachers' medium mean scores were on occupational promotion ($M = 2.81$, $SD = .82$), social contact ($M = 2.60$, $SD = .97$), on external expectations ($M = 2.59$, $SD = .77$), and on social stimulation ($M = 2.50$, $SD = .97$).

Preliminary analyses showed that data did not violate assumptions of normality (skewness values between -.97 to .08 and kurtosis values between -1.14 to .24) and

were reasonably acceptable. In addition, after examining all scatter plots of all models,

the data showed no violation of homoscedasticity and linearity assumptions. Figure I in

Appendix I illustrates the normality assumption for each TOTL scale. Moreover, by

examining the personal interest Variance of Inflation Factor (VIF) scores, the data did

not show any sign of multicollinearity between the independent variables in all models.

VIF = 4.5 was the highest score between the independent variables. Myers (1990)

suggested that VIF values greater than 10 indicate collinearity. In multiple regression

analysis, it is very important that predictors are independent and have low correlations

among them to avoid multicollinearity (Harlow, 2014).

The general regression equation of this model was as follows: $\hat{Y} = b_o + b_1$*Gender

+ b_2*Age + b_3*Degree + b_4*Position + b_5*School class + b_6*Work class + b_7*Experience

+ b_8*Schedule load + b_9*School size + b_{10}*School location + E. Where: $\hat{Y}$ was the EPS

scale each time when and E was the unexplained error in the regression equation.   See

Table 7 for all coefficient effects (bx) by model. Coefficient effects (b) are the effect of

the independent variables on the demographic variables.

Analysis of variance showed that the independent variables had a significant

relationship with the dependent variable. For the first model where the dependent

variable was *personal interest* $F(10,228) = 2.78$, $p = .003$. In addition, $R^2 = .11$ indicated

a weak explanation of the variation in the outcome with 95% interval of confidence (IC)

[.037, .183]. Independent variables that had a significant impact on personal interest

were age $t(2.2)$, $p = .03$, and school size $t(-2.9)$, $p = .003$.

The second model had *occupational promotion* as the dependent variable. It had

a significant relationship between occupational promotion and the demographic

variables in this model $F(10,228) = 2.9$, $p = .002$. The value of $R^2 = .12$ indicated that

independent variables explained 12% of the variation in occupational promotion as a

motive for teachers to engage in professional learning activities with 95% IC [.044,

.195].

Table 7

Effect Coefficients of the Independent Variables for EPS Scales

Independent variable	EPS Scale					
	[a] PI	OP	EE	PE	SC	SS
	b	*b*	*b*	*b*	*b*	*b*
Gender	.18	**.31**	**.32**	**.34**	.32	**.48**
Age	**.03**	.03	.01	**.04**	.01	-.02
Degree	.18	.15	.01	.04	-.09	.26
Position	-.14	-.20	.06	-.12	-.11	.02
School class	-.05	-.06	-.07	-.06	.03	.06
Work class	.04	.11	.01	-.04	.26	-.14
Experience	-.01	-.01	-.01	-.02	.02	.02
Schedule load	-.01	-.011	-.02	-.001	-.01	-.01
School size	**-.23**	**-.23**	**-.22**	**-.20**	**-.21**	-.10
School location	-.23	**0.27**	.03	.21	.20	.04

Note. $N = 228$. Bold values are significant at $p < .05$. [a] PI = Personal interest. OP = Occupational promotion. EE = External expectations. PE = Practical enhancement. SC = Social contact. SS = Social stimulation.

Three out of 10 independent variables had a significant effect on the dependent variable: gender $t(2.2)$, $p = .03$; school size $t(-2.28)$, $p = .005$; and school location $t(2.2)$, $p = .03$. The third model had *external expectations* as the dependent variable. Analysis of variance showed the independent variables had a significant relationship with external expectation $F(10,228) = 1.99$, $p = .04$; however, the value of $R^2 = .08$, which indicated a weak explanation of the variation in the dependent variable by the independent variables with 95% IC [.016, .144]. This model had only two independent variables which had a significant impact on the outcome. These were gender $t(2.4)$, $p = .02$ and school size $t(-2.8)$, $p = .005$.

The fourth model had *practical enhancement* as the dependent variable, which had a significant relationship with the independent variables in this model $F(10,228) = 2.92$, $p = .002$; however, the value of $R^2 = .12$, indicated a weak explanation of variation in the outcome by the independent variables with 95% IC [.044, .194]. In this model, gender $t(2.2)$, $p = .03$; age $t(2.2)$, $p = .03$; and school size $t(2.2)$, $p = .03$ had a significant impact on practical enhancement. The fifth and sixth models were nonsignificant regression models, where $F(10,228) = 1.81$, $p = .06$ and $F(10,228) = 1.51$, $p = .14$ respectively.

Standardized β regression coefficients (standardized estimates or regression weights) varied in their significance and interpretation for this research question. Standardized estimates explain the relationship between the outcome and the corresponding independent variable with β. In addition, standardized estimates could examine the effect sizes of all the independents variables in a model. According to Harlow (2014), "regression weights can also provide a measure of effect size (ES), we

could use Cohen's (1988,1992) guidelines for correlations, with .1, .3, and .5 indicating small, medium, and large β weights" (p. 60). Table 8 shows all β values by model in this research question. The first model, which had personal interest as the dependent variable, had a significant impact by age (β = .03) and school size (β = -.21). These were the strongest predictors having a significant impact on teacher personal interest. The description of the relationship between teacher personal interest and age was explained by only 3%--taking into account the relationship between teacher personal interest and other predictors in the regression equation. The relationship between teacher personal interest and school size is described as where school size increases by one level, teacher motivation based on personal interest would decrease by 21% holding other predictors in the regression model constant. It also had a medium effect size on the dependent variable. The second model, which had occupational promotion as the dependent variable, was significantly impacted by gender (β = .16), school size (β = -.21), and school location (β = .15). The third model, which had external expectations as the dependent variable, was significantly impacted by gender (β = .18) and school size (β = -.21) significantly. The fourth model, which had practical enhancement as the dependent variable, was significantly impacted by gender (β = .18), age (β = .32), and school size (β = -.18). The fifth model, which had social contact as the dependent variable, was significantly impacted by school size (β = -.22). The last model, which had social stimulation as the dependent variable, was significantly impacted by gender (β = .22).

Table 8

Standardized Regression Coefficients by Independent Variables

Independent variable	EPS Scale					
	[a] PI *b*	OP *b*	EE *b*	PE *b*	SC *b*	SS *b*
Gender	.11	**.17**	**.18**	**.180**	.15	**.220**
Age	**.29**	.23	.10	**.320**	.08	-.140
Degree	.10	.08	.01	.020	-.04	.120
Position	-.05	-.07	.02	-.040	-.03	.004
School class	-.06	-.06	-.07	-.070	.02	.060
Work class	.01	.04	.005	-.010	.07	-.040
Experience	-.15	-.13	-.04	-.150	.12	.150
Schedule load	-.05	-.07	-.14	-.004	-.04	-.070
School size	**-.22**	**-.21**	**-.22**	**-.180**	**-.16**	-.080
School location	.13	**.15**	.02	.110	.09	.020

Note. $N = 228$. Bold values are significant at $p < .05$. [a] PI = Personal interest. OP = Occupational promotion. EE = External expectations. PE = Practical enhancement. SC = Social contact. SS = Social stimulation.

Research Question Three

Teacher professional learning was a main aim for this study. The effects of demographic variables on teacher professional learning were evaluated in this study. These demographic variables were related to personal and school characteristics. Personal characteristics included gender, age, degree, position, work class, teaching experience, and schedule load. To address this question, multiple regression (MR) was

applied seven times to determine how the demographic variables effected the seven scales of TOTL separately. As a result, there were seven models that were examined. The number of respondents to this research question varied based on the learning activity in which they were involved. Preliminary analysis revealed the examined models showed different interpretations of normality and homoscedasticity. Out of the seven models that were analyzed, only three models showed approximately normal distribution, these were professional development programming, teacher collaboration, and individual learning activities. For the purpose of this study, only models that had no violation of the assumptions of normality and homoscedasticity were reported in the subsequent analysis. Figure J in Appendix J illustrates the normality assumption for each EPS scale.

Variance Inflation Factor (VIF) values for all independent variables in the seven models were < 10, which indicated that multicollinearity did not exist between the independent variables of this study. The general regression equation was as follows:

$\hat{Y} = b_o + b_1*$Gender $+ b_2*$Age $+ b_3*$Degree $+ b_4*$Position $+ b_5*$School class $+ b_6*$Work class $+ b_7*$Experience $+ b_8*$Schedule load $+ b_9*$School size $+ b_{10}*$School location $+ E$.

Each TOTL scale had different parameter estimates that varied by significance. Table 9 illustrates the effect coefficients (parameter estimates) corresponding to the demographical variables in all models of this research question. Gender had significant effect coefficients on informal communication and individual learning activities. Degree had significant effect coefficients on university/college courses and professional conferences. Position had a significant effect coefficient on teacher collaboration. School class had a significant effect coefficient on university/college courses. Work

class had a significant effect coefficient on professional development programming. Schedule load had a significant effect coefficient on individual learning activities. Age, teaching experience, school size, and school location had no significant effect coefficients on all of the models.

The second part of the demographic variables included school characteristics, which consisted of school class, school size, and school location. The results showed that most of the parameter estimates were not significant at the alpha level of .05, which indicated nonsignificant effects of the school characteristics on the TOTL seven scales. However, only one parameter estimate had a significant impact on the outcome, which was school class in the third model (t(-2.64), p = .009).

The standardized estimate coefficient β = -.19 indicated that if the level of school increased by one level, the university/college courses decreased by one hour holding all other variables constant. At the elementary level, there were 55 (24%) male teachers and 26 (11.4%) female teachers. At the middle school level, which had the lowest number of the participants (n = 52), there were 43 (18.9%) male teachers and only 9 (4%) female teachers. The high school level had the largest number of participants (n = 95), with 25 (11%) female teachers and 70 (30.7%) male teachers.

Table 9

Effect Coefficients of Demographic Variables by TOTL Scales

Demographic Variables	TOTL Scale						
	[a] PDP *b*	TCS *b*	U/CC *b*	PCS *b*	SS *b*	ICS *b*	ILAS *b*
Gender	-.520	.10	.560	.63	.20	**.620**	**2.32**
Age	-.004	.05	.040	-.05	.03	.030	.11
Degree	.370	-.18	**2.90**	**.89**	-.06	-.150	.28
Position	-.760	**-1.35**	-1.60	-.66	-.09	-.420	-.004
School class	-.160	.18	**-1.58**	-.11	-.02	.010	.36
Work class	**-1.56**	-.60	-1.86	.21	-.04	-.003	-1.05
Teaching experience	-.050	-.05	-.080	-.05	-.02	-.020	-.11
Schedule load	.010	-.03	-.030	-.04	.01	.020	**.18**
School size	-.050	.07	-1.16	-.38	-.07	-.140	-.98
School location	-.470	-.39	-.32	0.38	.16	-.060	-.03

Note. Bold values are significant at *p* < .05. [a] PDP = Professional development programming. TCS = Teacher collaboration scores. U/CC = University/college courses. PCS = Professional conferences scores. SS = Supervising scores. ICS = Informal communication scores. ILAS = Individual learning activities scores.

The first model had *professional development programming* as the dependent variable. This scale started with whether the respondent participated in any professional development programing activities related to their teaching area. If the answer was yes, the respondent was asked to provide the total hours (during the last 24 months) spent on this type of learning activity. The percentage of respondents who attended this type of learning activity was 77% (*n* = 175) of the total number of

respondents (female $n = 44$, male $n = 131$). After running the SAS program, the results

revealed a weak explanation of variation in the dependent variable ($R^2 = .05$) by this

model. R^2 values always fall between 0 and 1, scores close to 1 have a greater

explanation for the variation in the dependent variable (Harlow, 2014). R^2 confidence

intervals (CI) [-0.0179, 0.118] at $\alpha = .05$ estimates the range of values that could occur.

Analysis of variance indicated that none of the predictor variables had a linear

relationship with professional developing programming $F(10, 218) = 1.07$, $p = .39$.

However, at the alpha level of .05, work class (public or private) had a statistically

significant relationship with professional development programming $t(-2.00)$, $p = .047$.

The standardized coefficient ($\beta = -.05$) corresponding with work class indicated that its

absolute value ($\beta = .05$) could explain the relationship between the professional

development programming and work class by only 5%, taking into account other

independent variables of the regression equation. In addition, $\beta = .05$ had a very small

effect size. Table 10 illustrates all β values in all models. The second scale of TOTL,

teacher collaboration, was the dependent variable of the second model. There were $n =$

36 (16%) female teachers who participated in this type of activity and 89 (39%) male

teachers. This model showed a significant relationship with the independent variables

$F(10, 218) = 1.99$, $p = .04$. $R^2 = .08$ indicating a weak explanation of the variation in the

dependent variable with 95% IC [-.001, .169]. Out of the 10 independent variables, only

one independent variable, which was *position,* had a significant impact on the

dependent variable $t(-3.32)$, $p = .001$. By examining the standardized estimates (i.e., β

coefficients) of all independent variables, position was the strongest predictor of teacher

collaboration ($\beta = -.23$), which its absolute value explained the relationship between

teacher collaboration and position by 23%, taking into account the relationship between teacher collaboration and other predictors in the regression equation. The regression weight value (β = .23) was near medium size, which fell between .1 (small) and .3 (medium) size effects.

The last model, individual learning activities, was approximately normal and showed no violation of homogeneity or linearity. All respondents participated in individual learning activities (N = 228). The overall results revealed a small, shared variance effect size, R^2 = 08, 95% CI [.016, .144], and a nonsignificant relationship between the dependent variable and the independent variables F(10,228) = 1.82, p = .05. The mean score for all respondents was M = 15.2 (SD = 5.9) hours per month. In this model, gender had a significant relationship with the dependent variable t(2.26), p = .025. In addition, schedule load had a significant relationship with individual learning activities t(2.14), p = .033. Also, work class had a significant relationship with the dependent variable t(2.00), p = .04.

Standardized estimates for gender (female = 1, male = 2) was β = .17, which indicated when gender changed from 1 to 2, the expected hours spent on individual learning activities would increase by 17%, holding all other variables constant. For schedule load, the standardized estimate coefficient was β = .15, which means for every additional hour in schedule load, the expected hours of the respondent would increase by .15 hours on the average, holding all other variables constant. Also, work class had a small significant impact on teacher individual learning activities (β = -.15). Thus, if the work class change from public (1) to private (2), individual learning activities hours would decrease by 15%.

