DEVELOPMENT OF A FLIPPED PROFESSIONAL MODULE FOR ESL PRIMARY SCHOOL TEACHERS

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ABSTRACT

This study introduces a flipped professional development for English as a Second Language (ESL) teachers in an urban district in Malaysia. The shortcomings of the traditional professional development programs have spurred the idea of a flipped professional development. In most cases, traditional professional development programs are mostly held in the form of workshops aim at delivering pedagogical content to teachers; however, they leave no time for the design and implementation of the content. Thus, the idea of flipping the professional development program is to provide ample opportunities for design, development, and implementation of curriculum content via integration of technology. The design of this research, which is adopted from the Design-based Research (DBR) is conducted in seven thorough phases beginning with problem analysis and ending with an evaluation of the effectiveness of the flipped professional development training. The pyramidal framework for the implementation of this research is designed based on the blend of two theories: Bloom's Revised Taxonomy and Zone of Proximal Teacher Development (ZPTD). The resulting model for training teachers within their Zones of Proximal TeacherDevelopment integrates the social constructivism theory into a model of teacher education. The findings of this study indicates that teachers' pedagogical content knowledge needs were fulfilled throughout the training; nonetheless, the ESL teachers have shown resistance towards the form of flipped professional development. Teachers are not able to self-direct their own professional development as they are burdened with unending academic and non- academic duties in school, and this provides evidence that such approach is not prevailing in Malaysia. This study, however, synthesizes the features of an effective professional development

suggested by Desimone (2011). Desimone (2011) maintained that changes in teacher learning and the effectiveness of the training is spurred by the features of an effective professional development rather than the type of activity. Thus, it can be concurred that this professional development program was successful as the module was developed based on the principles of an effective professional development.

PEMBANGUNAN MODUL PROFESIONAL SECARA KAEDAH BERBALIK UNTUK PARA GURU ESL SEKOLAH RENDAH

ABSTRAK

Kajian ini mencadangkan pelaksanaan program pembangunan profesional guru secara kaedah berbalik untuk para guru yang mengajar matapelajaran Bahasa Inggeris sebagai Bahasa Kedua atau lebih dikenali sebagai "English as a Second Language" di kawasan bandar di Malaysia. Konsep pembangunan profesional guru secara kaedah berbalik dicetuskan oleh kelemahan program pembangunan profesional secara tradisional. Dalam kebanyakan kes, program pembangunan profesional guru secara tradisional dijalankan dalam bentuk bengkel latihan dan bertujuan untuk menyampaikan kandungan berunsurkan pedagogi kepada para guru. Namun begitu, format bengkel latihan tersebut tidak menitikberatkan kaedah pelaksanaan ilmu yang ditimba semasa menjalani latihan tersebut. Kelemahan dalam program pembangunan bersifat tradisional ini telah mencetuskan konsep program pembangunan bersifat berbalik yang memberi ruang untuk reka bentuk, pembangunan dan pelaksanaan kandungan kurikulum melalui pengunaan teknologi. Reka bentuk kaedah ini bermodelkan Kajian berasaskan Reka Bentuk atau lebih dekenali sebagai *Design-Based Research* (DBR). Kajian ini dijalankan melalui tujuh fasa yang bermula daripada analisis masalah dan berakhir dengan sesi penilaian keberkesanan program pembangunan profesional secara kaedah berbalik. Rangka pelaksanaan kajian ini yang berbentuk pyramid direka bermodelkan dua teori, iaitu Taksonomi Revisi Bloom dan Teori *Zone of Proximal Teacher Development (ZPTD).* Hasil daripada rangka tersebut mengabungkan teori konstruktivisme sosial untuk melahirkan sebuah model latihan bagi melatih para guru. Hasil kajian ini menunjukkan bahawa kaedah pembangunan profesional secara kaedah

berbalik membekalkan guru dengan ilmu pedagogi yang diperlukan. Walaubagaimanapun, guru-guru ESL telah menunjukkan reaksi resistan terhadap kaedah ini. Reaksi ini disebabkan oleh ketidakupayaan para gurudalam pengendalian dan pengurusan perkembangan profesional masing-masing dengan adanya pelbagai tugas lain di sekolah. Namun begitu, kajian ini mengenalpasti ciri-ciri program pembangunan profesional yang efektif sepertimana yang dicadangkan oleh Desimone (2011). Desimone (2011) menegaskan bahawa ciri-ciri program pembangunan profesional yang efektif boleh membawa perubahan dalam corak pembelajaran para guru dan meningkatkan keberkesanan latihan pembangunan profesional. Kesimpulannya, kajian ini berjaya kerana modul latihan dibangunkan berdasarkan prinsip pembangunan professional yang efektif.

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LIST OF SYMBOLS AND ABBREVIATIONS

A	:	Attitude
ACTA	:	Applied Cognitive Task Analysis
AX	:	Anxiety
BPK	:	Malaysian Curriculum Development Division
C-TPB-TAM	:	Combined Theory of Planned Behaviour/Technology Acceptance Model
CTA	:	Cognitive Task Analysis
DA	:	Dynamic Assessment
DBR	:	Design-Based Research
DBRC	:	Design-Based Research Collective
DSKP	:	Dokumen Standard Kurikulum & Pentaksiran
EE	:	Effort Expectancy
ELTC	:	English Language Teaching Centre
EN	:	Enjoyment
ESL	:	English as a Second Language
F2F	:	Face-to-Face
FiT-PD	:	Flipped Teacher Professional Development
IDT	:	Innovation Diffusion Theory
In-SeT	:	In-Service Training
IPG	:	Institut Pendidikan Guru
IS	:	Information Systems
IT	:	Information Technology
JPS	:	Jabatan Pendidikan Selangor

JU	:	Main Trainers
K-W-L	:	Know-Want-Learn
KBSR	:	Kurikulum Bersepadu Sekolah Rendah
KSSR	:	Kurikulum Standard Sekolah Rendah
LDP	:	Latihan Dalam Perkhidmatan
LINUS	:	Literacy and Numeracy Screening
MELTA	:	Malaysian English Language Teachers Association
MESL	:	Masters Degree in Teaching English as a Second Language
MM	:	Motivational Model
MOE	:	Ministry of Education
MPCU	:	Model of PC Utilization
OL	:	Online
OT	:	Original Taxonomy
OTPD	:	Online Teacher Professional Development
PD	:	Professional Development
PE	:	Performance Expectancy
PIPPK	:	Pelan Induk Pembangunan Profesionalisme Keguruan
PPD	:	District Education Office
RT	:	Revised Taxonomy
SBA	:	School Based Assessment
SCT	:	Social Cognitive Theory
SE	:	Self-Efficacy
SI	:	Social Influence
SMEs	:	Subject Matter Experts
SMS	:	Short Messaging Service

SPSS	:	Statistical Package for the Social Sciences
TAM	:	Technology Acceptance Model
TEDBET	:	Development for Beginning English Teachers
TL	:	Train-to-Learn
TL1	:	Train-to-Learn Stage 1
TL2	:	Train-to-Learn Stage 2
TL3	:	Train-to-Learn Stage 3
TL4	:	Train-to-Learn Stage 4
TPs	:	Training Participants
TPB	:	Theory of Planned Behavior
TRA	:	Theory of Reasoned Action
UPSR	:	Ujian Pencapaian Sekolah Rendah
UTAUT	:	Unified Theory of Acceptance and Use of Technology
VLE	:	Virtual Learning Environment
ZPD	:	Zone of Proximal Development
ZPTD	:	Zone of Proximal Teacher Development

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CHAPTER 1

INTRODUCTION

Introduction

In this day and age, professional development has become an essential component in enhancing the development of staff in any workforce. It is a platform which provides support to people in almost every workforce by helping them to understand better about the environment of the place they work, their job, as well as guiding them on performing better in what they do. Likewise, with the advent of technology, it is undeniable that education systems all around the world are experiencing revolutions and reforms. However, one significant reform that is essential to maintain an outstanding education system is the education of the millennials, namely the young learners. As with teachers of all levels of education, primary school teachers strive hard to adequately meet the growing needs of young learners these days.