Table 10

Standardized Regression Coefficients by Independent Variables

Independent variable	[a] PDP $b*$	TCS $b*$	U/CCS $b*$	PCS $b*$	SCS $b*$	SS $b*$	ILAS $b*$
			TOTL Scale				
Gender	-.08	.03	.03	.11	.10	**.19**	**.17**
Age	-.01	.21	.03	-.14	.20	.15	.13
Degree	.06	-.05	**.17**	**.15**	-.03	-.05	.020
Position	-.07	**-.23**	-.06	-.07	-.03	-.08	-.0002
School class	-.05	-.10	**-.19**	-.04	-.02	.01	.05
Work class	**-.15**	-.10	-.07	.02	-.01	-.001	**-.15**
Experience	-.13	-.23	-.08	.14	-.16	-.12	-.14
Schedule load	.02	-.08	-.02	-.09	.05	.06	**.15**
School size	-.01	.03	-.12	-.11	-.06	-.07	-.12
School location	-.08	-.10	-.02	.07	.08	-.02	-.002

Note. $N = 228$. Bold values are significant at $p < .05$. [a] PDP = Professional development programming. TCS = Teacher collaboration scores. U/CC = University/college courses. PCS = Professional conferences scores. SS = Supervising scores. ICS = Informal communication scores. ILAS = Individual learning activities scores.

Summary

This chapter included the analysis of descriptive data of the respondents and the study's research questions. Pearson's product moment *r* correlation was utilized to answer the first question of this study. The dependent variable, teacher professional learning, was measured using the TOTL survey by Akiba (2012). The predictor was

teacher motivation, which was measured by using the EPS survey by Richter et al. (2019). To examine this relationship, seven models were run for each of the TOTL's seven scales. The first model examined the relationship between all EPS scales with the first scale of TOTL, which was professional development programming. The first and fourth scales of the EPS, personal interest and practical enhancement, had a significant relationship with the dependent variable. In the second model, all predictors had a nonsignificant relationship with teacher collaboration. The third model had university/college courses as the dependent variable, which had significant relationships with personal interest, occupational promotion, and social contact. The fourth model had professional conferences as the dependent variable, which had a significant relationship with personal interest, occupational promotion, and practical enhancement. The fifth model had supervising as the dependent variable, which had a significant relationship with personal interest, occupational promotion, and social contact. The last model, which had individual leaning activities as the dependent variable, had a significant relationship with all EPS scales except social stimulation, which had a nonsignificant relationship in all models. The relationships for all models were nonsignificant to near medium positive correlation, where the r values fell between .17 and .28 at alpha levels .05 and .01.

The second question sought to examine the effects of demographic variables on teacher motivation. Multiple regression analysis was utilized to determine the weight of each demographic variable on teacher motivation, which had six scales. Therefore, this analysis had six models, each model had one of the EPS scales as a dependent variable and the demographic variables were the predictors in each model. School size

had significant standardized coefficients β in all models, except the social stimulation model although β had small effect sizes in all cases, which were between .16 and .22 and p values between .003 and .03 at alpha level .05. Gender had a significant impact on occupational promotion, external expectations, practical enhancement, and social stimulation. The standardized coefficients β for gender were between .16 and .21, and p values between .005 and .03. β values corresponding with gender indicated a small effect size on the corresponding dependent variable of each model. Age had a significant impact on personal interest; however, the impact was very small (β = .03, p = .03). It also had a significant effect on practical enhancement, because β = .32, p = .003 which indicated a medium effect on teacher practical enhancement. School location had a significant effect on occupational promotion since (β = .15, p = .03).

The third question of this study sought to examine the effects of demographic variables on teacher professional learning. Multiple regression analysis was utilized to examine these effects. Gender had a significant, however, small effect size on informal communication (β = .19, p =.01) at α = .05. It also had a significant impact on individual learning activities (β = .17, p = .03, α = .05). Degree had small significant effects on university/college courses (β = .17, p = .009, α = .05), as well as professional conferences (β = .15, p = .02, α = .05). Position had a small significant effect only on teacher collaboration (β = -.23, p = .001, α = .05). Work class had the small significant effects on professional development programming, as well as individual learning activities (β = -.15, p = .04, α = .05). Schedule load had a weak significant effect on individual learning activities at α = .05. School class also had a small significant effect on individual learning activities (β = .15, p = .03, α = .05). The remining demographic

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variables such as age, teaching experience, school size, and school location had

nonsignificant effects in all models.

Chapter 5

Summary, Conclusions, Implications, and Recommendations

The purpose of this study was to examine the relationship between teacher motivation and professional learning for teachers in Makkah, Saudi Arabia. This chapter includes a summary of this study, conclusions from the research, implications for practice, and recommendations for future research.

Summary

Although teacher motivation and professional learning have been examined in many research studies, this was the first study to combine both areas in one study in Makkah, Saudi Arabia. Teacher motivation was measured by using Richter et al.'s (2019) modified version of the Educational Participation Scale (EPS). The EPS determines the types of motivation that cause teachers to engage in professional learning activities. The EPS has six scales, which are personal interest, occupational promotion, external expectations, practical enhancement, social contact, and social stimulations. They were measured on a 1-4 Likert scale, where 1 indicated no influence and 4 indicated much influence.

Teacher professional learning was measured using the Teacher Opportunity to Learn (TOTL) survey by Akiba (2012). The TOTL survey had seven scales to measure teacher professional learning. These scales were professional development programming, teacher collaboration, university/college courses, professional conferences, supervising, informal communication, and individual learning activities.

Teachers would report their timeframe on these scales for the last 12 months. However, for the purpose of this study, the time was extended to 24 months after receiving permission from the author. This was due to the COVID pandemic and the existence of the Fares for recording formal teacher training activities. Four of the scales measured the amount of time teachers engaged in learning activities in the last 24 months. These scales were professional development programming, teacher collaboration, university/college courses, and professional conferences. Three scales measured the amount of time teachers engaged in professional learning activities in a typical month on average. These scales included supervising, informal communication, and individual learning activities.

Both instruments were translated into Arabic, since the targeted population was teachers from Makkah, Saudi Arabia. To convey appropriate meaning in Arabic, the back-translation procedure was followed. One translating agency was hired to translate the original instruments into Arabic and another agency to translate the instruments back into English. Cognitive interviews were conducted to ensure both surveys were clear and easy to understand in Arabic.

For data collection, an electronic survey link was sent to schools' principals via the General Authority of Education in Makkah at the beginning of this school year 2021. Principals sent the link of this study to teachers via social media applications such as WhatsApp. The number of respondents who completed the survey was 228 (female teachers $n = 60$ and male teachers $n = 168$). Once the responses were received, descriptive statistics, Pearson product moment correlations, and multiple regression analysis were used.

Conclusions

The results of this study generated several relevant conclusions.

Only two of the professional learning scales on the TOTL were highly related to the EPS scales: individual learning activities and informal communication. Individual learning activities had a nonsignificant relationship with social contact and weak to near small relationships with personal interest, occupational promotion, external expectations, and practical enhancement. Informal communication had a nonsignificant with external expectations and weak relationships with personal interest, occupational promotion, and practical enhancement. The findings of this study indicated teacher professional learning heavily relied on self-directed learning. Taking into account that this study was conducted during the COVID-19 environment, all professional learning activities were online-based, because of the restrictions by the government to control all in-person contact.

Personal characteristics that effected teacher motivation were gender and age. Gender had a small effect on teacher motivation on four scales: occupational promotion, external expectations, practical enhancement, and social stimulation. Age had a small effect on teacher motivation on the personal interest and medium effect on practical enhancement. Therefore, as teachers get older, their age could explain their motivational orientations regarding their practical enhancement; however, age had no clear explanation for personal interest. In similar studies, Kao et al. (2011) found no age or gender differences within each scale of the EPS. Richter et al. (2019) found that teaching load, which is similar to schedule load in this study, had a small significant effect on teacher motives to participate in professional development. The remaining of

personal characteristics such as degree, position, work class, teaching experience, and schedule load had no effects on teacher motivation.

School characteristics had different effects on teacher motivation scales. School size had effects on all the scales of the EPS except social stimulation. Since results were negative, the impact of school size on teacher motivation was negative as well, which means increasing the school size (small, medium, large) would decrease the corresponding motivational orientation for teachers. School location (urban, rural, remote) had only effected occupational promotion scale. As far as the school location from Makkah, teacher occupational promotion would increase since the educational policy system in Makkah provided incentives for teachers who work in remote areas.

The effects of personal characteristics on teacher professional learning were generally low. The personal characteristics were gender, degree, position, work class, and schedule load. Gender had effects on informal communication and individual learning activities. Degree had effects on university/college courses and professional conferences, which indicated that the higher the degree the more that teachers take courses and attend conferences. Position also had an effect on teacher collaboration. Findings of this study indicated that, if a teacher had another position besides teaching, the professional learning activities would decrease. In addition, work class (public or private) had significant effects on professional development programming and individual learning activities. Examination on the impact of work class indicated that teachers in the public sector engaged in professional development programming and individual learning activities more often than teachers in the private sector.

For the school characteristics, only school class influenced teacher professional learning. Based on the findings of this study, when school class changes (elementary, middle, high), teachers rely more on university/college courses as a professional learning activity.

The TOTL scales were developed during a non-pandemic period. Massive changes to educational delivery occurred during the time of this research due to the COVID-19 virus. Responses to the TOTL survey could easily have been impacted by the event of the previous year and a half. For example, the TOTL scales were geared toward in-person professional learning activities, not virtual professional learning activities.

Implications

The implications of this study contributed information to the existing literature on teacher motivation and professional learning.

The research study results could be beneficial to teachers, supervisors, trainers, the Saudi Arabia Ministry of Education staff, and the Saudi Arabia Department of Development and Planning staff by examining the motivational orientations of teachers as well as determining teacher professional learning activities.

Universities could use the EPS scales to identify areas of motivation within the Saudi educational system. They could also revise the TOTL scales to more accurately reflect the Saudi context to consider the post-COVID-19 environment.

Teachers could use their knowledge of their EPS results to understand their motivating orientations, which could help them to increase their participation in professional learning activities.

Supervisors could identify teachers' professional learning activities based on the teachers' TOTL results. The Department of Development and Planning staff could use supervisors' and trainers' feedback on the EPS and TOTL to plan future teacher training courses. All levels of educational entities will need to increase their flexibility to adapt to the post-pandemic environment by examining teacher professional learning activities based on TOTL as well as by examining teacher motivational orientations to engage in these activities.

Recommendations for the Future Research

The findings of this study resulted in several recommendations for future research. These recommendations are as follows:

1. Develop protocols for interviewing individuals about their perceptions of the training courses related to their academic major. Interviews might provide another source of information that could be used to improve the content or presentation of the training courses.

2. Replicate research once the COVID-19 pandemic has ended and educational systems have settled into the post-pandemic environment.

3. The Ministry of Education could conduct a nationwide study in Saudi Arabia to add to the results of this study since this research was only conducted in the city of Makkah.

4. Interview female supervisors and teachers about their perceptions of training based on segregation of the genders in Saudi Arabia education.

5. Develop a plan to collect additional female responses on how to improve training process for teachers.

6. Since the authors of the EPS and the TOTL gave the researcher permission to translate the instruments into Arabic for this study only, the Arabic versions are not available for widespread use by other researchers. Obtaining permission for widespread use of the Arabic versions could open these instruments for research in a wide variety of settings.

7. Conduct research with fewer demographic variables and focus on school characteristics or personal characteristics with more variables in each category to examine two broader categories separately.

8. Revise TOTL to ask more specific, direct items rather than yes/no questions and compare results to previous studies.

9. Utilize other statistical analyses, such as ANOVA, to examine group differences based on their demographic variables.

10. Conduct research in other fields besides education to examine the motivational orientation and professional development of employees in non-educational fields.

11. Integrate the TOTL survey into the Fares system in Saudi Arabia to measure their informal and formal learning activities and use data based on their responses for further research.

12. Utilize the EPS to collect data about pre-service teachers to examine their responses to existing programs or the creation of new training programs that would meet their teaching development needs and provide information for identified changes.

References

Ahonen, E., Pyhalto, K., Pietarinen, J., & Soini, T. (2015). Becoming a teacher--student teachers' learning patterns in teacher education. *Journal of Education and Training Studies*, *3*(5), 89–101.

Akiba, M. (2012). Professional learning activities in context: A statewide survey of middle school mathematics teachers. *Education Policy Analysis Archives*, *20*, 1–36. https://doi.org/10.14507/epaa.v20n14.2012

Al Ta'ani, H. (2009). التدريب: مفهومه وفعاليته *[Training: Its concept and effectiveness]* (3rd ed.). Sunrise House for Publishing and Distribution.

Alajaji, A. A. (2017). متطلبات التطوير المهني الذاتي لمعلمي التعليم العام بالمملكة العربية السعودية. [Requirements for personal professional development for general education teachers in the Kingdom of Saudi Arabia]. *College of Education Journal*, *33*(1), 174–216.

Alamro, M. A. (2002). جهود وزارة المعارف في المملكة العربية السعودية في تدريب المعلمين على رأس العمل [Efforts of the Ministry of Education in the Kingdom of Saudi Arabia in training teachers on the job]. *The First Educational Symposium—Experiences of the GCC Countries in Preparing the Teacher*, (pp. 629-665).

Alansari, E. H. (2004). تدريب المعلمين أثناء الخدمة في المملكة العربية السعودية : الواقع و المستقبل [In-service teacher training in the Kingdom of Saudi Arabia Saudi Arabia: Reality and Future]. *Journal of Psychological and Educational Research*, *19*(3), 174–207.

Alaqeel, A. (2005). سياسة التعليم ونظامه في المملكة العربية السعودية *[Education policy and system in the Kingdom of Saudi Arabia]*. Al-Rushd Library.

Albalawi, A. S., & Alrajeh, N. M. (2021). واقع التطور المهني لمعلمي ومعلمات الرياضيات في المملكة العربية السعودية [The reality of the professional development of mathematics teachers in the Kingdom of Saudi Arabia]. *Education and Psychology Message*, *38*, 43–78.

Albarnawi, A. (2018). تطوير أداء معلمي العلوم الطبية في المدينة المنورة في ضوء معايير الاعتماد المدرسي *[Developing the performance of medical science teachers in Al-Madinah Al-Munawwarah in the light of school accreditation standards]*. Al-Madinah International University.

Albarnawi, A., & Ali, A. (2019). حاجات التطوير المهني لمعلمي العلوم الطبيعية [Professional development needs for science teachers]. *Journal of Education and Psychology*, *3*(3), 50–66. https://doi.org/10.26389/AJSRP.K151018

Alghamdi, H. A., & Abduljawad, N. M. (2010). تطور نظام التعليم في المملكة العربية السعودية *[The development of the education system in the Kingdom of Saudi Arabia]* (3rd ed.). Bin Rushd Library.

Alharbi, Q. A., & Almahdi, Y. (2012). نظام التعليم بالمملكة العربية السعودية: الواقع والمأمول *[The education system in the Kingdom of Saudi Arabia: Reality and hopes]*. Al-Rashed Library.

Alhoqail, A. (1981). التطور التاريخي لإعداد المعلم في المملكة العربية السعودية [The historical development of teacher preparation in the Kingdom of Saudi Arabia]. *King Abdulaziz Circuit, 6*(4), 119–130.

Alhoqail, S. (2003). نظام وسياسة التعليم في المملكة العربية السعودية: الجذور التاريخية لنظام التعليم، الأسس، *[Education system and policy in the* الأهداف وبعض وسائل تحقيقها، الاتجاهات، نماذج من المنجزات *Kingdom of Saudi Arabia: Historical roots of the education system, foundat*. Al-Humaidhi Press.

Aljassai, A. H. (2011). أثر الحوافز المادية والمعنوية في تحسين أداء العاملين في وزارة التربية والتعليم بسلطنة عمان *[The effect of material and moral incentives in improving the performance of workers in the Ministry of Education in the Sultanate of Oman]*.

Alkatheeri, R., & Alnassar, S. (2005). المدخل للتدريس *[Entrance to teaching]*. King Abdulaziz Circuit.

Almhaidib, A. I. (2013). التعليم الهندسي في المملكة العربية السعودية: الواقع والتحديات [Engineering education in the Kingdom of Saudi Arabia: Reality and challenges]. *The Saudi Journal of Higher Education--Saudi Arabia, 2*, 11–27.

Alotaibi, S. T. (2018). تحليل نظام التعليم في المملكة العربية السعودية : الواقع والتطلعات [Analyzing the education system in the Kingdom of Saudi Arabia: The reality and aspirations]. *Arab Journal of Educational and Psychological Sciences, 3*, 170–219.

Alzahrani, H. (2017). أثر الحوافز المادية والمعنوية في أداء معلمات اللغة الإنجليزية في المدارس الثانوية بمحافظةالمخواة التعليمية [The effect of material and moral incentives on the performance of English language teachers in secondary schools in Al-Makhwah governorate]. *Journal of Educational and Psychological Sciences, 1*(2), 167–181.

Appova, A., & Arbaugh, F. (2018). Professional development in education teachers ' motivation to learn: Implications for supporting professional growth. *Professional Development in Education, 5257*, 1–17. https://doi.org/10.1080/19415257.2017.1280524

Atav, E., & Deniz Altunoğlu, B. (2013). Meslek ve Alan Seçiminde Motivasyon Ölçeğinin Türkçe Formunun Geçerlik ve Güvenirlik Çalışması [The validity and reliability study of the Turkish form of the motivation scale in the selection of profession and field]. *Journal of Education, 28*(2), 58–70.

Azazi, F. (2012). نُظم التعليم بالمملكة العربية السعودية [Education systems in the Kingdom of Saudi Arabia]. Dar Al Zahraa.

Bajehzer, K. (2010). النمو المهني للمعلم لرفع كفاءته التدريبية في مرحلة التعليم [Professional growth for teacher to raise his training efficiency in the education stage]. *Saudi Society for Educational and Psychological Sciences*, *15*, 624–638.

Bakkenes, I., Vermunt, J. D., & Wubbels, T. (2010). Teacher learning in the context of educational innovation: Learning activities and learning outcomes of experienced teachers. *Learning and Instruction, 20*(6), 533–548. https://doi.org/10.1016/j.learninstruc.2009.09.001

Ball, D. L., & Cohen, D. K. (1999). Developing practice, developing practitioners: Toward a practice-based theory of professional education. In L. Darling-Hammond & G. Sykes (Eds.), *Teaching as the learning profession: Handbook of policy and practice* (pp. 3–31). Jossey-Bass Publishing.

Birman, B. F., Boyle, A., Le Floch, K. C., Elledge, A., Holtzman, D., Song, M., Thomsen, K., Walters, K., & Yoon, K. (2009). *State and local implementation of the No Child Left Behind Act: Volume VIII—Teacher quality under NCLB: Final report.*

Boqaiee, N. (2012). مستوى الدافعية الداخلية والخارجية للتعلم لدى طلبة تخصص معلم صف في كلية العلوم التربوية الجامعية [The level of internal and external motivation to learn among students of a class teacher specialization in the University College of Educational Sciences]. *The Educational Journal, 26*(104), 239–266.

Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher, 33*(8), 3–15.

Borko, H., & Putnam, R. T. (1996). Learning to teach. In D. C. Berliner & R. C. Calfee (Eds.), *Handbook of educational psychology* (pp. 673–708). Routledge.

Boshier, R. (1971). Motivational orientations of adult education participants: a factor analytic exploration of Houle's typology. *Adult Educaiton Journal, 21*(2), 3–26.

Boshier, R. (1977). Motivational orientations re-visited: life-space motives and the Education participation scale. *Adult Educaiton Quarterly, 27*(2), 89–115.

Boshier, R. (1991). Psychometric properties of the alternative form of the education participation scale. *Adult Education Quarterly, 41*(3), 150–167. https://doi.org/10.1177/0001848191041003002

Butler, B. (2014). What teachers want to achieve and ehy it matters: An achievement goal approach to teacher motivation. In P. W. Richardson, S. A. Karabenick, & M. G. and Watt (Eds.), *Teacher motivation theory and practice* (pp. 20–35). Routledge Publishing.

Cameron, S., Mulholland, J., & Branson, C. (2013). Professional learning in the lives of teachers: Towards a new framework for conceptualizing teacher learning. *Asia-Pacific Journal of Teacher Education*, *41*(4), 377–397. https://doi.org/https://doi.org/10.1080/ 1359866X.2013.838620.

Carter, K. (1993). Teachers' knowledge and learning to teach. *Journal of Teacher Education*, *44*(3), 223–232.

Cavallini, D. J. (1998). Continuing professional education for teachers. In W. H. Young (Ed.), *Continuing professional education in transition: Visions for the professions and new strategies for lifelong learning* (pp. 239–250). Krieger Publishing.

Clark, C. M. (1992). *Teachers as designers in self-directed professional development*. Teachers College Press.

Clarke, D., & Hollingsworth, H. (2002). Elaborating a model of teacher development. *Teaching and Teacher Education*, *18*, 947–967.

Cohen, L., Manion, L., & Morrison, K. (2011). *Research methods in education* (7th ed.). Routledge Publishing.

Creswell, J. W. (2002). *Research design: Qualitative, quantitative, and mixed method approaches*. Sage Publishing.

Dabbagh, N., & Kitsantas, A. (2012). Personal learning environments, social media, and self-regulated learning: A natural formula for connecting formal and informal learning. *Internet and Higher Education*, *15*(1), 3–8. https://doi.org/10.1016/j.iheduc.2011.06.002

Damij, N., Levnajić, Z., Skrt, V. R., & Suklan, J. (2015). What motivates us for work? Intricate web of factors beyond money and prestige. *PLoS ONE, 10*(7), 1–14. https://doi.org/10.1371/journal.pone.0132641

Darling-Hammond, Linda, & Richardson, N. (2009). Teacher learning: What matters? *Educational Leadership*, *66*(5), 46–53.

Dass, P. M., & Yager, R. E. (2009). Professional development of science teachers: History of reform and contributions of the STS-based Iowa Chautauqua program. *The Science Education Review*, *8*, 99–111.

Deci, E., & Ryan, R. (1995). Human autonomy. In M. Kernis (Ed.), *Efficacy, agency, and self-esteem.* (pp. 31–49). Springer Publishing.

Deci, E., & Ryan, R. (2000). Self-determination theory and the facilitation of intrinsic motivation. *American Psychologist*, *55*(1), 68–78.

Desimone, L. (2011). A primer on effective professional. *Kappan*, *92*(6), 68–72.

Desimone, L. M., Porter, A. C., Garet, M. S., Yoon, K. S., & Birman, B. F. (2002a). Effects of professional development on teachers' instruction: Results from a three-year longitudinal study. *Educational Evaluation and Policy Analysis*, *24*(2), 81–112. https://doi.org/10.3102/01623737024002081

Desimone, L. M., Porter, A. C., Garet, M. S., Yoon, K. S., & Birman, B. F. (2002b). How do district management and implementation strategies relate to the quality of the professional development that districts provide to teachers? *Teachers College Record*, *104*(7), 1265–1312.

Dzubay, D. (2001). *Understanding motivation & supporting teacher renewal. Quality Teaching and Learning Series.* Northwest Regional Educational Laboratory.

Early Childhood General Administration. (2019). *Early Childhood General Administration.* https://departments.moe.gov.sa/ECE/Pages/1440.aspx

Easton, L. B. (2008). Teaching: A developing profession. *Phi Delta Kappa*, *89*(10), 755–761.

Emo, W. (2015). Teachers' motivations for initiating innovations. *Journal of Educational Change*, *16*(2), 171–195. https://doi.org/10.1007/s10833-015-9243-7

Eraut, M. (2000). Non-formal learning and tacit knowledge in professional work. *British Journal of Educational Psychology*, *70*(1), 113–136. https://doi.org/10.1348/000709900158001

Fujita-Starck, P. J. (1996). Motivations and characteristics of adult students: Factor stability and construct validity of the Educational Participation Scale. *Adult Educaiton Quarterly*, *47*(1), 29–40.

Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, *26*(4), 331–362. https://doi.org/10.1002/job.322

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction* (8th ed.). Pearson Education.

Garet, M. S., Porter, A. C., Desimone, L. M., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, *38*(4), 915–945.

Glatthorn, A. A. (1997). The teacher's portfolio: Fostering and documenting professional development. *International Reading Association*, *51*(2), 171–173.

Gniewosz, B., Eccles, J. S., & Noack, P. (2015). Early adolescents' development of academic self-concept and intrinsic task value: The role of contextual feedback. *Journal of Research on Adolescence*, *25*(3), 459–473. https://doi.org/10.1111/jora.12140

Goddard, R. D., Hoy, W. K., & Woolfolk Hoy, A. (2000). Collective teacher efficacy: Its meaning, measure, and impact on student achievement. *American Educational Research Journal*, *37*(2), 479–507. https://doi.org/10.3102/00028312037002479

Goldsmith, L. T., Doerr, H. M., & Lewis, C. C. (2014). Mathematics teachers' learning: A conceptual framework and synthesis of research. *Journal of Mathematics Teacher Education*, *17*(1), 5–36. https://doi.org/10.1007/s10857-013-9245-4

Gorozidis, G., & Papaioannou, A. G. (2014). Teachers' motivation to participate in training and to implement innovations. *Teaching and Teacher Education*, *39*, 1–11. https://doi.org/10.1016/j.tate.2013.12.001

Gultekin, H., & Acar, E. (2014). The intrinsic and extrinsic factors for teacher motivation. *Revista de Cercetare Si Interventie Sociala*, *47*, 291–306.

Hall, A. (2007). *Inspiration, implementation, and impact: Examining teacher professional development in successful school districts (Order No. 3269648).* ProQuest Dissertations and Theses database.

Harlow, L. L. (2014). *The essence of multivariate thinking: Basic themes and methods* (2nd ed.) [Book]. Routledge Publishing. https://doi.org/10.4324/9781315832746

Herzberg, F. (2005). Motivation-hygiene theory. In J. Miner (Ed.), *Organizational behavior one: Essential theories of motivation and leadership* (pp. 61–74). Routledge Publishing.

Hodkinson, P., & Hodkinson, H. (2004). The significance of individuals' dispositions in workplace learning: A case study of two teachers. *Journal of Education and Work*, *17*, 167–182. https://doi.org/https://doi.org/10.1080/1363908041000166-16.

Hoyle, E., & John, P. D. (1995). *Professional knowledge and professional practice*. Cassel Publishing.

Ibrahim, M. A. (2009). معجم مصطلحات ومفاهيم التعليم والتعلم *[A dictionary of terms and concepts of teaching and learning]*. The World of Books.

Jamel, A. A. (2006). التربية المهنية في التعليم الأساسي: برنامج مقترح لإعداد المعلم [Professional education in basic education: A proposed teacher preparation program]. *The Eighteenth Scientific Conference: Education Curricula and Building the Arab Human Being*, *1*, 280–295.

Jansen in de Wal, J., den Brok, P. J., Hooijer, J. G., Martens, R. L., & van den Beemt, A. (2014). Teachers' engagement in professional learning: Exploring motivational profiles. *Learning and Individual Differences*, *36*(2014), 27–36. https://doi.org/10.1016/j.lindif.2014.08.001

Jurasaite-Harbison, E., & Rex, L. A. (2010). School cultures as contexts for informal teacher learning. *Teaching and Teacher Education*, *26*(2), 267–277. https://doi.org/10.1016/j.tate.2009.03.012

Kao, C. P., Wu, Y. T., & Tsai, C. C. (2011). Elementary school teachers' motivation toward web-based professional development, and the relationship with Internet self-efficacy and belief about web-based learning. *Teaching and Teacher Education*, *27*(2), 406–415. https://doi.org/10.1016/j.tate.2010.09.010

Kennedy, M. M. (2016). How does professional development improve teaching? *Review of Educational Research*, *86*(4), 945–980. https://doi.org/10.3102/0034654315626800

Khalifa, A. (2005). التنمية المهنية للمعلم العربي مفهومها، أهدافها، أسسها ومبادئها، أساليبها مؤتمر التنمية المستدامة للمعلم العربي [The professional development of the Arab teacher: Its concept, objectives, foundations and principles, and methods]. *Conference on the Sustainable Development of the Arab Teacher The Sixth Scientific Conference of the Faculty of Education in Fayoum (Sustainable Development of the Arab Teacher) Egypt*, 49–61.

Knowles, M. S. (1980). *The modern practice of adult education: From pedagogy to andragogy*. Prentice Hall Publishing.

Koestner, R., & Losier, G. (2002). Distinguishing three ways of being internally motivated: A closer look at introjection, identification, and intrinsic motivation. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 101–121). University of Rochester Press.

Kunter, M., Klusmann, U., Baumert, J., Richter, D., Voss, T., & Hachfeld, A. (2013). Professional competence of teachers: Effects on instructional quality and student development. *Journal of Educational Psychology*, *105*(3), 805–820. https://doi.org/10.1037/a0032583

Kwakman, K. (2003). Factors affecting teachers' participation in professional learning activities. *Teaching and Teacher Education*, *19*(2), 149–170. https://doi.org/10.1016/S0742-051X(02)00101-4

Lecat, A., Spaltman, Y., Beausaert, S., Raemdonck, I., & Kyndt, E. (2020). Two decennia of research on teachers' informal learning: A literature review on definitions and measures. *Educational Research Review*, *30*, 1–15. https://doi.org/10.1016/j.edurev.2020.100324

Little, J. W. (1987). Teachers as colleagues. In A. Lieberman (Ed.), *Educators' handbook: A research perspective* (pp. 491–518). The Falmer Press.