Previous studies have shown that professional development programs of high quality that brought upon positive effects and achievement in learners rely on the effectiveness of the teacher (Fullan & Miles, 1992; Hamre & Pianta, 2005; Loeb, Fuller, Kagan, & Carrol, 2004; Spillane, 1999). The three key elements that are necessary for a teacher to be effective are knowledge, skills, and practices (Chen & Chang, 2006; Sheridan, Edwards, Marvin, & Knoche, 2009). Researchers asserted that teachers who are qualified, knowledgeable, and skillful throughout their teaching career ensure the presence of high quality teaching in schools (Day & Sachs, 2004; Smith, Desimone, & Euno, 2005). Guskey (1994) stated that the improvement of schools is parallel with the improvement of the skills and abilities that the teachers

possess; hence, teachers are solely responsible in implementing change in the schools. Also, professional development programs ought to focus on changing the way a teacher teaches so that improvement in the learning outcomes of students can be seen (Guskey, 2002, Luft & Hewson, 2014; Whitehurst, 2002). Teachers are known to be the prime factor in the success of their students (Nye, Konstantopoulos & Hedges, 2004); in other words, the way a teacher teaches plays a very significant role in students learning; thus, this can be achieved provided that teachers are exposed to quality professional development programs (Fishman et al., 2013). However, not all professional development lead to teacher change, and very few studies link to student outcomes (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007).

Nevertheless, the development of teachers relies on their participation in professional development programs (Bransford, Brown, & Cocking, 2000; Darling-Hammond & Bransford, 2005; Shulman & Shulman, 2004; Villani, Almeida Pacca, & Freitas, 2009). Mushayikwa and Labben (2009) believed that development is a bottom-up process that should be initiated by teachers. Alternatively, Van Eekelen, Vermunt and Boshuizen (2006) claimed that development is a process that should extend beyond a teachers' pre-service training, and it should be continuous throughout one's teaching career.

To add on, research conducted over time has shown that the key to alleviate the standards of education and to sustain the quality of the teachers, is undeniably the professional development programs (Borko, 2004; Darling-Hammond & Bransford, 2005; Desimone et al., 2007; Guskey & Huberman, 1995; Martinez-Beck & Zaslow, 2006, Wei, Darling-Hammond, & Adamson, 2010). Despite the fact that the research field on teacher learning is still relatively new, it is indisputable that professional

development has borne positive results in teachers' pedagogical practices and students' learning (Borko, 2004). According to Guskey (1994):

> *Never before in the history of education has there been greater recognition of the importance of professional development. Every proposal to reform, restructure, or transform schools emphasizes professional development as a primary vehicle in efforts to bring about needed change* (p.40).

Therefore, to ensure that teachers reap the benefits from professional development programs, the quality of professional development programs must be prudently thought out (Porter, Garet, Desimone & Birman, 2003).

Professional Development for English as a Second Language (ESL) Teachersin Malaysia

All Malaysian teachers are made compulsory to fulfill and document 42 hours (7 days) of professional development programs per year so that their content knowledge, pedagogical skills and soft skills can be improved (Ministry of Education [MOE], 2009). The Ministry of Education claims that the 42 hours of professional development which may include workshops, conferences, trainings, and seminars are school-based (Kabilan & Kasthuri, 2013). The Malaysian Education Blueprint of 2013 – 2025 emphasized on providing greater support to teachers in the aim to help them reach their full potential; the blueprint also mentioned that they will have more access to school-based professional development opportunities through constructive feedback discussions and dialogue (MOE, 2012).

However, studies have shown that the professional development programs in Malaysiaare mostly cascade-type (top-down approach) programs, and they do not benefit the teachers; thus, the teachers are dissatisfied (Kabilan, 2004; Kabilan, Vethamani & Chee, 2008). Teachers are obligated to attend any professional

development program that is dictated by the MOE (Kabilan & Kasthuri, 2013). MOE (2012) also stated that the participation of teachers in on-going professional development programs has been very good; nevertheless, over 90% of teachers' report that they spend approximately 10 days each year on professional development, which is more than Ministry-mandated requirement of seven days per year. A study conducted in the local setting also shows that besides shortage of time, teachers reported that lack of support from schools which leads them feeling unmotivated to learn and attempt new pedagogies in their respective classrooms (Thang et al., 2009). Kabilan and Kasthuri (2013) further added that teachers in the Third World countries have expressed their frustration over lack of opportunities in voicing out their needs for professional development programs that are relevant to their field and interests.

Hazri, Nordin, Reena and Abdul Rashid (2011) pointed out that professional development, which was previously thought as a short-term process, has now improved by leaps and bounds and is deemed as a long-term and ongoing process that promotes growth and development of the teaching profession. In line with this, a special committee set up in 1995 by the Education Ministry of Malaysia has been assigned to look into the professional development of teachers, and one of the recommendations made was to encourage teachers to attend in-service courses (Mohd. Sofi Ali, 2002). The previous Education Director General of Malaysia, Datuk Seri Khair Mohamad Yusof said that efforts are being taken to train and improve the skills of teachers through continuous professional development. Among the significant aspects that maintain teacher professional development in Malaysia are continuous professional development and in-service training (In-SeT) (Hazri et al., 2011). English as a Second Language (ESL) teachers in Malaysia have insisted for professional development programs that are tailored based on their needs (Kabilan et al., 2008).

There are so many changes and variation made to policies that require ESL teachers in Malaysia to constantly improve or change their methodologies and teaching practice; without embracing a professional change, they may suffer a burn out (Mukun & Khandehroo, 2009). Thus, professional development programs should be parallel with the changes that are made to the educational aims and policies for ESL in Malaysia (Khandehroo, Mukundan, & Zhinoos, 2011). Kabilan (2007) reported that issues related to policies of ESL have always been discussed by various stakeholders in Malaysia which also include politicians; this has led to flip-flopping in the teaching and learning policies in Malaysia.

Kabilan and Kasthuri (2013) also mentioned that the flip-flopping in the teaching and learning policies in Malaysia has further aggravated matters related to teacher development. In their paper, they also expressed concerns about the new English curriculum that was introduced in 2002, known as *Kurikulum Standard Sekolah Rendah* (KSSR). According to the authors, the curriculum may not be successfully implemented in schools if teachers' needs on their professional development are neglected. Therefore, as mentioned by Kabilan and Kasthuri (2013), the ESL teachers in Malaysia call for professional development programs that are relevant to them and programs that are constantly reviewed for their effectiveness.

In fact, Kabilan and Kasthuri (2013) who conducted a nationwide study in the process of identifying the professional development needs of ESL teachers in Malaysia has come up with a model that has 3 stages of professional development programs: (1) planning and development, (2) implementing professional development and engaging teachers, and (3) evaluating and enriching teachers' experiences and professional growth. Despite agreeing that professional development programs should be voluntary, the ESL teachers apparently did not express concerns on 'self-initiated' or

'self-directed' professional development. Nevertheless, Kabilan and Kasthuri (2013) asserted that ESL teachers should engage in self-initiated or self-directed professional development by collaborating with other teachers as it could fulfill the needs of their students as well as the school.