Liu, W., Li, X.-W., & Zou, Y. (2019). The formation of teachers' intrinsic motivation in professional development. *Integrative Psychological and Behavioral Science*, *53*(3), 418–430. https://doi.org/10.1007/s12124-018-9465-3

Livneh, C., & Livneh, H. (1999). Professional education among educators: Predictors of participation in learning activities. *Adult Education Quarterly*, *2*, 91.

Loucks-Horsley, S., Hewson, P. W., Love, N., & Stiles, K. E. (1998). *Designing professional development for teachers of science and mathematics.* Corwin Press.

Magestro, P., & Stanford-Blair, N. (2000). A tool for meaningful staff development. *Educational Leadership*, *57*(8), 34–35.

Martin, R., & Steffgen, G. (2002). Zum einfluss der berufswahlmotive auf die berufszufriedenheit von grundschullehrern [The influence of motives for choosing a career on the job satisfaction of primary school teachers]. *Psychologie in Erziehung Und Unterricht*, *49*(4), 241–249.

McCarthy, K. E. (2016). *An analysis of the formal and informal professional learning practices of middle and high school mathematics teachers* (Issue Available from Social Science Premium Collection. (2461128861; ED589583) [The University of South Florida]. http://ezproxy.lib.usf.edu/login?url=https://www.proquest.com/dissertations-theses/analysis-formal-informal-professional-learning/docview/2461128861/se-2?accountid=14745

McMillan, D. J., McConnell, B., & O'Sullivan, H. (2016). Continuing professional development–why bother? Perceptions and motivations of teachers in Ireland. *Professional Development in Education*, *42*(1), 150–167. https://doi.org/10.1080/19415257.2014.952044

McMillan, D., McConnell, B., & O'Sullivan, H. (2016). Continuing professional development–why bother? Perceptions and motivations of teachers in Ireland. *Professional Development in Education*, *42*(1), 150–167. https://doi.org/10.1080/19415257.2014.952044

Ministry of Economy and Planning. (2020). *Ensure inclusive and equitable quality education for all and promote lifelong learning opportunities for all*. https://mep.gov.sa/ar/sustainabledevelopment/Pages/QualityEducation.aspx

Ministry of Education. (2003). *Educational Supervisor's Handbook*. King Fahad National Library.

Ministry of Education in Saudi Arabia. (2020). *National Center for Professional and Educational Development*. https://ncepd.moe.gov.sa/ar/Pages/default.aspx

Morris, L. V., Finnegan, C., & Wu, S. (2005). Tracking student behavior, persistence, and achievement in online courses. *Internet and Higher Education*, *8*(3), 221–231. https://doi.org/10.1016/j.iheduc.2005.06.009

Mushayikwa, E., & Lubben, F. (2009). Self-directed professional development: Hope for teachers working in deprived environments? *Teaching and Teacher Education*, *25*(3), 375–382. https://doi.org/10.1016/j.tate.2008.12.003

Ng, W., Nicholas, H., & Williams, A. (2010). School experience influences on pre-service teachers' evolving beliefs about effective teaching. *Teaching and Teacher Education*, *26*(2), 278–289.

OECD. (2009). *Creating effective teaching and learning environments: First results from TALIS* [Book]. OECD Publishing.

Petrie, K., & McGee, C. (2012). Teacher professional development: Who is the learner? *Australian Journal of Teacher Education*, *37*(2), 59–72.

Pintrich, P. R., & De Groot, E. V. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. *Journal of Educational Psychology*, *95*(4), 667–686. https://doi.org/10.1037/0022-0663.95.4.667

Powell, C. G., and Bodur, Y. (2016). Professional development for quality teaching and learning: A focus on student learning outcomes. In *Handbook of Research on Professional Development for Quality Teaching and Learning* (pp. 652–677). IGI Global.

Power, K., & Goodnough, K. (2018). Fostering teachers' autonomous motivation during professional learning: a self-determination theory perspective. *Teaching Education*, *6210*, 1–21. https://doi.org/10.1080/10476210.2018.1465035

Prenzel, M., Baumert, J., Blum, W., Lehmann, R., Leutner, D., & Neubrand, M. (2005). *PISA. Der zweite vergleich der lander in Deutschland: Was wissen und konnen Jugendliche? [PISA 2003. The second comparison between the German states: What do students know and can do?]*. Waxmann Publishing.

Prion, S., & Haerling, K. A. (2014). Making sense of methods and measurement: Pearson product-moment correlation coefficient [Article]. *Clinical Simulation in Nursing*, *10*(11), 587–588. https://doi.org/10.1016/j.ecns.2014.07.010

Putnam, R., & Borko, H. (1997). Teacher learning: Implications of new views of cognition. In B. J. Biddle, T. L. Good, & I. F. Goodson (Eds.), *The international handbook of teachers and teaching* (pp. 1223–1296). Kluwer Publishing.

Qualtrics. (n.d.). *Check survey accessibility*. https://www.qualtrics.com/support/survey-platform/survey-module/surveytools/%0Ageneral-tools/check-survey-accessibility/

Radwan, O. (2017). الدافعية المهنية للتدريس لدى معلمي الرياضيات في البيئة الثقافية العربية دراسة تحليلية [Professional motivation to teach mathematics teachers in the Arab cultural environment an analytical study]. *Journal of the College of Education in Educational Sciences*, *41*(2), 58–176.

Richardson, V., & Placier, P. (2001). Teacher change. In V. Richardson (Ed.), *Handbook of research on teaching* (pp. 905–947). American Educational Research Association.

Richter, D., Kleinknecht, M., & Gröschner, A. (2019). What motivates teachers to participate in professional development? An empirical investigation of motivational orientations and the uptake of formal learning opportunities. *Teaching and Teacher Education*, *86*, 102929. https://doi.org/10.1016/j.tate.2019.102929

Richter, D., Kunter, M., Lüdtke, O., Klusmann, U., Anders, Y., & Baumert, J. (2013). How different mentoring approaches affect beginning teachers' development in the first years of practice. *Teaching and Teacher Education*, *36*, 166–177. https://doi.org/10.1016/j.tate.2013.07.012

Roth, G. (2014). Antecedets and outcomes of teachers' autonomous motivation. In P. W. Richardson, S. A. Karabenick, & H. G. Watt (Eds.), *Teacher motvation theory and practice*. Routledge Publishing.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publishing.

Ryan, Richard M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, *55*(1), 68–78. https://doi.org/10.1037/0003-066X.55.1.68

Rzejak, D., Künsting, J., Lipowsky, F., Fischer, E., Dezhgahi, U., & Reichardt, A. (2014). Facetten der Lehrerfortbildung Motivation: Eine faktorenanalytische Betrachtung [Facets of teacher training motivation: A factor-analytical consideration]. *Journal for Educational Research Online*, *6*(1), 139–159.

Sakran, M. M. (2005). On the road to the continuous professional development of the Arab teacher. *The Sixth Scientific Conference of the Faculty of Education: Sustainable Development for the Arab Teacher*, *2*, 63–69.

Schunk, D. H., Pintrich, P. R., & Meece, J. L. (2008). *Motivation in education: Theory, research and applications* (3rd ed.). Merrill/Prentice Hall.

Schunk, D., Meece, J., & Pintrich, P. (2012). *Motivation in education: theory, research, and applications* (4th ed.). Pearson Education.

Shavelson, R. (1996). *Statistical reasoning for the behavioral sciences*. Allyn and Bacon.

Sparks, D. (2002). *Designing powerful professional development for teachers and principals.* National Staff Development Council.

Sprott, R. A. (2019). Factors that foster and deter advanced teachers' professional development. *Teaching and Teacher Education*, *77*, 321–331. https://doi.org/10.1016/j.tate.2018.11.001

Strong, R. (2012). Developing an instrument to examine master gardeners' participation motives. *Journal of Agricultural Education*, *53*(3), 71–83. https://doi.org/10.5032/jae.2012.03071

Swennen, A., Volman, M., & Van Essen, M. (2008). The development of the professional identity of two teacher educators in the context of Dutch teacher education. *European Journal of Teacher Education*, *31*(2), 169–184. https://doi.org/10.1080/02619760802000180

Tabachnik, B. G., & Fidell, L. S. (1989). *Using multivariate statistics* (2nd ed.). Harper & Row Publisher.

Tang, S. Y. F., Wong, A. K. Y., Li, D. D. Y., & Cheng, M. M. H. (2020). Millennial generation preservice teachers' intrinsic motivation to become a teacher, professional learning and professional competence. *Teaching and Teacher Education*, *96*, 103–180. https://doi.org/10.1016/j.tate.2020.103180

Taylor, R. (1990). Interpretation of the correlation coefficient: A basic review [Article]. *Journal of Diagnostic Medical Sonography*, *6*(1), 35–39. https://doi.org/10.1177/875647939000600106

The Arab Center for Gulf Countries. (2008). دليل المركز العربي للتدريب التربوي لدول الخليج *[the guide of the Arab Center for Educational Training of Gulf Countries]*.

The National Center for Professional and Educational Development. (2021). *Roles, responsibilities and tasks of the National Center for Professional and Educational Development.* https://ncepd.moe.gov.sa/ar/About/Pages/alhaykal.aspx

Tynjälä, P. (2008). Perspectives into learning at the workplace. *Educational Research Review*, *3*(2), 130–154. https://doi.org/10.1016/j.edurev.2007.12.001

Vallerand, J. R. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. In M. P. Zaana (Ed.), *Advances in experimental social psychology* (pp. 271–60). Academic Press.

Vallerand, R. J., & Halliwell, W. R. (1983). Toward a cross-cultural validation methodology for psychological inventories: Implications in sport psychology. *Canadian Journal of Applied Sport Sciences*, *8*, 9–18.

Van Eekelen, I. M., Boshuizen, H. P. A., & Vermunt, J. D. (2005). Self-regulation in higher education teacher learning. *Higher Education*, *50*(3), 447–471. https://doi.org/10.1007/s10734-004-6362-0

VandenBos, G. R. (2007). *APA dictionary of psychology*. American Psychological Association.

Visser, R. D., Calvert Evering, L., & Barrett, D. E. (2014). #TwitterForTeachers: The implications of twitter as a self-directed professional development tool for K-12 teachers. *Journal of Research on Technology in Education*, *46*(4), 396–413. https://doi.org/https:// doi.org/10.1080/15391523.2014.925694

Walk, M. J., & Rupp, A. A. (2012). Pearson Product-Moment Correlation Coefficient. In *Encyclopedia of Research Design* (pp. 1023–1026). Sage Publishing. https://doi.org/https://dx.doi.org/10.4135/9781412961288

Watt, H., & Richardson, P. (2008). Motivation for teaching. *Learning and Instruction*, *18*, 1–17.

Willis, B. G. (2011). Cognitive Interviewing. In P. J. Lavrakas (Ed.), *Encyclopedia of Survey Research Methods* (pp. 107–109). Sage Publishing. https://doi.org/https://dx.doi.org/10.4135/9781412963947

Young, W. H. (1998). Systematic efforts in continuing professional education focusing on mandatory continuing professional education. In W. H. Young (Ed.), *Continuing professional education in transition: Visions for the professions and new strategies for ifelong learning* (pp. 129–142). Krieger Publishing.

Zeng, Y., & Day, C. (2019). Collaborative teacher professional development in schools in English (UK) and Shanghai (China): Cultures, contexts and tensions. *Teachers and Teaching: Theory and Practice*, *25*(3), 379–397. https://doi.org/10.1080/13540602.2019.1593822

Zhou, L. (2016). *The mechanisms and intervention of learning autonomy among pupils in grades 3-6.* East China Normal University.

Appendices

Appendix A

Adapted Education Participation Scale and Translated Versions

Adapted Education Participation Scale

TO WHAT EXTENT DID THESE REASONS INFLUENCE YOU TO ENROLL IN YOUR LEARNING ACTIVITIES?

Think back to when you enrolled for your learning activities and indicate the extent to which each of the reasons listed below influenced you to participate. **Chose ONLY One** category which best reflects the extent to which each reason influenced you to enroll. There are no right or wrong answer.

Personal interest

	No influence	Little influence	Moderate influence	Much influence
I participate in professional development for personal improvement.	No influence	Little influence	Moderate influence	Much influence
I participate in professional development because I like to work on new topics.	No influence	Little influence	Moderate influence	Much influence
I participate in professional development because I generally enjoy learning.	No influence	Little influence	Moderate influence	Much influence

Occupational promotion

	No influence	Little influence	Moderate influence	Much influence
I participate in professional development because it helps me to advance in my professional career.	No influence	Little influence	Moderate influence	Much influence
I participate in professional development because it is useful to improve job status.	No influence	Little influence	Moderate influence	Much influence
I participate in professional development because I get qualified for special responsibilities in school.	No influence	Little influence	Moderate influence	Much influence

External expectations

	No influence	Little influence	Moderate influence	Much influence
I participate in professional development because colleagues' encouragement.	No influence	Little influence	Moderate influence	Much influence
I participate in professional development because others' participation.	No influence	Little influence	Moderate influence	Much influence
I participate in professional development to meet job requirements.	No influence	Little influence	Moderate influence	Much influence

Practical enhancement

	No influence	Little influence	Moderate influence	Much influence
I participate in professional development because I want to learn something that improves my instruction.	No influence	Little influence	Moderate influence	Much influence
I participate in professional development because I want to learn how to deal with struggling students in class.	No influence	Little influence	Moderate influence	Much influence

Appendix A Continued

	No influence	Little influence	Moderate influence	Much influence
I participate in professional development because I want to know more about how to explain students complicated material.	No influence	Little influence	Moderate influence	Much influence
I participate in professional development because I want to know more about teaching and learning methods.	No influence	Little influence	Moderate influence	Much influence

Social contact

	No influence	Little influence	Moderate influence	Much influence
I participate in professional development because I like to meet other teachers.	No influence	Little influence	Moderate influence	Much influence
I participate in professional development because I want to get to know people with similar interests.	No influence	Little influence	Moderate influence	Much influence
I participate in professional development because I like to learn together with other teachers.	No influence	Little influence	Moderate influence	Much influence

Social stimulation

	No influence	Little influence	Moderate influence	Much influence
I participate in professional development to get relief from boredom.	No influence	Little influence	Moderate influence	Much influence
I participate in professional development to get away from the daily routine of instruction.	No influence	Little influence	Moderate influence	Much influence
I participate in professional development because I need a break from my routine.	No influence	Little influence	Moderate influence	Much influence

Appendix A Continued

Translated Arabic Version of the EPS

Appendix A Continued

نشكر لكم تكريس دقائق معدودة من وقتكم لأخذ بعض المعلومات عنكم، ونود أن ننوه على أن اسماء الاشخاص ليست مطلوبة.

١. ما جنسك؟   □ أنثى   □ ذكر

١. كم عمرك؟

٣. ما هو مستواك الدراسي؟   □ ابتدائي   □ متوسط   □ ثانوي

٤. نأمل الاشارة الى أعلى مؤهل دراسي حصلت عليه   □ بكالوريوس   □ ماجستير   □ دكتوراه   □ أخرى ——

٥. هل تشغل منصب أخر غير التدريس؟

٦. منذ متى وأنت تمارس مهنة التدريس؟   □ ٠-٧   □ ٨-٢٣   □ ٢٤ أو اكثر

٧. ما هو مجال تخصصك؟

Appendix A Continued

□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني لأني أرغب في تعلم المزيد عن طرق التدريس والتعلم

للتواصل الاجتماعي

□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني لأني أحب مقابلة المعلمين الاخرين
□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني لأني أرغب في التعرف على أشخاص جدد لدي نفس اهتماماتي
□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني لأني أحب التعلم مع المعلمين الاخرين

التحفيز الاجتماعي

□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني للتخلص من الرتابة
□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني للتخلص من الروتين اليومي لعملية التعليم
□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني للتخلص من الروتين اليومي

Appendix A Continued

مقياس المشاركة في التعلم التكيفي

إلى أي مدى أدت هذه الأسباب إلى دفعك للتسجيل في أنشطة التعلم الخاصة بك؟

حاول تذكر عندما سجلت في أنشطة التعلم الخاصة بك ووضح إلى أي مدى أثرت عليك كل من الأسباب المذكورة أدناه للمشاركة في الانشطة، يجب عليك اختيار خيار واحد فقط يعكس على أفضل وجه مدى تأثير كل سبب عليك في التسجيل. لا توجد إجابة صحيحة أو خاطئة.

اهتمامات شخصية

□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني لتحسين امور شخصية
□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني لأني احب العمل على المواضيع الجديدة
□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني لأنني أستمتع عمومًا بالتعلم

الترقية المهنية

□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني لانها تساعدني للتقدم في حياتي المهنية
□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني لانها مفيدة في تحسين حالتي الوظيفية
□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني لانها تؤهلني الى تقلد مسئوليات خاصة في المدرسة

توقعات خارجية

□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني بسبب تشجيع زملائي
□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني بسبب مشاركة الاخرين
□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني لاستيفاء المتطلبات الوظيفية
□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	

تحسين الجانب العملي

□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني لأنني أرغب في تعلم شيئ ما يساعدني في تحسين طرق تدريسي
□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني لأنني أرغب في تعلم كيفية التعامل مع الطلاب المتعثرين في الفصل.
□ تأثير ملحوظ	□ تأثير متوسط	□ تأثير طفيف	□ ليس لها تأثير	أشارك في برامج التطوير المهني لانني ارغب في تعلم كيفية شرح المواد المعقدة للطلاب

Appendix A Continued

Appendix A Continued

Retranslated English Version of the EPS

Participation Scale in Adaptive Education

To what extent did these reasons lead you to enroll in your learning activities?
Try to remember when you signed up for your learning activities and explain to what extent each of the reasons listed below affected you to participate in the activities. You should only choose one option that best reflects how each reason affects you in registration . There is no right or wrong answer.

Personal Interests
I participate in professional development to improve personal matters
☐ No influence ☐ Little influence ☐ Moderate influence ☐ Significant influence

I participate in professional development because I like to work on new topics
☐ No influence ☐ Little influence ☐ Moderate influence ☐ Significant influence

I participate in professional development because I ,generally, enjoy learning
☐ No influence ☐ Little influence ☐ Moderate influence ☐ Significant influence

Occupational Promotion
I participate in professional development because it helps me to advance in my vocational life
☐ No influence ☐ Little influence ☐ Moderate influence ☐ Significant influence

I participate in professional development because it is helpful for improving my job status
☐ No influence ☐ Little influence ☐ Moderate influence ☐ Significant influence

I participate in professional development because I get qualified to be eligible for some special school's responsibilities
☐ No influence ☐ Little influence ☐ Moderate influence ☐ Significant influence

External Expectations
I participate in professional development because of my colleagues' encouragement
☐ No influence ☐ Little influence ☐ Moderate influence ☐ Significant influence

I participate in professional development because of others' participation
☐ No influence ☐ Little influence ☐ Moderate influence ☐ Significant influence

I participate in professional development to fulfill my career requirements
☐ No influence ☐ Little influence ☐ Moderate influence ☐ Significant influence

Practical enhancement
I participate in professional development because I want to learn something that helps me improve my teaching methods
☐ No influence ☐ Little influence ☐ Moderate influence ☐ Significant influence

I participate in professional development because I want to learn to deal with struggling students in class
☐ No influence ☐ Little influence ☐ Moderate influence ☐ Significant influence

Appendix A Continued

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مكتب صـالـح بـن بـاز
للترجمة المعتمدة
ترخيص رقم ٦٩٢ – رقم العضوية ٢٠٢٠٠١١٦٥٠٧٣

I participate in professional development because I want to improve my teaching quality to explain complex subjects

☐ No influence   ☐ Little influence   ☐ Moderate influence   ☐ Significant influence

I participate in professional development because I want to learn more methods of teaching and learning

☐ No influence   ☐ Little influence   ☐ Moderate influence   ☐ Significant influence

Social contact

I participate in professional development because I like meeting other teachers

☐ No influence   ☐ Little influence   ☐ Moderate influence   ☐ Significant influence

I participate in professional development because I would like to meet new people who have the same interests as mine

☐ No influence   ☐ Little influence   ☐ Moderate influence   ☐ Significant influence

I participate in professional development because I like learning with other teachers

☐ No influence   ☐ Little influence   ☐ Moderate influence   ☐ Significant influence

Social Stimulation

I participate in professional development to get rid of monotony

☐ No influence   ☐ Little influence   ☐ Moderate influence   ☐ Significant influence

I participate in professional development to get rid of the daily routine of education process

☐ No influence   ☐ Little influence   ☐ Moderate influence   ☐ Significant influence

I participate in professional development to get rid of education pressures

☐ No influence   ☐ Little influence   ☐ Moderate influence   ☐ Significant influence

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جوال: ٠٥٥٩٣٠٤١٥٤
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Appendix B

Permission to Use Richter et al.'s EPS Survey

P Prof. Dr. Dirk Richter <richtedi@uni-potsdam.de>
Wed 3/10/2021 2:01 AM
To: Alzahrani, Yassir <yassir@usf.edu>

Dear Mr. Alzahini,

thank you for your interest in the scale. I am totally fine that you use it for your research and translate it into Arabic.

All the best for your research!
Dirk

Von meinem iPhone gesendet

> Am 08.03.2021 um 20:40 schrieb Alzahrani, Yassir <yassir@usf.edu>:
>
>
> Dear Dr. Richter,
>
> My name is Yassir Alzahrani and I'm a doctoral candidate in the Department of Leadership, Policy, and Lifelong Learning at the University of South Florida in Tampa. I'm a high school math teacher from Saudi Arabia. I taught math for 14 years until I got out of the field to continue my studies. Currently, I'm writing my dissertation proposal and the aim of my study is to explore the relationship between teachers' professional development and motivation in Saudi Arabia. After reading your article *What motivates teachers to participate in professional development? An empirical investigation of motivational orientations and the uptake of formal learning opportunities*, I became interested in your modified instrument of the original EPS. It would be an excellent tool to capture the data of my study. Kindly, I need your permission to use your instrument as well as to translate it into Arabic since this study will be conducted in Saudi Arabia. At present, I wanted to get your permission before sharing your instrument with my committee members. If they requested any changes other than what I mentioned previously, I will seek your approval. Have a nice day!
>
> Regards
> Yassir Alzahrani

Appendix C

Adapted Teachers' Opportunity to Learn Survey and Translated Versions

Adapted Teachers' Opportunity to Learn Survey

1. PROFESSIONAL DEVELOPMENT PROGRAMMING

Professional development programming is an organized activity for the purpose of improving teaching and student learning (e.g., school, or organizational sponsored in-service training or workshop).

1a) During the past 24 months, have you participated in a professional development program related to your teaching area or learning?

☐ Yes

☐ No

If yes, the person is directed to the question below. If no, they are directed to section 2.

1. PROFESSIONAL DEVELOPMENT PROGRAMMING

Professional development programming is an organized activity for the purpose of improving your teaching and student learning (e.g., school, or organizational sponsored in-service training or workshop).

1b) How many <u>total hours</u> of professional development programming on your teaching or learning have you participated in during the <u>past 24 months</u>? Please include hours spent for a take-home task or a project required by the professional development program.

☐ 1 - 2 hours
☐ 3 - 5 hours
☐ 6 - 10 hours
☐ 11 - 20 hours
☐ 21 - 40 hours
☐ 41 - 60 hours
☐ 61 - 80 hours
☐ > 80 hours

2. TEACHER COLLABORATION

Teacher collaboration is an ongoing activity such as a study group, <u>Professional Learning Community (PLC)</u>, teacher network, group action research, and any other form of interaction among teachers for the purpose of improving teaching and learning. Teacher collaboration can be formally organized by professional developers or informally practiced by a group of teachers. supervising is <u>not</u> teacher collaboration.

2a) Have you participated in an ongoing teacher collaboration(s) focused on teaching and learning during the past 24 months?

Appendix C Continued

☐ Yes
☐ No

If yes, the person is directed to the question below. If no, they are directed to section 3.

2. TEACHER COLLABORATION

*Teacher collaboration is an ongoing activity such as a study group, Professional Learning Community (PLC), teacher network, group action research, and any other form of interaction among teachers for the purpose of improving teaching and learning. Teacher collaboration can be formally organized by professional developers or informally practiced by a group of teachers. **Supervising is not teacher collaboration**.*

2b) How many total hours did you spent in teacher collaboration(s) during the past 24 months?

☐ 1 - 10 hours
☐ 11 - 20 hours
☐ 21 - 40 hours
☐ 41 - 60 hours
☐ 61 - 80 hours
☐ 81 - 100 hours
☐ 101 - 120 hours
☐ > 120 hours

3. UNIVERSITY/COLLEGE COURSES

University/College courses may be taken for a degree or professional development credits.

3a) Have you taken university or college courses in your area of education for credit during the previous 24 months?

☐ Yes
☐ No

If yes, the person is directed to the question below. If no, they are directed to section 4.

3. UNIVERSITY/COLLEGE COURSES

University/College courses may be taken for a degree or professional development credits.

How many actual hours (not credit hours) have you spent attending university or college courses on the following topics during the past 24 months?

3b) Your subject content
☐ None
☐ 1 - 5 hours
☐ 6 - 10 hours
☐ 11 - 20 hours
☐ 21 - 40 hours
☐ > 40 hours

3c) Your subject instruction/pedagogy
☐ None
☐ 1 - 5 hours
☐ 6 - 10 hours
☐ 11 - 20 hours
☐ 21 - 40 hours
☐ > 40 hours

3d) Foundations (e.g., diversity, social contexts of schools, ESOL)
☐ None
☐ 1- 5 hours
☐ 6 - 10 hours
☐ 11 - 20 hours
☐ 21 - 40 hours
☐ > 40 hours

3e) Research and measurement in your subject education
☐ None
☐ 1 - 5 hours
☐ 6 - 10 hours
☐ 11 - 20 hours
☐ 21 - 40 hours
☐ > 40 hours

3f) Other areas
☐ None
☐ 1 - 5 hours
☐ 6 - 10 hours
☐ 11 - 20 hours
☐ 21 - 40 hours
☐ > 40 hours

4. PROFESSIONAL CONFERENCES
A professional conference is an opportunity to present your practices or research as well as to learn from presenters about new ideas in mathematics teaching or learning.

Appendix C Continued

4a) Have you attended a local, regional, or national conference(s) on teaching or learning during the previous 24 months?

☐ Yes
☐ No

If yes, the person is directed to the question below. If no, they are directed to section 5.

4. PROFESSIONAL CONFERENCES

A professional conference is an opportunity to present your practices or research as well as to learn from presenters about new ideas in mathematics teaching or learning.

How many total hours have you spent for each of the following activities at a conference(s) on teaching or learning during the past 24 months?

4b) Conference attendee

☐ None
☐ 1 - 2 hours
☐ 3 - 5 hours
☐ 6 - 10 hours
☐ 11 - 20 hours
☐ 21 - 40 hours
☐ > 40 hours

4c) Conference presenter

☐ None
☐ 1 - 2 hours
☐ 3 - 5 hours
☐ 6 - 10 hours
☐ 11 - 20 hours
☐ 21 - 40 hours
☐ > 40 hours

5. MENTORING/COACHING
Mentoring/Coaching is a formal district or school sponsored activity to provide new teachers with induction experiences and professional development.

5a) Do you currently have a formal supervisor assigned by your district or school to work individually with you?

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Appendix C Continued

☐ Yes
☐ No

5. MENTORING/COACHING

Mentoring/Coaching is a formal district or school sponsored activity to provide new teachers with induction experiences and professional development.

5b) How many <u>hours</u> do you spend communicating with your assigned supervisor <u>during a typical month</u>? Please include both face-to-face time and communication through phone or email.

☐ < 1 hour
☐ 1 - 3 hours
☐ 4 - 5 hours
☐ 6 - 10 hours
☐ > 10 hours

6. INFORMAL COMMUNICATION

Informal communication refers to planned or unplanned interactions with co-workers or friends outside of the previously listed activities in this survey.

6a) Do you have someone, other than a formal supervisor with whom you informally rely on and communicate with for your professional learning about teaching?

☐ Yes
☐ No

6. INFORMAL COMMUNICATION

Informal communication refers to planned or unplanned interactions with co-workers or friends outside of the previously listed activities in this survey.

If you have multiple persons with whom you communicate with for your professional learning about teaching, please choose the person who has most influenced your teaching.

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Appendix C Continued

6b) How many <u>hours</u> do you spend communicating with this person <u>during a typical month</u>? Please include both face-to-face time and communication through phone or email.

☐ < 1 hour
☐ 1 - 3 hours
☐ 4 - 5 hours
☐ 6 - 10 hours
☐ > 10 hours

---

7. INDIVIDUAL LEARNING ACTIVITIES

Individual learning activities refer to activities you engage in by yourself outside of the previously listed activities in this survey such as reading professional journals, analyzing student work, and researching resources for curriculum and instruction.