Problem Statement

When a teacher participates in professional development programs, one is driven by a personal yearning to improve one's own teaching practice (Kao, Wu & Tsai, 2011). However, as cited in Barth (2004), Haycock (1997) in simple words clarifies that "we don't even put into the place the simple systems that could reliably identify which of our teachers are terrific at moving students from wherever they are academically to higher levels of achievement and which teachers still need help to attain that level of effectiveness" (p.1). Bell and Gilbert (1994) asserted that despite being introduced to more current initiatives, teachers have developed cynicism towards any new suggestion and are even reluctant to volunteer for professional development programs. Professional development programs should help teachers in developing pedagogical content knowledge (Van Driel, Beijaard, &Verloop, 2001), but Briscoe (1991) has stated that teachers are mostly frustrated that they are unable to utilize the new pedagogical knowledge learnt in their classrooms; thus, they remain teaching the way they always had.

Owing to the great importance of professional development programs, the typical and traditional professional development programs conducted for teachers are field experiences such as practicum, short-term workshops, seminars, observations, and simulations (Boyle, Lamprianou & Boyle, 2005; Copley & Padron, 1998; Lee, 2005). Nonetheless, studies have shown that there is no clarity on how these

professional development programs change teachers' teaching practice and how they impact the learners. These programs normally aim at introducing teachers to new activities to be implemented in their classrooms; however, these programs are insufficient (Borko, 2004), and there are numerous drawbacks of such traditional professional development programs (Wongsopawiro, 2012). Many of these traditional (face-to-face) professional development programs that are initiated to equip teachers with knowledge and skills have been futile for numerous reasons (Fullan, 2001; Gordon, 2004; Tinoca, 2005; Wongsopawiro, 2012). Only a mere 12 to 27 percent teachers have seen an improvement in their teaching after attending such professional development activities. Researchers stated that teachers are not voluntarily participating, but are often mandated and obliged to attend the workshops where the programs are characterized by "one size fits all" approach, topics are totally unrelated and are too broad to be applied in classroom settings (Peery, 2002; Redding & Kamm, 1999; Tinoca, 2005). They are unmotivated to participate as they are not provided any platform or opportunities to express their needs and interests as well as the problems they face in classroom (O'Brien, 1992, Wongsopawiro, 2012); thus, they feel disconnected from the learning experience planned for them (O'Brien, 1992). The designers fail to fit in teachers' practical knowledge in the process of developing the programs (Haney, Czerniak & Lumpe, 1996; Klinger, 2000; Van Driel et al., 2001; Wongsopawiro, 2012). Besides, Radford (1998) highlighted that the professional development programs which emphasize on the lecturing strategy are very common and reflect a choice of methodology which is poor and not innovative. Lynch (1997) advocated the ineffectiveness of traditional professional development programs since the ideas and strategies suggested during the programs are not implementable in reality. The new reforms and ideas may sound innovative and interesting, but they can

hardly be implemented in real classroom setting, and this happens owing to lack of opportunities provided to teachers in experimenting the new reform themselves. Not only this, Hayes (1997) identified time constraint and lack of incentives as a reason to not attend traditional professional development programs. However, Guskey and Kwang (2009) described the workshops as a waste of time and money as there rarely is a follow-up workshop to provide sustained support or to get feedback from teachers. They added that most of these workshops are poorly organized and tend to focus on unproven ideas. Bredeson (2002) pointed out that lack of time, money, and appropriate structure contributes to the failure of a continuous learning opportunity for teachers to refine their knowledge and practice.

As pointed out by Balan, Manko and Phillips (2011), one shot professional development programs, though some of them are momentarily inspiring, they usually fall short of the mark because of teachers' workload. Most professional development programs in schools have been condemned for being superficial, irrelevant and ineffective (Guskey, 1986, 2002; Huberman, 1995). Having minimum support from administration and communication issues that bring about poor results are some hindrances to effective professional development (Bryant, Bryant, Boudah & Klinger, 2010).

In the Malaysian context, research has revealed that many professional development programs fail because teachers' needs of professional development activities are neglected and rarely given attention to (Khandehroo et al., 2011; Lee, 2007). As it is in other places, teachers in Malaysia perceive professional development as unproductive as it is usually a course normally developed by either by the Ministry of Education (MOE) or the State Department of Education which is mandated to them (Malakolunthu, 2007).

The idea of using flipped classroom approach in a professional development setting has not been explored a large scale yet, more so in Malaysia. Although the literature corpus on flipped learning is expanding, much of the literature available on flipped learning is focused on its implementation in either schools, colleges or universities. Therefore, elicited by a lack of research in applying the flipped process in a teacher professional development, this study focused in tackling the various challenges and barriers faced by Malaysian ESL teachers in existing professional development programs.

Research Background

This study introduced a revolutionized professional development model. To cater to the professional needs of the primary school ESL teachers, designers and developers of professional development programs should take into account the needs and interests of teachers. Prior to the design of the professional development activities, the researcher of this study conducted a needs analysis in which primary school ESL teachers were provided opportunities to voice out their needs in the teaching field. Khandehroo et al. (2011) pointed out that demographic factors such as the years of experience and the setting of school may influence the teachers' needs for professional development. Guskey (1986) asserted that one of the key factors that ensures the attainment of a professional development program is the teachers' motivation to engage in staff development. Laughridge (2011) further concurred that a professional development program is deemed successful when teachers voluntarily participate in it rather than being obliged to participate in. Therefore, teachers will be motivated to participate in professional development programs that are designed to cater to their needs and interests.

As opposed to the typical traditional professional development programs that were held in the past, the design of this professional development program rested on the idea of a flipped classroom. The proliferation of instructional technologies has enabled the use of technology such as videos in real-time, PowerPoint slides, podcasts, and online learning platforms in the field of education (Lage & Platt, 2000). Berger (2014) recommended that professional development organizations should indeed make full use of technologies to provide a continuous learning platform to their members. Strayer (2007) described flipped classroom, also known as inverted classroom (Lage & Platt, 2000) as a classroom concept in which the lecture session takes place outside of the field whereas the homework or tutorial are conducted within the classroom through learning activities. Opposed to the traditional learning where a deeper engagement with the learning materials occurs outside of the classroom, flipped classroom allows the introduction to be done outside the classroom whereas the deeper engagement occurs within the classroom (Strayer, 2007).

Hinging on the concept of the flipped classroom and using the theory of Bloom's Revised Taxonomy and Zone of Proximal Teacher Development (ZPTD) as the framework, this study aimed to adopt the flipping concept in the professional development programs, thus introducing a Flipped Teacher Professional Developmentfor primary ESL teachers in Malaysia (see Figure 1.1). Daniels (2014) revealed that traditional professional development only provides pedagogical ideas and resources to teachers while leaving no time for design and implementation; thus, a flipped professional development idea was developed to emphasize on the design and development as well as the implementation of the curriculum via technology integration. The author further added that the flipped professional development can be conducted in a workshop setting provided that the coaching element is added to it.

In this approach, the teachers watch the video tutorials to learn new methodologies, get inspirations and ideas, and later discuss with the experts on developing those ideas; also, the experts sit with the teachers to coach, scaffold, and provide guidance until the teachers manage to develop and implement the resources (Flanigan, 2013). Therefore, the crux of this study concerned supporting a flipped professional development program for primary school ESL teachers. Figure 1.1 shows how a flipped teacher professional development program takes place. Teachers watch videos, read materials on an online platform prior to the face-to-face session; during the face-to-face session, teachers engage in discussions and also participate in hands-on activities to develop their own resources. As opposed to traditional professional development programs, the learning in a flipped professional development program takes place via an online platform, which is outside classroom.