How many <u>hours during a typical month</u> do you usually spend on your own for the following activities?

7a) Analyzing and evaluating student work (to improve instructional practice)
☐ Never
☐ 1 - 2 hours
☐ 3 - 5 hours
☐ 6 - 10 hours
☐ 11 - 20 hours
☐ 21 - 30 hours
☐ > 30 hours

7b) Reading the teachers' manual for adopted textbook(s)
☐ Never
☐ 1 - 2 hours
☐ 3 - 5 hours
☐ 6 - 10 hours
☐ 11 - 20 hours
☐ 21- 30 hours
☐ > 30 hours

7c) Researching and developing student assessment tools and materials
☐ Never
☐ 1 - 2 hours
☐ 3 - 5 hours
☐ 6 - 10 hours

Appendix C Continued

☐ 11 - 20 hours
☐ 21- 30 hours
☐ > 30 hours

7d) Searching web-based sites for curriculum and instructional resources
☐ Never
☐ 1 - 2 hours
☐ 3 - 5 hours
☐ 6 - 10 hours
☐ 11 - 20 hours
☐ 21 - 30 hours
☐ > 30 hours

7e) Reading professional journals or books on teaching and learning
☐ Never
☐ 1 - 2 hours
☐ 3 - 5 hours
☐ 6 - 10 hours
☐ 11 - 20 hours
☐ 21 - 30 hours
☐ > 30 hours

7f) Other (please specify the activity then indicate the number of hours spent, per month, on that activity):
Activity: _____
☐ 1 - 2 hours
☐ 3 - 5 hours
☐ 6 - 10 hours
☐ 11 - 20 hours
☐ 21 - 30 hours
☐ > 30 hours

Appendix C Continued

Translated Arabic Version of the TOTL

Appendix C Continued

استبيان فرص المعلمين للتعلم التكيفي

١. برامج التطوير المهني

ان برامج التطوير المهني هي عبارة نشاط منظم مصمم لغرض تحسين عملية التدريس وتعلم الطالب (مثل النشاط المدرسي أو التدريب أثناء الخدمة برعاية المنظمات او رشة عمل)

١) هل شاركت في برنامج تطوير مهني ذو علاقة بمجال عملية تدريسك او تعليمك خلال الاربع وعشرون شهر الماضية:

☐ نعم
☐ لا

اذا كانت الاجابة بـ "نعم" نأمل منك الاجابة على ما يلي، واذا كانت بـ "لا" نأمل منك التوجه الى القسم الثاني.

برامج التطوير المهني

ان برامج التطوير المهني هي عبارة عن نشاط منظم يغرض تحسين أدائك في عملية التدريس وتحسين عملية تعلم الطالب (مثل النشاط المدرسي أو التدريب أثناء الخدمة برعاية المنظمات او رشة عمل)

١ب) كم عدد اجمالي الساعات التدريبية التي قضيتها في برنامج التدريب المهني الذي شاركت به خلال الاربع وعشرون شهر الماضية؟ نأمل منك توضيح ساعات المهام التي تنجز في المنزل أو الساعات التي تتعلق بمشروع يكون من متطلبات برنامج التطوير المهني.

☐ ١-٢ ساعة
☐ ٣-٥ ساعات
☐ ٦-١٠ ساعات
☐ ١١-٢٠ ساعة
☐ ٢١-٤٠ ساعة
☐ ٤١-٦٠ ساعة
☐ ٦١-٨٠ ساعة
☐ اكثر من ٨٠ ساعة

٢. تعاون المعلم

تعاون المعلم هو عبارة عن نشاط مستمر مثل المجموعات الدراسية ومجتمع التعليم المهني وشبكة المعلمين والبحث الاجرائي الجماعي، وأي شكل آخر من أشكال التفاعل بين المعلمين يغرض تحسين عملية التدريس والتعلم. ويمكن تنظيم عملية تعاون المعلم رسميًا عبر مطورين محترفين أو ممارسته بشكل غير رسمي بواسطة مجموعة من المعلمين. ولا يمكن اعتبار الإشراف بمثابة تعاون المعلم.

٢
أ) هل شاركت من قبل في برامج تعاون المعلمين المستمرة التي تركز على عملية التدريس والتعلم خلال الاربع وعشرين عام الماضية؟

☐ نعم
☐ لا

Appendix C Continued

اذا كانت الاجابة بـ "نعم" نأمل منك الاجابة على ما يلي، واذا كانت بـ "لا" نأمل منك التوجه الى القسم الثالث.

٢- تعاون المعلم هو عبارة عن نشاط مستمر مثل المجموعات الدراسية ومجتمع التعلم المهني وشبكة المعلمين والبحث الاجرائي الجماعي، وأي شكل آخر من أشكال التفاعل بين المعلمين بغرض تحسين عملية التدريس والتعلم. ويمكن تنظيم عملية تعاون المعلم رسميًا غير مطورين محترفين أو ممارسته بشكل غير رسمي بواسطة مجموعة من المعلمين. ولا يمكن اعتبار الإشراف بمثابة تعاون المعلم.

٢ب) كم عدد الساعات الاجمالية التي قضيتها في برنامج/ برامج تعاون المعلمين خلال الاربع وعشرون شهر الماضية)

☐ ١٠-١ ساعات
☐ ٢٠-١١ ساعة
☐ ٤٠-٢١ ساعة
☐ ٦٠-٤١ ساعة
☐ ٨٠-٦١ ساعة
☐ ١٠٠-٨١ ساعة
☐ ١٢٠-١٠١ ساعة
☐ أكثر من ١٢٠ ساعة

٢- الدورات الجامعية/ التي تُقدم من الكليات

يمكن أخذ الدورات الجامعية من أجل الحصول على وحدات في مجال التطوير المهني أو وحدات دراسية

٣أ) هل حصلت على دورات جامعية في مجال تخصصك التدريسي خلال الاربع وعشرون شهر الماضية؟

☐ نعم
☐ لا

اذا كانت الاجابة بـ "نعم" نأمل منك الاجابة على ما يلي، واذا كانت بـ "لا" نأمل منك التوجه الى القسم الرابع.

٣- الدورات الجامعية/ التي تُقدم من الكليات
يمكن أخذ الدورات الجامعية من أجل الحصول على وحدات في مجال التطوير المهني أو وحدات دراسية

كم عدد الساعات الفعلية (وليس الساعات المعتمدة) التي قضيتها في حضور دورات جامعية في الموضوعات التالية خلال الـ ٢٤ شهرًا الماضية؟

٣ب) محتوى مادتك

☐ لا يوجد
☐ ٥٠-١ ساعات
☐ ١٠٠-٦ ساعات
☐ ٢٠-١١ ساعة
☐ ٤٠-٢١ ساعة

Appendix C Continued

□ أكثر من ٤٠ ساعة

٣ت) طرق تدريس مادتك
□ لا يوجد
□ ١-٠٥ ساعات
□ ٦-١٠٠ ساعات
□ ١١-٢٠ ساعة
□ ٢١-٤٠ ساعة
□ أكثر من ٤٠ ساعة

٣ث) الاسس (مثال متنوعة، سياقات اجتماعية للمدارس، تدريس اللغة الانجليزية كلغة ثانية)
□ لا يوجد
□ ١-٠٥ ساعات
□ ٦-١٠٠ ساعات
□ ١١-٢٠ ساعة
□ ٢١-٤٠ ساعة
□ أكثر من ٤٠ ساعة

٣ج) الابحاث والقياس في عملية تدريس مادتك
□ لا يوجد
□ ١-٠٥ ساعات
□ ٦-١٠٠ ساعات
□ ١١-٢٠ ساعة
□ ٢١-٤٠ ساعة
□ أكثر من ٤٠ ساعة

٣ح) مجال أخرى
□ لا يوجد
□ ١-٠٥ ساعات
□ ٦-١٠٠ ساعات
□ ١١-٢٠ ساعة
□ ٢١-٤٠ ساعة
□ أكثر من ٤٠ ساعة

٤- المؤتمرات المهنية
المؤتمر المهني هو فرصة لعرض ممارساتك أو أبحاثك وكذلك للتعلم من مقدمي العروض حول الأفكار الجديدة في تدريس الرياضيات أو تعلمها.

Appendix C Continued

٤أ) هل سبق لك حضور مؤتمر/ مؤتمرات محلية أو اقليمية أو وطنية تعالج امور التدريس أو التعلم خلال الاربع وعشرون شهر الماضية؟

□ نعم

□ لا

اذا كانت الاجابة بـ "نعم" نأمل منك الاجابة على ما يلي، واذا كانت بـ "لا" نأمل منك التوجه الى القسم الخامس.

المؤتمر المهني هو فرصة لعرض ممارساتك أو ابحاثك وكذلك للتعلم من مقدمي العروض حول الأفكار الجديدة في تدريس الرياضيات أو تعلمها.

كم عدد الساعات الإجمالية التي قضيتها في كل من الأنشطة التالية بالمؤتمر (المؤتمرات) التي عُقدت حول التدريس أو التعلم خلال الـ ٢٤ شهراً الماضية؟

٤ب) حاضر المؤتمر

□ لا يوجد
□ ١ـ٢٠ ساعات
□ ٣ـ٥٠ ساعات
□ ٦ـ١٠ ساعات
□ ١١ـ٢٠ ساعة
□ ٢١ـ٤٠ ساعة
□ اكثر من ٤٠ ساعة

٤ث) مقدم المؤتمر

□ لا يوجد
□ ١ـ٢٠ ساعات
□ ٣ـ٥٠ ساعات
□ ٦ـ١٠ ساعات
□ ١١ـ٢٠ ساعة
□ ٢١ـ٤٠ ساعة
□ اكثر من ٤٠ ساعة

٥- الإرشاد / التدريب

ان الإرشاد / التدريب هو عبارة عن نشاط رسمي برعاية رسمية من الادارات المعنية أو برعاية المدارس الغرض منه تزويد المعلمين الجدد بتجارب الاستقراء والتطوير المهني.

٥أ) هل قامت الادارة التعليمية أو المدرسة التي تتبع اليها بتعين مشرف رسمي للعمل بصورة فردية معك؟

□ نعم
□ لا

Appendix C Continued

اذا كانت الاجابة بـ "نعم" نأمل منك الاجابة على ما يلي، واذا كانت بـ "لا" نأمل منك التوجه الى القسم السادس.

٥. ان الارشاد / التدريب هو عبارة عن نشاط رسمي برعاية رسمية من الادارات المعنية أو برعاية المدارس الغرض منه تزويد المعلمين الجدد بتجارب الاستقراء والتطوير المهني.

٥ب) كم ساعة تقضيها في التواصل مع مشرفك المعين خلال الشهر؟ يرجى الاشارة الى كل من الوقت الذي تقضيه للتواصل وجهًا لوجه أو عبر الهاتف أو البريد الإلكتروني

- ☐ أقل من ساعة
- ☐ ١-٣.٠ ساعات
- ☐ ٤- ٥ ساعات
- ☐ ٦-١٠ ساعات
- ☐ أكثر من ١٠ ساعات

٦. التواصل غير الرسمي

يشير التواصل غير الرسمي إلى عمليات التواصل المخطط لها أو غير المخطط لها مع زملاء العمل أو الأصدقاء خارج الأنشطة المذكورة سابقًا في هذا الاستطلاع.

٦أ) هل لديك شخص ما ، بخلاف المشرف لرسمي ، تعتمد عليه بشكل غير رسمي وتتواصل معه فيما يتعلق بتعلمك المهني حول التدريس؟

- ☐ نعم
- ☐ لا

اذا كانت الاجابة بـ "نعم" نأمل منك الاجابة على ما يلي، واذا كانت بـ "لا" نأمل منك التوجه الى القسم السابع.

٦. التواصل غير الرسمي

يشير التواصل غير الرسمي إلى عمليات التواصل المخطط لها أو غير المخطط لها مع زملاء العمل أو الأصدقاء خارج الأنشطة المذكورة سابقًا في هذا الاستطلاع.

إذا كان لديك العديد من الأشخاص الذين تتواصل معهم من أجل التعلم المهني حول التدريس ، فالرجاء اختيار الشخص الذي كان له أكبر الأثر في طريقة تدريسك

٦ب) كم ساعة تقضيها في التواصل مع هذا الشخص خلال الشهر؟ يرجى الاشارة الى كل من الوقت الذي تقضيه للتواصل وجهًا لوجه أو عبر الهاتف أو البريد الإلكتروني

- ☐ أقل من ساعة
- ☐ ١-٣.٠ ساعات
- ☐ ٤- ٥ ساعات
- ☐ ٦-١٠ ساعات
- ☐ أكثر من ١٠ ساعات

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٧- أنشطة التعلم الفردية

تشير أنشطة التعلم الفردية إلى الأنشطة التي تشارك فيها بنفسك خارج الأنشطة المدرجة سابقاً في هذا الاستطلاع مثل قراءة المجلات المهنية ، وتحليل عمل الطلاب ، والبحث عن الموارد للمناهج الدراسية والتعليم

كم ساعة خلال الشهر العادي تقضيها عادة بمفردك في الأنشطة التالية؟

٧أ) تحليل وتقييم عمل الطلاب (لتحسين الممارسة التعليمية)
- ☐ لا يوجد
- ☐ ١-٢٠ ساعات
- ☐ ٣-٥٠ ساعات
- ☐ ٦-١٠ ساعات
- ☐ ١١- ٢٠ ساعة
- ☐ ٢١- ٣٠ ساعة
- ☐ اكثر من ٣٠ ساعة

٧ب) قراءة دليل المعلم للكتب الدراسية المعتمدة؟
- ☐ لا يوجد
- ☐ ١-٢٠ ساعات
- ☐ ٣-٥٠ ساعات
- ☐ ٦-١٠ ساعات
- ☐ ١١- ٢٠ ساعة
- ☐ ٢١- ٣٠ ساعة
- ☐ اكثر من ٣٠ ساعة

٧ت) البحث عن أدوات ومواد تقييم الطلاب وتطويرها
- ☐ لا يوجد
- ☐ ١-٢٠ ساعات
- ☐ ٣-٥٠ ساعات
- ☐ ٦-١٠ ساعات
- ☐ ١١- ٢٠ ساعة
- ☐ ٢١- ٣٠ ساعة
- ☐ اكثر من ٣٠ ساعة

٧ث) البحث في مواقع الويب عن المناهج والموارد التعليمية
- ☐ لا يوجد
- ☐ ١-٢٠ ساعات
- ☐ ٣-٥٠ ساعات
- ☐ ٦-١٠ ساعات
- ☐ ١١- ٢٠ ساعة

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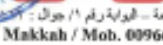
Appendix C Continued

☐ ٢١ـ٣٠ ساعة
☐ اكثر من ٣٠ ساعة

٧ج) قراءة المجلات أو الكتب المتخصصة في التدريس والتعلم
☐ لا يوجد
☐ ١ـ٢٠ ساعات
☐ ٣٠ـ٥٠ ساعات
☐ ٦ـ١٠ ساعات
☐ ١١ـ٢٠ ساعة
☐ ٢١ـ٣٠ ساعة
☐ اكثر من ٣٠ ساعة

أخرى (يرجى تحديد النشاط ثم الإشارة إلى عدد الساعات التي تم قضاؤها شهريا في هذا النشاط):
النشاط: _____
☐ لا يوجد
☐ ١ـ٢٠ ساعات
☐ ٣٠ـ٥٠ ساعات
☐ ٦ـ١٠ ساعات
☐ ١١ـ٢٠ ساعة
☐ ٢١ـ٣٠ ساعة
☐ اكثر من ٣٠ ساعة

Appendix C Continued

Retranslated English Version of the TOTL

Appendix C Continued

Teacher Learning Opportunities Questionnaire

1- Professional Development Program

The professional development program is an organized activity designed for the purpose of improving teaching performance and student learning process (such as school activity, in-service training sponsored by organizations, or a workshop)

1-a) Have you ever participated in a professional development program related to the field of your teaching or education process during the past 24 months:

☐   Yes

☐   No

If the answer is "yes", we hope that you will answer the following, and if it is "no", go to the second section.