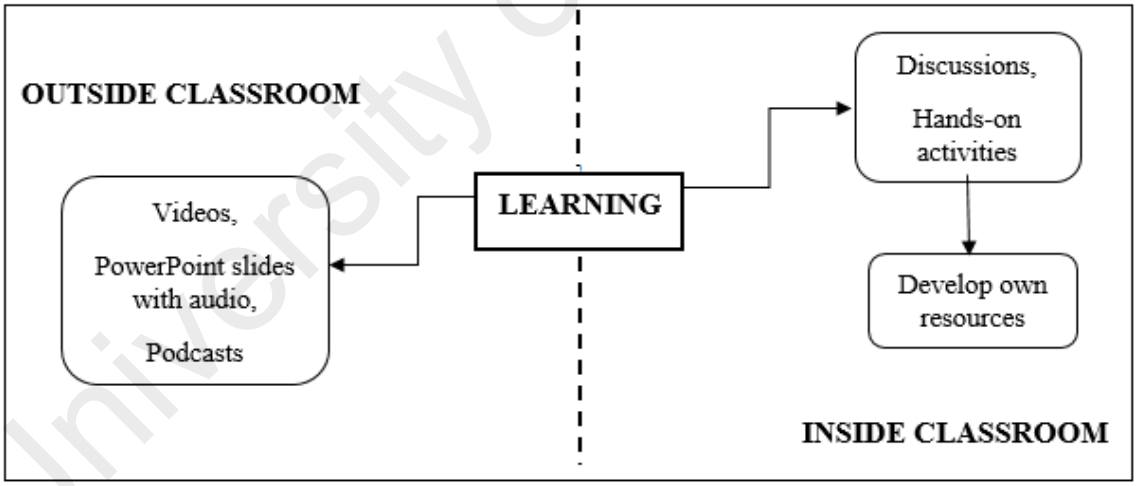


Figure 1.1 Flipped Teacher Professional Development (FiT-PD)

Research Objectives

The overarching aim of this study was to develop a Flipped Professional Development Module for English as a Second Language (ESL) teachers in Malaysia.

Thus, this study was carried out in several phases, and following are the objectives of this study that were fulfilled in every phase of this study.

1. To identify the problems faced by ESL teachers in the existing professional development programs.
2. To identify the needs of the ESL teachers in the professional development programs.
3. To obtain experts' validation on the flipped teacher professional development module.
4. To develop a flipped teacher professional development module.
5. To evaluate the ESL teachers' acceptance towards the flipped teacher professional development module.

Research Questions

This study attempted to answer the following research questions that guide this research on a flipped professional development program for English as a Second Language (ESL) teachers in primary schools.

1. What are the problems faced by the ESL teachers in the existing professional development programs?
2. What are the needs of ESL teachers in professional development?
3. What have the experts recommended on the flipped teacher professional development module?
4. What are the constructs integrated in the flipped teacher professional development module?
5. To what extent do the ESL teachers accept the flipped teacher professional development module?

Theoretical Framework

A research framework provides a structure and guidance in carrying out the study (Liehr & Smith, 1999). Hence, a theoretical framework provides an overview of the theories that are used to guide a study (Imenda, 2014). The theoretical framework for this research is based on Bloom's Revised taxonomy and the Vygotsky's Social Constructivist theory. Lewin's (1943, p.169) maxim that there is "nothing as practical as a good theory" is a sound belief as teachers indeed base their teaching practices on certain facets of a theory (Carlile & Jordan, 2005). Teachers step into classrooms with an integral theory of teaching which is either explicitly or implicitly stated in the teachers' action, and this theory usually has its repercussions on students' learning (Donnelly & Fitzmaurice, 2005). Donnelly and Fitzmaurice (2005) further added that it is fundamental to be aware of the various learning theories, and also that there is no universal approach of learning. Brown and Atkins (1991) stressed that different students have a dissimilar way of learning, and that learning is a continuous process of development in between of the 'learning-for-understanding' and 'learning-for-knowledge' paradigms. Hence, in designing a good pedagogical module, it is crucial to ensure that the design is consistent with the curriculum, the teaching strategy, the learning setting, as well as the evaluation procedures (Biggs, 1999).

Learning Theories

Borko (2004) argued that professional development should be underpinned by both the cognitive and social aspects of learning; nevertheless, Watson (2013) pointed out that theory has tended to place emphasis on either cognitive or social perspectives. Cognitive perspectives focus on the concepts of changes in teachers' beliefs and knowledge (Watson, 2013) whereas the social perspectives are centered on professional development through participation (Lave & Wenger, 1991). Lave and

Wenger (1991) advocated that professional development must be revolved around the communities of practices. According to Bradley (2011), constructivism is the cutting-edge learning theory among all the three major schools of learning theory – behaviorism, cognitivist, and constructivism. Since most of the professionals in this day and age adopt a constructivist pedagogical framework, the behaviourist and competence-based process model is found to be inconsistent in the professional development programs (McMillan et al., 2012). Hence, Palincsar (2005) has proposed that the design professional development programs for teachers should be based on the principles of social constructivism.

Social constructivism. Knabe (2004) pointed out that among all the theoretical frameworks that underpin online course development and teaching, survey of the literature shows that the most commonly cited is the constructivism theory. Researchers have come to a consensus that online course designs that are based on the constructivist theory have borne success of the particular online course (Ausburn, 2004; Chitanana, 2012; Gold, 2001; Salter, Richards & Carey, 2004; Wiesenberg & Stacey, 2005). The constructivist epistemology is supportive to teachers in terms of setting an environment which emphasizes on learner collaboration, reflections and designing authentic tasks, which enhances learner participation and encourages active learning (Merrill, 1992; Gold, 2001; Savery & Duffy, 2001, Ausburn, 2004). Thus, in this respect, the constructivist theory is in line with the successful online teaching strategies which involve community learning, collaborations and interactions, as well as deep and meaningful learning experiences (Chitanana, 2012). Gulati (2008) has mentioned that a "social constructivist experience" occurs when constructivism is applied in the design of online courses (p.184).

Most online learning is related to social constructivism with an emphasis on

collaboration in solving tasks (Jonassen, Peck & Wilson, 1999) as well as individual development through sharing of text and other cultural tools (Gergen, 1995; Postholm, 2012). Chitanana (2012) stressed on the significance of the social aspect in designing an online learning content and that participants ought to be provided with chances to engage in dialogues with other learners as well as experts of the respective fields. Previous literature confirmed that that the discussion platform enhances learning and promotes engagement in learning, application of critical thinking besides the building of knowledge (Laurillard, 1994; McLoughlin & Luca, 2000). Pitsoe and Maila (2012) reported that despite the availability of rich literature on constructivist learning theories and their usability in South Africa, there is, however, a very minimal attention on the implications of constructivist insights and practices for teacher professional development and teacher education; hence, they argued that principles that are attuned with the contemporary paradigm should underpin and guide the teacher professional development programs.

Bloom's Taxonomy

Bloom's Taxonomy, initiated by Benjamin Bloom was originally perceived to categorize the level of test items in assessments, but eventually became a system to classify learning outcomes (Mayes & de Freitas, 2004). The taxonomy provided six major categories in the cognitive domain and each level is subsumed by the higher levels in a multi-tiered form; at the lowest level of the hierarchy is the knowledge category which is followed by Comprehension, Application, Analysis, Synthesis, and Evaluation (Asim, 2011). Krathwohl (2002) mentioned that the six categories were put in order based on their complexity, from simple to complex and from concrete to abstract; a mastery of the lower level is a prerequisite before a progression can be made

to the higher level (Asim, 2011). Several researchers have accepted the first three levels from the bottom as lower cognitive levels whereas the top three levels are identified as the higher cognitive levels (Bloom, 1956; Krathwohl, 2002; Olivia, 1988; Wulf & Schave, 1984).

Bloom's taxonomy did not receive much attention in the beginning (Krathwohl, 2002), but eventually, it has been used in all levels of education by curriculum planners as well as academicians (Anderson & Sosniak, 1994). Krathwohl (2002) pointed out that Bloom saw the taxonomy as more than just a measurement tool. He believed that the taxonomy could function as a:

- Common language about learning goals to facilitate communication across persons, subject matter, and grade levels.
- Basis for determining for particular course or curriculum the specific meaning of broad educational goals, such as those found in the currently prevalent national, state, and local standards.
- Means for determining the congruence of educational objectives, activities, and assessment in a unit, course, or curriculum.
- Panorama of the range of educational possibilities against which the limited breadth and depth of any particular educational course or curriculum could be considered.