The Professional development program

The Professional development program is an organized activity designed for the purpose of improving teaching performance and student learning process (such as school activity, in-service training sponsored by organizations or a workshop)

1- b) How many total training hours did you spend in the professional training program that you participated in during the past twenty four months? We hope you add hours of homework assignments or hours related to a project that is a requirement of the professional development program.

☐   1-2   Hrs.

☐   3-5   Hrs.

☐   6-10   Hrs.

☐   11-20   Hrs.

☐   21-40   Hrs.

☐   41-60   Hrs.

☐   61-80   Hrs.

☐   Over 80   Hrs.

2- The Teacher's Cooperation

The Teacher's cooperation is an ongoing activity such as study groups, the professional education community, teachers communication networks, group action research, and any other form of interaction between teachers for the purpose of improving the teaching and learning process. The teacher cooperation process can be formally organized through professional developers, or it can be practiced informally by a group of teachers. Supervision cannot be considered as a teacher cooperation.

2-a) Have you ever participated in the continuing teacher cooperation programs that focus on the teaching and learning process during the past 24 months?

☐   Yes

☐   No

If the answer is "yes", we hope that you will answer the following, and if it is "no", go to the third section.

Appendix C Continued

2- The Teacher's cooperation is an ongoing activity such as study groups, the professional education community, teachers communication networks, group action research, and any other form of interaction between teachers for the purpose of improving the teaching and learning process. The teacher cooperation process can be formally organized through professional developers, or it can be practiced informally by a group of teachers. Supervision cannot be considered as a teacher cooperation.

2-a) How many total hours have you spent in the teacher cooperation program(s) during the past 24 months?

☐   1-10   Hrs.
☐   11-20   Hrs.
☐   21-40   Hrs.
☐   41-60   Hrs.
☐   61-80   Hrs.
☐   81-100   Hrs.
☐   101-120   Hrs.
☐   Over 120   Hrs.

3- University / colleges courses

University or college courses can be taken in order to obtain units in the field of professional development or units of study in your major/specialty.

3-a) Have you taken university or college courses in the field of your teaching specialty during the past 24 months?

If the answer is yes, we hope you answer the following, and if it is "No", then you please go to the fourth section

3- University courses / offered by colleges

University or college courses can be taken in order to obtain units in the field of professional development or units of study in your major/specialty.

How many actual hours (not credit hours) have you spent attending university courses in the following subjects during the past 24 months

3-b) The content of your Course

☐   None   Hrs.
☐   1-05   Hrs.
☐   06-10   Hrs.
☐   11-20   Hrs.

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مكتب صالح بن باز
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ترخيص رقم ٦٩٢ – رقم العضوية ٢٠٢٠٠١١٦٥٠٧٣

☐ 21-40   Hrs.
☐ Over 40   Hrs.

3-D) Basics (e.g. Social Genesis of schools, introduction to psychology of children)

☐ None   Hrs.
☐   1-05   Hrs.
☐ 06-10   Hrs.
☐ 11-20   Hrs.
☐ 21-40   Hrs.
☐ Over 40   Hrs.

2- E) Research and measurement in the process of teaching your course .

☐ None   Hrs.
☐   1-05   Hrs.
☐ 06-10   Hrs.
☐ 11-20   Hrs.
☐ 21-40   Hrs.
☐ Over 40   Hrs.

4- Professional Conferences

The professional conference is an opportunity to present your practices or research and also to learn from presentations introducing new ideas in teaching or learning of your course matter.

4-a) Have you ever attended a local, regional or national conference or conferences that dealt with matters of teaching or learning during the past 24 months
☐ **Yes**
☐ **No**
If the answer is "yes", we hope that you will answer the following, and if it is "no", go to the fifth section.
The professional conference is an opportunity to present your practices or research and also to learn from presentations introducing new ideas in teaching or learning of your course.
How many total hours have you spent in the following activities in the conference(s) that were held about teaching during the past 24 months?

4-b) Conference Attendant (Just an Attendant without participation)
☐ None   Hrs.

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مكتب صـالـح بـن بـاز
للترجمة المعتمدة
ترخيص رقم ٦٩٢ – رقم العضوية ٢٠٢٠٠١١٦٥٠٧٣

☐ 1-02   Hrs.
☐ 03-05   Hrs.
☐ 06-10   Hrs.
☐ 11-20   Hrs.
☐ 21-40   Hrs.
☐ Over 40 Hrs.

4-c) Conference Introducer (You have something to introduce, e.g.: research paper, poster, Etc.)
☐ None   Hrs.
☐ 1-02   Hrs.
☐ 03-05   Hrs.
☐ 06-10   Hrs.
☐ 11-20   Hrs.
☐ 21-40   Hrs.
☐ Over 40 Hrs.

5- Supervision

Supervision is an official activity under the official care of the concerned departments or care schools, intended to provide new teachers with experiences of induction and professional development

5- a) Has the educational department or the school to which you are affiliated appointed an official supervisor to work individually with you?
☐ **Yes**
☐ **No**
If the answer is "yes", we hope that you will answer the following, and if it is "no", go to the sixth section.

5- Supervision is an official activity under the official care of the concerned departments or care schools, intended to provide new teachers with experiences of induction and professional development .

5-b) How many hours do you spend communicating with your assigned supervisor during **a month**? Please indicate each of the time you spend communicating face to face with the supervisor or via phone or email
☐ None   Hrs.   ☐
☐ 1-03   Hrs.   ☐

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☐   04-05   Hrs.   ☐
☐   06-10   Hrs.   ☐
☐   Over 10   Hrs.   ☐

6- Informal communication

Informal communication refers to planned or unplanned contacts with colleagues or friends outside the activities previously mentioned in this survey.

6-a) Do you have someone other than a formal supervisor that you informally rely on and communicate with regarding your professional learning about teaching

☐   **Yes**

☐   **No**

If the answer is "yes", we hope that you will answer the following, and if it is "no", go to the seventh section.

6-Informal communication

Informal communication refers to planned or unplanned contacts with colleagues or friends outside the activities previously mentioned in this survey.

If you have many people with whom you communicate for professional learning about teaching, please choose the one who has had the greatest impact on your teaching method.

6-b) How many hours do you spend communicating with this person during **a month**? Please indicate each of the time you spend communicating face to face, by phone or email.

☐   Below 1   Hrs.
☐   1-03   Hrs.
☐   04-05   Hrs.
☐   06-10   Hrs.
☐   Over 10   Hrs.

7- Individual learning activities

Individual learning activities refer to activities that you engage in on your own outside of the activities previously listed in this survey such as reading professional journals, analyzing student work, and looking for resources for curriculum and education.

How many hours during **a month** do you usually spend alone in the following activities?

7-a) Analyzing and evaluation of students' work (to improve educational practice)

☐   None   Hrs.
☐   1-02   Hrs.

Appendix C Continued

☐ 03-05   Hrs.
☐ 06-10   Hrs.
☐ 11-20   Hrs.
☐ 21-30   Hrs.
☐ Over 30   Hrs.

7- b) Reading the teacher's guide for approved textbooks?
☐ None   Hrs.
☐ 1-02   Hrs.
☐ 03-05   Hrs.
☐ 06-10   Hrs.
☐ 11-20   Hrs.
☐ 21-30   Hrs.
☐ Over 30   Hrs.

7- c) Finding and developing student assessment tools and materials
☐ None   Hrs.
☐ 1-02   Hrs.
☐ 03-05   Hrs.
☐ 06-10   Hrs.
☐ 11-20   Hrs.
☐ 21-30   Hrs.
☐ Over 30   Hrs.

7- d) Searching web sites for educational curricula and resources
☐ None   Hrs.
☐ 1-02   Hrs.
☐ 03-05   Hrs.
☐ 06-10   Hrs.
☐ 11-20   Hrs.
☐ 21-30   Hrs.
☐ Over 30   Hrs.

7- e) Reading magazines or books specialized in teaching and learning
☐ None   Hrs.
☐ 1-02   Hrs.
☐ 03-05   Hrs.
☐ 06-10   Hrs.

Appendix C Continued

Saleh Bin Baz Office
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مكتب صـالـح بــن بــاز
للترجمة المعتمدة
ترخيص رقم ٦٩٢ – رقم العضوية ٢٠٢٠٠١١٦٥٠٧٣

☐ 11-20   Hrs.
☐ 21-30   Hrs.
☐ Over 30   Hrs.

7- f) Others, please specify the activity and then indicate the number of hours you spent **per month** on this activity

☐ None   Hrs.
☐ 1-02   Hrs.
☐ 03-05   Hrs.
☐ 06-10   Hrs.
☐ 11-20   Hrs.
☐ 21-30   Hrs.
☐ Over 30   Hrs.

Makkah – Al-Zaher – Umm Al Qura University for Girls
Mobile: 0559304154
egytranslator36@hotmail.com

مكة المكرمة – الزاهر – بجوار جامعة أم القرى للبنات
جوال: ٠٥٥٩٣٠٤١٥٤
www.binbaz.sa

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Appendix D

Permission to Use Akiba's (2012) TOTL Survey

AY Alzahrani, Yassir
Mon 3/8/2021 3:01 PM
To: makiba@fsu.edu

Dear Dr. Akiba,

I hope this email finds you well. My name is Yassir Alzahrani and I'm a doctoral candidate in the Department of Leadership, Policy, and Lifelong Learning at the University of South Florida. I'm a high school math teacher from Saudi Arabia. Now, I'm writing my dissertation proposal and one part of my study is about teacher professional learning specifically teachers' learning activities. After reading your article *Professional Learning Activities in Context: A Statewide Survey of Middle School Mathematics Teachers,* I found the instrument (TOTL) would be an excellent tool to capture the data of this part of my study. I need your permission to use TOTL and translate it into Arabic since this study will be conducted in Saudi Arabia. Also, I need to change two things: first, the subject content from math to include all subjects, second, the time from 12 months to 24 months since the Covid-19 heavily affected the activities of teachers' professional learning in Saudi Arabia. At present, I wanted to get your permission before sharing TOTL with my committee members, if they request any changes other than what I mentioned previously, I will seek your approval. Have a nice day!

Regards
Yassir Alzahrani

MA Motoko Akiba <makiba@fsu.edu>
Mon 3/8/2021 4:53 PM
To: Alzahrani, Yassir

Hi Yassir, you are welcome to use my TOTL survey instrument with a proper citation and an explanation of the modifications.
Best of luck with your dissertation research!
Motoko

Motoko Akiba, Ph.D.
Department Chair and Professor
Dept. of Educational Leadership and Policy Studies
Florida State University
1209C STB, 1114 W. Call St., Tallahassee, FL32306-4450
850-644-5553
makiba@fsu.edu

...

Appendix E

Permission for Using McCarthy's (2016) Formatting for the TOTL Survey

Alzahrani, Yassir
Sun 3/21/2021 6:05 PM
To: McCarthy, Kelly

Hi Dr. McCarthy,
This is Yassir Alzahrani, I got Akiba's approval to use the TOTL survey instrument with some adjustments to consist with the Saudi educational context. I need your approval as well to use yours because I want to use the same format you used in your dissertation. Have a nice day!

Regards
Yassir

McCarthy, Kelly
Sun 3/21/2021 6:08 PM
To: Alzahrani, Yassir

Hi Yassir,

You have my permission. Good luck with your data collection!

Kelly

Kelly McCarthy, PhD
Director for Assessment & Evaluation
USF Health, Morsani College of Medicine
560 Channelside Drive, MDD 54 | Tampa, FL 33602
Office Location: MDD 0557C
Office: 813-974-2544 | Fax: 813-974-2976
kemccart@usf.edu

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Appendix F

Adapted Teachers' Opportunity to Learn (TOTL) Survey McCarthy's Format

1. PROFESSIONAL DEVELOPMENT PROGRAMMING

Professional development programming is an organized activity for the purpose of improving mathematics teaching and student learning (e.g., school, district, or organizational sponsored in-service training or workshop).

1a) During the past 12 months, have you participated in a professional development program related to mathematics teaching or learning?

☐ Yes

☐ No

If yes, the person is directed to the question below. If no, they are directed to section 2.

1. PROFESSIONAL DEVELOPMENT PROGRAMMING

Professional development programming is an organized activity for the purpose of improving mathematics teaching and student learning (e.g., school, district, or organizational sponsored in-service training or workshop).

1b) How many total hours of professional development programming on mathematics teaching or learning have you participated in during the past 12 months? Please include hours spent for a take home task or a project required by the professional development program.

☐ 1 - 2 hours

☐ 3 - 5 hours

☐ 6 - 10 hours

☐ 11 - 20 hours

☐ 21 - 40 hours

☐ 41 - 60 hours

☐ 61 - 80 hours

☐ > 80 hours

2. TEACHER COLLABORATION

Appendix F Continued

*Teacher collaboration is an ongoing activity such as a study group, Professional Learning Community (PLC), teacher network, group action research, and any other form of interaction among teachers for the purpose of improving mathematics teaching and learning. Teacher collaboration can be formally organized by professional developers or informally practiced by a group of teachers. **Mentoring or coaching is not teacher collaboration.***

2a) Have you participated in an ongoing teacher collaboration(s) focused on mathematics teaching

and learning during the past 12 months?

☐ Yes

☐ No

If yes, the person is directed to the question below. If no, they are directed to section 3.

2. TEACHER COLLABORATION

*Teacher collaboration is an ongoing activity such as a study group, Professional Learning Community (PLC), teacher network, group action research, and any other form of interaction among teachers for the purpose of improving mathematics teaching and learning. Teacher collaboration can be formally organized by professional developers or informally practiced by a group of teachers. **Mentoring or coaching is not teacher collaboration.***

2b) How many total hours did you spend in teacher collaboration(s) during the past 12 months?

☐ 1 - 10 hours

☐ 11 - 20 hours

☐ 21 - 40 hours

☐ 41 - 60 hours

☐ 61 - 80 hours

☐ 81 - 100 hours

Appendix F Continued

☐ 101 - 120 hours

☐ > 120 hours

3. UNIVERSITY/COLLEGE COURSES

University/College courses may be taken for a degree or professional development credits.

3a) Have you taken university or college courses in mathematics or mathematics education for credit during the previous 12 months?

☐ Yes

☐ No

If yes, the person is directed to the question below. If no, they are directed to section 4.

3. UNIVERSITY/COLLEGE COURSES

University/College courses may be taken for a degree or professional development credits.

How many actual hours (not credit hours) have you spent attending university or college courses on the following topics during the past 12 months?

3b) Mathematics content

☐ None

☐ 1 - 5 hours

☐ 6 - 10 hours

☐ 11 - 20 hours

☐ 21 - 40 hours

☐ > 40 hours

3c) Mathematics instruction/pedagogy

☐ None

Appendix F Continued

☐ 1 - 5 hours

☐ 6 - 10 hours

☐ 11 - 20 hours

☐ 21 - 40 hours

☐ > 40 hours

3d) Foundations (e.g., diversity, social contexts of schools, ESOL)

☐ None

☐ 1- 5 hours

☐ 6 - 10 hours

☐ 11 - 20 hours

☐ 21 - 40 hours

☐ > 40 hours

3e) Research and measurement in mathematics education

☐ None

☐ 1 - 5 hours

☐ 6 - 10 hours

☐ 11 - 20 hours

☐ 21 - 40 hours

☐ > 40 hours

3f) Other areas

☐ None

☐ 1 - 5 hours

☐ 6 - 10 hours

☐ 11 - 20 hours

☐ 21 - 40 hours

☐ > 40 hours

4. PROFESSIONAL CONFERENCES

Appendix F Continued

A professional conference is an opportunity to present your practices or research as well as to learn from presenters about new ideas in mathematics teaching or learning.

4a) Have you attended a local, regional, state, or national conference(s) on mathematics teaching or learning during the previous 12 months?

☐ Yes

☐ No

If yes, the person is directed to the question below. If no, they are directed to section 5.

4. PROFESSIONAL CONFERENCES

A professional conference is an opportunity to present your practices or research as well as to learn from presenters about new ideas in mathematics teaching or learning.

How many total hours have you spent for each of the following activities at a conference(s) on mathematics teaching or learning during the past 12 months?

4b) Conference attendee

☐ None

☐ 1 - 2 hours

☐ 3 - 5 hours

☐ 6 - 10 hours

☐ 11 - 20 hours

☐ 21 - 40 hours

☐ > 40 hours

4c) Conference presenter

☐ None

Appendix F Continued

☐ 1 - 2 hours

☐ 3 - 5 hours

☐ 6 - 10 hours

☐ 11 - 20 hours

☐ 21 - 40 hours

☐ > 40 hours

5. MENTORING/COACHING

Mentoring/Coaching is a formal district or school sponsored activity to provide new teachers with induction experiences and professional development.

5a) Do you currently have a formal mentor or a coach assigned by your district or school to work individually with you?

☐ Yes

☐ No

If yes, the person is directed to the question below. If no, they are directed to section 6.

5. MENTORING/COACHING

Mentoring/Coaching is a formal district or school sponsored activity to provide new teachers with induction experiences and professional development.

If you have multiple formal mentors or coaches, please choose the mentor or coach who has most influenced your mathematics teaching and learning.

5b) How many hours do you spend communicating with your assigned mentor or coach during a typical month? Please include both face-to-face time and communication through phone or email.

☐ < 1 hour

☐ 1 - 3 hours

☐ 4 - 5 hours

Appendix F Continued

☐ 6 - 10 hours

☐ > 10 hours

6. INFORMAL COMMUNICATION

Informal communication refers to planned or unplanned interactions with co-workers or friends outside of the previously listed activities in this survey.

6a) Do you have someone, other than a formal mentor or coach, with whom you informally rely on and communicate with for your professional learning of mathematics teaching?

☐ Yes

☐ No

If yes, the person is directed to the question below. If no, they are directed to section 7.

6. INFORMAL COMMUNICATION

Informal communication refers to planned or unplanned interactions with co-workers or friends outside of the previously listed activities in this survey.

If you have multiple persons with whom you communicate with for your professional learning of mathematics teaching, please choose the person who has most influenced your mathematics teaching.

6b) How many hours do you spend communicating with this person during a typical month? Please include both face-to-face time and communication through phone or email.

☐ < 1 hour

☐ 1 - 3 hours

☐ 4 - 5 hours

☐ 6 - 10 hours

☐ > 10 hours

Appendix F Continued

7. INDIVIDUAL LEARNING ACTIVITIES

Individual learning activities refer to activities you engage in by yourself outside of the previously listed activities in this survey such as reading professional journals, analyzing student work, and researching resources for curriculum and instruction.

How many hours during a typical month do you usually spend on your own for the following activities?

7a) Analyzing and evaluating student work (to improve instructional practice)

☐ Never

☐ 1 - 2 hours

☐ 3 - 5 hours

☐ 6 - 10 hours

☐ 11 - 20 hours

☐ 21 - 30 hours

☐ > 30 hours

7b) Reading the teachers' manual for adopted textbook(s)

☐ Never

☐ 1 - 2 hours

☐ 3 - 5 hours

☐ 6 - 10 hours

☐ 11 - 20 hours

☐ 21- 30 hours

☐ > 30 hours

7c) Researching and developing student assessment tools and materials

☐ Never

☐ 1 - 2 hours

Appendix F Continued

☐ 3 - 5 hours

☐ 6 - 10 hours

☐ 11 - 20 hours

☐ 21- 30 hours

☐ > 30 hours

7d) Searching web-based sites for curriculum and instructional resources

☐ Never

☐ 1 - 2 hours

☐ 3 - 5 hours

☐ 6 - 10 hours

☐ 11 - 20 hours

☐ 21 - 30 hours

☐ > 30 hours

7e) Reading professional journals or books on mathematics teaching and learning

☐ Never

☐ 1 - 2 hours

☐ 3 - 5 hours

☐ 6 - 10 hours

☐ 11 - 20 hours

☐ 21 - 30 hours

☐ > 30 hours

7f) Other *(please specify the activity then indicate the number of hours spent, per month, on that*

activity):

Appendix F Continued

Activity: _____

☐ 1 - 2 hours

☐ 3 - 5 hours

☐ 6 - 10 hours

☐ 11 - 20 hours

☐ 21 - 30 hours

☐ > 30 hours

Appendix G

Approval Letter by the General Authority of Education in Makkah, Saudi Arabia

Appendix H

## A Copy of the Email Reminder to Participate

Appendix I

Normality Models for EPS Scales
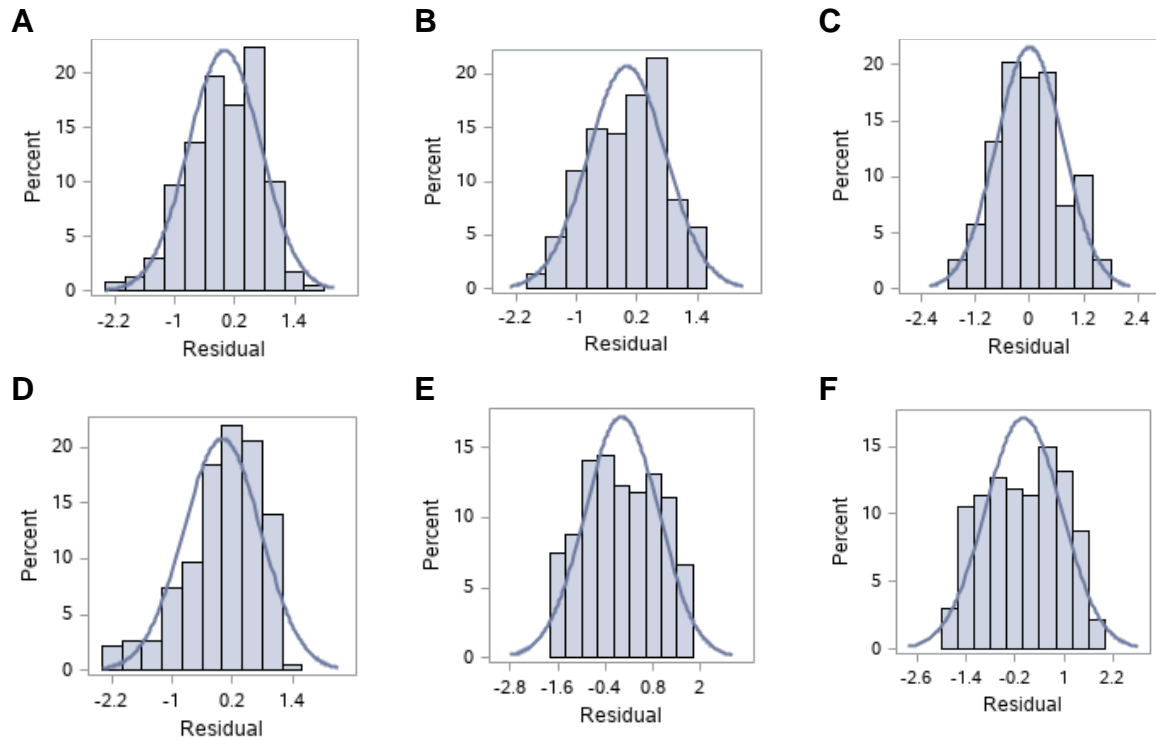
Note. Panel A: Distribution of personal interest scores. Panel B: Distribution of occupational promotion scores. Panel C: Distribution of external expectations scores. Panel D: Distribution of practical enhancement scores. Panel E: Distribution of social contact scores. Panel F: Distribution of social stimulation scores.

Appendix J

Normality Models for TOTL Scales

A

B

C

D

E

F

G
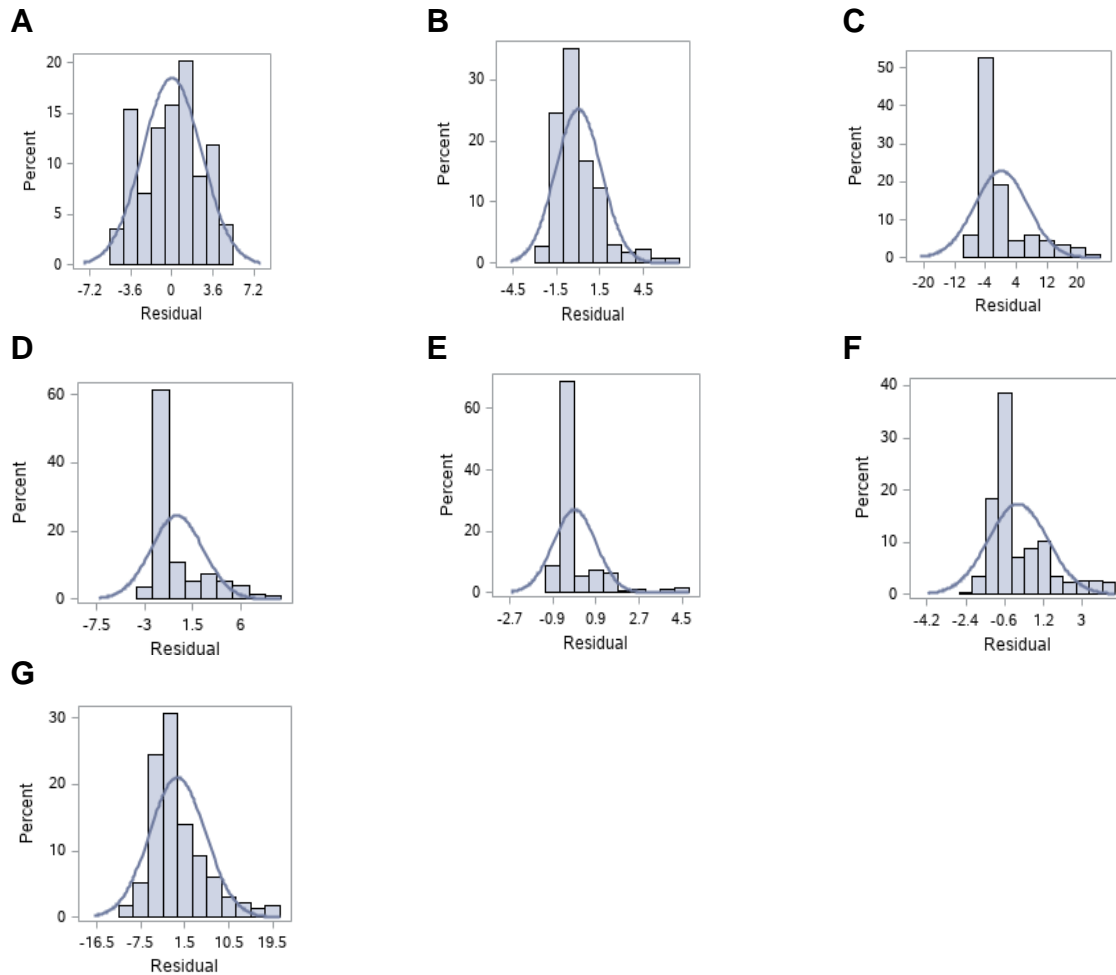
Note. Panel A: Distribution of professional development programming scores. Panel B: Distribution of teacher collaboration scores. Panel C: Distribution of university/college courses scores. Panel D: Distribution of professional conferences scores. Panel E: Distribution of supervising scores. Panel F: Distribution of informal communication scores. Panel G: Distribution of individual learning activities scores.

About the Author

Yassir Alzahrani earned his Ph.D. degree in Curriculum and Instruction with an emphasis in Adult Education from the Department of Leadership, Policy, and Lifelong Learning at the University of South Florida. He has been a high and middle school math teacher since 2004. He was recognized for his outstanding teaching in a variety of schools. Throughout his teaching experience, he relied on professional development to be a successful teacher in different educational contexts. In 2009, he was granted a scholarship to Canada and then to the United States of America to continue his graduate studies. His interests include professional development, evaluation, statistics, cognitive learning styles, teacher motivation, and teaching quality improvement.