Despite the boon Bloom taxonomy has brought to the education systems, several researchers have pointed out some drawbacks and limitations of the Bloom's taxonomy. Furst (1994) stated that an obvious deficiency is assuming that the cognitive processes occur on single dimension from simple to complex behavior. This was earlier reported by Ormell (1974) that there are some contradicting elements in the

taxonomy. Asim (2011) further explained that in certain situations, some objectives of the Knowledge category can be more complex than the objectives of the higher categories. In addition to this, it has also been revealed that the Evaluation level is not more complex than Synthesis level; Evaluation is a part of Synthesis (Krietzer & Madaus, 1994). The taxonomy has also been contended for making the mastery of lower level as a prerequisite before advancing to the higher levels (Asim, 2011), and this has been indicated as a "stringent standard" (Anderson, Lorin, & Krathwohl, 2001). Also, experts observed that the hierarchical classification is not deemed proper for all the study fields.

Nonetheless, Forehand (2012) believed that Bloom taxonomy has stood the test of time and this is supported by research findings that conceded that due to its popularity, it has been reviewed, extended, compressed, and studied in many other ways. Times has changed; in those times when the Bloom's taxonomy was conceived, the learning and teaching revolved around the principles of behaviorism whereas these days, constructivism and student-centered learning have become prominent. Thus, Amer (2006) stated that the taxonomy ought to be revised to fit the demands of the current education trends. One current revision that was done in 2001 by a former Bloom's student, Lorin W. Anderson will be discussed further.

Revised Bloom's taxonomy. With the intentions of addressing the deficiencies discovered in the original Bloom's taxonomy (OT), several researchers comprising of cognitive psychologists, curriculum and instructional researchers, and assessment specialists had revised the taxonomy and included fundamental changes to the assumptions, structure, as well as the terminology (Anderson et al., 2001). Amer (2006) explained that taking into consideration the current developments in the educational and psychological literature where students are more knowledgeable and

takes charge of their own learning and thinking, the Revised Taxonomy (RT) was developed.

Theories like Constructivism, Self-regulated learning, and Metacognition are examples of theories which regards learning as a "proactive activity, requiring self-initiated motivational and behavioral processes as well as metacognitive ones" (Zimmerman, 1998). Constructivism, for instance, advocates that students ought to be provided opportunities to discover and construct their own learning. In brief, there are two reasons behind the revision of OT (Anderson et al., 2001); besides the abovementioned intention, it is also revised to attract the educators' attention back to it and at the same time to emphasize the value of the OT for being a taxonomy that can still be applicable in the recent days (Rohwer & Sloane, 1994).

Differences between Original Taxonomy (OT) and Revised Taxonomy (RT). Despite retaining the original six stages in a hierarchical form, there are important differences between the original taxonomy and the revised taxonomy. First, in terms of the terminology, the cognitive processes in OT is in the noun forms whereas RT is relabeled in the verb forms. The lowest level in OT which was 'Knowledge' is renamed to 'Remembering' in RT, and 'Comprehension' has been renamed 'Understanding' in RT (Bumen, 2007). The top level in OT which is 'Evaluation' has moved to the second from top and renamed in the verb form. 'Synthesis' which was the second from the top in OT has moved to the top as 'Creating'.

In terms of the structure, OT is one-dimensional which means the knowledge category embodies both noun and the verb whereas RT is two-dimensional; it separates the noun and verb components to the 'Knowledge' dimension and the 'Cognitive Process' dimension (Amer, 2006). The three subcategories of the knowledge level have been organized and renamed to factual knowledge, conceptual knowledge and

procedural knowledge. In RT, a fourth category known as metacognitive knowledge is added to the knowledge dimension (Anderson et al., 2001).

It is claimed that OT was not applicable in all learning fields (Bakdemir & Selim, 2008) whereas RT is proposed for a much broader audience (Forehand, 2012). OT is hierarchical and cumulative as the lower level is a prerequisite before moving to a higher level (Krathwohl, 2002). However, in RT, the process categories are still arranged hierarchically but not rigid as in OT (Krathwohl, 2002). They are allowed to overlap one another; for example, 'Understand' is not a prerequisite to 'Apply' anymore (Bekdemir & Selim, 2008).

Table 1.1

Differences between the Original Taxonomy and Revised Taxonomy

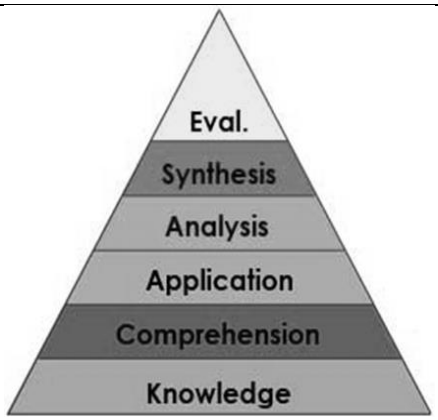
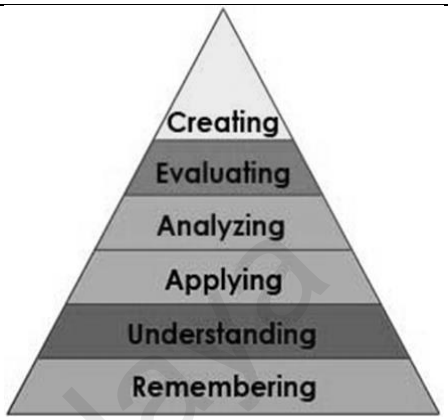
	Original Taxonomy (OT)	Revised Taxonomy (RT)
Model		
Terminology	1. OT labeled cognitive processes in the noun forms – knowledge, comprehension, application, analysis, synthesis, and evaluation. 2. The lowest level is 'Knowledge'. 3. The second lowest level is 'Comprehension'. 4. 'Evaluation' is the top level. 5. 'Synthesis' is second from the top.	1. RT relabeled the cognitive processes in the verb forms – remembering, understanding, applying, analyzing, evaluating, and creating. 2. 'Knowledge' was renamed to 'Remembering'. 3. 'Comprehension' category' renamed 'Understanding'. 4. 'Evaluation' moved in the second from top and renamed to 'Evaluating'. 5. 'Synthesis' moved to the top as 'Creating'. (interchanged with evaluation)

Table 1.1, continued

	Original Taxonomy (OT)	Revised Taxonomy (RT)
Structure	1. One-dimensional (the knowledge category embodied both noun and verb)	1. Two-dimensional (separates the noun and verb components to – 'the Knowledge dimension' and 'the Cognitive Process dimension'
	2. Three subcategories of the 'knowledge' level – knowledge of specifics, knowledge of ways and means of dealing with specifics, and knowledge of universals and abstractions in a field.	2. The three subcategories of the knowledge level reorganized and renamed to – factual knowledge, conceptual knowledge, and procedural knowledge.
		3. A fourth category was added to the knowledge dimension – metacognitive knowledge.
Assumptions	1. OT cannot be used for all learning fields.	1. RT is proposed for a much broader audience.
	2. OT is hierarchical and cumulative – the lower level is a prerequisite before moving to the higher level.	2. The process categories are arranged hierarchically but not rigid as in the OT. Eg: 'understand' is not a prerequisite for 'apply' anymore.
	3. OT emphasized the 6 major categories.	3. RT provides extensive description of the subcategories.

The shift from one dimension to two dimensions in the RT has led to the formation of a two-dimensional Taxonomy Table (TT). It functions as an analytical tool of the RT (Bumen, 2007). Amer (2006) in his study mentioned that the TT can be used for several reasons such as (i) to analyze and reflect the objectives of a curriculum or a syllabus, (ii) help teachers not to confuse their activities or tasks with the objectives, (iii) to help teacher be aware of the relationship between assessments and their teaching-learning activities, and (iv) to examine the curriculum alignment. Anderson (2002) revealed that TT can be advantageous in estimating the curriculum alignment regardless of the subject matter or the school level. He further added that a strong link between the objectives, instruction, and assessments ensures that the curriculum is aligned. Gorin and Blanchard (2004) concurred that the alignment of the abovementioned elements will result in successful student learning; research shows that alignment of the curriculum brings a positive influence on achievement (English & Steffy, 2001).

Other studies using Revised Bloom's taxonomy. Bumen (2007) stated the pluses of using the RT and his research, and added that studies conducted based on RT and planning skills are very minimal. The results of his study confirmed other studies which have indicated a number of benefits of RT in the planning of lessons (Anderson, 2002; Ferguson, 2002; Krathwohl, 2002; Mayer, 2002; Pintrich, 2002; Su et al., 2004; 2005; Amer, 2006). Owing to the results of these studies, it is fair to come to a consensus that RT has made several improvements in curricular development in the field of education (Bumen, 2007). Nasstrom (2009) conducted a study in Sweden using RT to evaluate functions of mathematics and considered it valuable in his research. Furthermore, Nobel (2004) incorporated RT with Multiple Intelligences and found it to be effective. Ayvaci and Turkdogan (2010) also reported RT to be successful in

evaluating Science and Technology questions. Asim (2011) mentioned that RT has gained its popularity on the international stage. More studies should be done to develop pre-service or in-service teacher education by using the RT (Bumen, 2007); also, to see if the RT is across other subject fields (Bumen, 2007; Nasstrom, 2009). Bumen (2007) in his study also recommended the taxonomy table to be used by teachers to model the way they teach and later, to analyze they teaching.

Zone of Proximal Teacher Development (ZPTD)

The contemporary conceptualizations of the constructivism paradigm fall under Lev Vygotsky's theoretical lens. Vygotsky (1986) stated that, "direct teaching of concepts is impossible and fruitless. A teacher who tries to do this usually accomplishes nothing but empty verbalism, a parrot-like repetition of words by the child, simulating a knowledge of the corresponding concepts but actually covering up a vacuum" (p.150). Vygotsky's (1978) theory emphasized on the crucial role played by the social interactions and culture in the learning environment, and one of the major contribution of Vygotsky's theory is the idea that the possibility of cognitive development to take place in a child is determined by the child's Zone of Proximal Development (ZPD) (Tayebeh & Farid, 2001). Vygotsky's ZPD approach has been advanced by Warford (2011) to educate teachers within the Zone of Proximal Teacher Development (ZPTD), and Warford (2011) in his literature explained ZPTD as "the distance between what teacher trainees are able to do on their own and a proximal level that they are capable of attaining with the guidance and strategic mediation of an expert in the field" (p.253).

The illustration in Figure 1.2 clearly shows that teachers too, like students as espoused in Vygotsky's ZPD need scaffolding from more knowledgeable others to be

able to do something independently. The diagram explains the ZPTD approach that was advanced by Warford (2011).

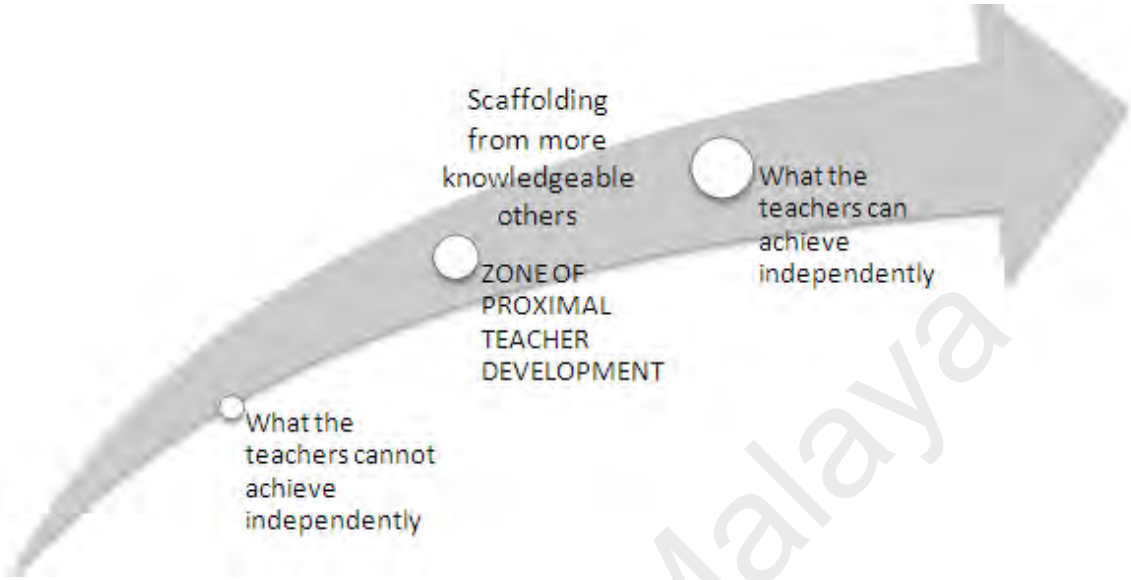


Figure 1.2 Zone of Proximal Teacher Development (ZTPD)

Warford (2011) has stressed that teacher education curriculum based on Vygotskyan approach should promote discussion between teachers' prior teaching experiences, their pedagogical knowledge and observation as well as their tacit beliefs about pedagogy. Having said this, instead of cramming teaching candidates with facts, the candidates create their own meaning by utilizing the cultural tools espoused by Vygotsky's theory. As shown in Table 1.2, unlike ZPD which starts with experts' assistance and scaffolding, ZPTD starts with teachers' reflection (self-assistance) on their prior experiences and beliefs, and moves toward experts' assistance (Tayebeh & Farid, 2011). Warford (2011) also believed that "the distinction between self and expert-assistance, from a teacher development perspective is not an 'either…or' phenomenon but rather a point of emphasis" (p.253). As shown in figure 3.1, the Zone of Proximal Teacher Development (ZPTD) starts with i) what the teachers cannot achieve independently, progresses to the Zone of Proximal Teacher Development

whereby the ii) teachers experience scaffolding from more knowledgeable others and finally reaches to iii) what the teachers can achieve independently.

It is also fundamental to note that even though ZPTD was initially introduced in pre-service teacher programs, it can also be applied to in-service teacher programs (Rolando, Salvador, Souza, Luz, 2014). Warford (2011) has highlighted four stages of the ZTPD: (1) self-assistance, (2) assistance of experts, (3) internalization/automatization, and (4) recursion/ deautomatization.

Table 1.2

The Zone of Proximal Teacher Development (ZPTD) Source: Warford (2011)

ZPTD	Sample Interventionist Dynamic Assessments	Sample Interactionist Dynamic Assessments
I. Self-assistance [Stage II in ZPD (Gallimore & Tharp, 1990)]	Preparing learning autobiographies, Responding to prompts about prior experiences	Discussion, sharing autobiographies, follow-up questions
II. Expert other assistance [Stage I in ZPD (Gallimore & Tharp, 1990)]	Analysis of teaching practices (demonstrations, videos, field observation) Role-taking/playing Forced choice quizzes (written) WebQuests Cubing exercises	Leading questions and follow-up discussion Processing role plays Oral quizzes
III. Internalization	Journaling Micro-teaching Candidate statement of teaching philosophy	Discussion, dialogic partners
IV. Recursion	Journaling Clinical reflective reports: collecting information and making warranted claims for change On-line forum Role taking/playing	Discussion, sharing autobiographies, Follow-up questions, Post-observation conferencing, Processing role-plays

Conceptual Framework of the Research

A conceptual framework is necessary when the research problem cannot be researched by basing it just on a theory or concepts that exist within a certain theory.

Thus, Imenda (2014) suggested that researchers may need to synthesize the existing theoretical and empirical views in the literature to come up with a model, also known as a conceptual framework. Liehr and Smith (1999) mentioned that a conceptual framework thus provides an integrated way of looking at the research problem. The concepts are put together in a framework to provide a broader understanding of the research (Imenda, 2014).

This research established a conceptual framework based on the pyramidal illustration in the figure below. This conceptual framework in Figure 1.3 is designed based on the cognitive processes in Bloom's Revised Taxonomy and the stages in Zone of Proximal Teacher Development (ZPTD). Both are relatively new, and thus far, there is no study that delineates these abovementioned concepts being used to produce a professional development training framework. There are four stages in this step-by-step professional development framework, which are identified as Train-to-Learn Stage 1 (TL1) to Train-to-Learn Stage 4 (TL4).

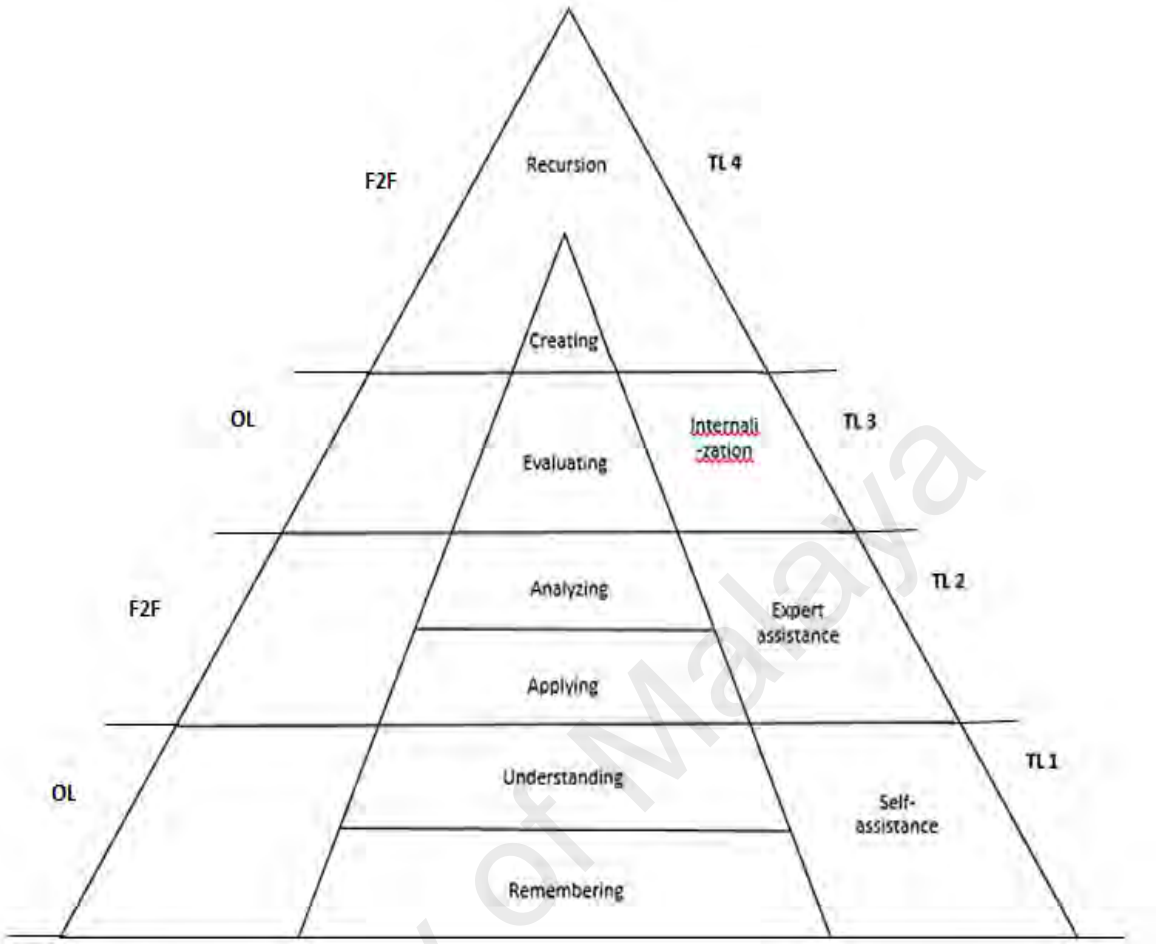


Figure 1.3 A Pyramidal Teacher Professional Development Training

Legends:

TL	Train-to-Learn
OL	Online
F2F	Face-to-Face

Although this framework looks hierarchal and the six cognitive processes in the smaller pyramid are presumed to be arranged according to the increasing complexity, they are actually allowed to overlap one another (Anderson et al., 2001). Both these concepts blend very well in producing a four stages training framework which supports the aim of this study which is to introduce a flipped training module for teachers. The

training was conducted in two different components alternatively: face-to-face (F2F) and online (OL). At the very initial stage (TL 1), teachers were engaged in retrieving relevant knowledge from their long term memory through the processes of recalling and recognizing. Upon retrieval of knowledge, they determined the meaning of instructional messages including oral and graphic communication (Amer, 2006). Lantolf and Poehner (2007) stated, "Our everyday practices are highly influenced by various stages of life by the particular types of activities that our culture makes available to us" (p.14); thus, Warford (2011) who came up with the idea of ZPTD believed that schooling is significant part of human's development and that participants of teaching courses do bring their prior learning experiences with them. Thus, Warford (2011) advocated that before moving to the next stage where they are assisted by subject-matter experts, teachers ought to reflect on their tacit beliefs with regards to pedagogy. The sessions at this stage are mediated by the trainers, but the emphasis is to prompt them to reflect on their prior knowledge through discussions and other tools. For instance, Warford (2011) pointed out that when teachers were asked to critique or analyze their current classroom practices, the trainers were able to identify those practices that falls into the a preferable and known category.

According to Warford (2011), this tuning-in stage is significant as trainers are unable to promote teacher learning without the calibration of the teachers' pedagogical beliefs. He added that if the teachers get carried away with a particular teacher practice which is not significant in this day and age, the trainer ought to make use of interventions to assist the teacher to bridge the gap. Based on the aim of prolepsis instruction, which according to Van Lier (2004) helps create a platform for learners to explore, Warford (2011) suggested that it is essential for trainers to acknowledge the

teachers' prior experiences, and this would eventually lead to the second stage (TL 2) which is more trainer-regulated.

Moving on to the next stage (TL 2), teachers were involved in cognitive processes in which they execute a procedure in a given situation and later break up the material into smaller parts and detect how interrelated these parts are (Amer, 2006). Warford (2011) proposed that the teachers should be exposed to live and videotaped, or field-based demonstration on the strategies to carry out innovative teaching in their classrooms. He further added that to reduce the gap between the real classroom situations and field-based, these thorough interventions ought to be grounded in the experiential concepts and relate to teachers' aspirations of a contemporary classroom which was explored in the earlier stage. Also, for this expert assistance stage especially and the subsequent stages, a dynamic assessment (DA) concept which blends teaching and testing in such a way that it is potential for development is recommended. According to Lantolf and Poehner (2004) who are the proponents of DA, DA provides a kind of instructional intervention which is continuously adjusted to a learners' responsiveness to mediation; thus, Lantolf and Poehner (2004) designated their DA concept to two varieties: an interventionist DA and an interactionist DA. Warford (2011) pointed out that the DA provides a springboard to steer up-and-coming ZPTDs. Since the aim is to conduct a flipped training using the framework in Figure 1, the DA concepts fits well into this stage as it is grounded in Vygotsky's ZPD theory in which learning is emphasized over assessment (Liz & Gindiz, 2003).

After being exposed to contemporary methodologies and strategies through the tools involved in DA, the teachers are then involved in an evaluation process where they make judgments based on the criteria and the standards (Amer, 2006). In this

stage (TL 3), teachers internalize the pedagogical concepts and theories they have been exposed to in the earlier stage (Warford, 2011). He further suggested that videotaped microteaching demonstration is one assignment that should be conducted at this stage. Teachers are able to demonstrate their capability to use the knowledge and skills learnt in the earlier stage as their internalization grows. However, Warford (2011) stressed that recently, writing which was also advocated by Vygotsky (1986) has been proposed as a prominent tool in the area of teacher development; therefore, he encouraged the use of journaling at this stage where teachers reflect on the strengths and needs, and he proposed that trainers should focus on evaluating teachers' journals rather than relying entirely on their microteaching demonstrations.

According to Anderson (2005), the cognitive process 'creating' is the most complex and abstract process, opposing to Bloom's taxonomy where 'evaluation' is deemed as the highest tier on the cognitive process dimension. Amer (2006) described the cognitive process at this final stage (TL 4) as a process in putting elements together to form a novel, coherent whole, or make an original product. As Warford (2011) puts it, this is a recursion stage which in layman term means putting theory into practice. This is a stage where teachers generate a new practice in their classrooms based on the innovative strategies espoused to them throughout the flipped training. Warford (2011) cautioned that discrepancies and conflicts may occur when teachers have to let go their traditional methodologies, but as advocated by Vygotskyan approach, conflicts are seen as a catalyst for development. Nevertheless, Warford (2011) suggested that teachers should work with the peers collaboratively to overcome the conflicts. The process of flipped training does not end at this stage as Reiman (1999) as cited in Warford (2011) argued that the reflection process should be sustained over time to encourage professional growth. Lempert-Shepell (1995) pointed out that teachers

should take the role of a teacher-researcher and consistently investigate learning for their professional development.

Significance of the Study

In the past few years, great emphasis has been put in the improvement of the national school curriculum. One of the major improvements made to the ESL education was to introduce a standard based curriculum; with such great emphasis placed in improving the standards of English in Malaysia, it is vital that the teachers' professional development to stay abreast with the new changes to be taken into consideration. Therefore, the main goal of this study is to improve the English language instruction in Malaysian primary schools as ESL teachers of primary schools have to adopt different approaches given the fact that it is the age of the young learners that makes it unfitting for the teaching of formal concepts, i.e. grammar. Thus, it is widely recognized that teachers' knowledge, skills, and practices are decisive in the success of any teaching career. This study addresses a gap in the recent research of teachers' professional development. Khandehroo et al. (2011) stated that there are very few descriptive research designs about the specific instructional skills that teachers need professional development for. Fatiha, Abdul Razak, and Shanina (2013) reported that novice teachers in Malaysia encounter challenges in the first year of service in teaching as they do not feel equipped enough. Thus, this study zoomed into the professional needs of the ESL teachers of the primary schools in Malaysia, including the novice teachers.

Besides, this research attempted to explore and understand how successful a self-initiated professional development program can be in bringing innovations and reforms to the field of ESL education. The findings of this research may help direct

and plan realistic professional development programs, and at the same time help educational policymakers to better plan for and organize flipped professional teacher professional development (FiT-PD) for ESL teachers and also teachers in other disciplines. The findings of this study arefollowedby recommendations and suggestions for policymakers to consider in improving the teachers' professional development by integrating elements of educational technology and to ensure that they are parallel with the needs of the teachers.

Limitations of Study

Till date, there is an apparent lack of literature in the area of flipped professional development. In Malaysia, researches on the flipped method in the classroom setting is scant. Therefore, there are no existing models or frameworks of flipped professional development to ground this study. In addition to that, teachers in Malaysia are only accustomed to the top-down approach in professional development programs; hence, the participants faced challenges in familiarizing themselves with a self-initiated approach in a professional development program.

Also, the participants of this research were reluctant to participate in this training due to the heavy workload they have in schools. Hence, the teachers had to be personally motivated to participate in the training. Though some teachers attended the first one or two sessions, they could not attend or participate in the following sessions due to the week-long courses they had to attend.

Definition of Terms

Applied Cognitive Task Analysis (ACTA). A streamlined method of CTA that consists of three interview methods that help the practitioner to extract information

about the cognitive demands and skills required for a task (Militello & Hutton, 1998). In this study, the Applied Cognitive Task Analysis (ACTA) was used to obtain the experts validation on the Flipped Teacher Professional Development module that was designed.

Design-Based Research (DBR). A series of approaches, with the intent of producing new theories, artifacts, and practices that account for and potentially impact learning and teaching in naturalistic settings (Barab & Squire, 2004). There are four main phases in a design-based research; however, in this study, the phases were modified to introduce a robust and thorough research design.

English as a Second Language (ESL). The term for the use or study of the English language by non-native speakers in an English speaking environment. The national language in Malaysia is Bahasa Melayu, and English is a compulsory language taught in primary and secondary schools. Thus, the participants of this study are teachers who teach English in national primary schools.

Flipped Learning. An instructional strategy that reverses the traditional learning environment by delivering the instructional content, often online, outside of the classroom. It moves the activities that were traditionally considered homework, into classroom. In this study, the concept of flipped classroom was used to introduce a flipped professional development for teachers.

Flipped Teacher Professional Development (FiT-PD). This term was coined in this study. A flipped teacher professional development reverses the traditional professional development training by delivering the content on an online platform before conducting hands-on activities during a face-to-face session.

Professional Development (PD): Any activity that is intended partly or primarily to prepare paid staff members for improved performance in present or future roles in the school districts (Little, 1987).

Summary

It is inevitable that school and educational reforms rely on teacher learning which eventually improve students learning, and education reform is synonymous with teacher professional development. Therefore, the research problem is highlighted, and the research objectives are developed to address the existing problems in the teacher professional development in Malaysia. To address the problems, a flipped professional development training is proposed, and the conceptual framework of the study is established the constructivism approach; the Flipped Teacher Professional Development (FiT-PD) training framework for the primary school English teachers is grounded using the cognitive processes in the Bloom's Revised Taxonomy and the stages in the Zone of Proximal Teacher Development (ZPTD).

CHAPTER 2

LITERATURE REVIEW

Introduction

This chapter begins with the review on teaching English as a Second Language (ESL) in Malaysian primary schools, and later focuses specifically on teacher professional development and discusses its significance to the teaching profession. Several gaps have been identified throughout the study of the wide literature in this area, and as such, the following review of literature is threefold, focusing on studies that: (1) explore the evolvement and changing paradigms of the professional development trends and approaches, (2) discuss the core features of effective professional development, and (3) identify ways to evaluate the effectiveness of professional development programs.

English as a Second Language (ESL) in Malaysian Primary Schools

In tandem with educational reforms all around the world, there is a noticeable effort in improving the standards of English language teaching in Malaysia. Although it is not compulsory to obtain a pass in the English subject at the primary and secondary levels, the Malaysian government has countless times introduced new policies and changes to enhance the standards of English, and one of them was to teach Science and Mathematics in English. However, due to strong criticisms and a great resistance from Malaysian nationalists, the policy was reversed starting 2012 (Hardman & Nurhaslynda, 2014). One major policy shift took place when a standard-based curriculum was introduced in 2011, replacing the integrated-based curriculum. Beginning 2011, students in primary one were introduced to *Kurikulum Standard*

Sekolah Rendah (KSSR).

The integrated-based curriculum (KBSR) was aimed to provide a basic understanding of English language (Malaysian Curriculum Development Division [BPK], 2003); on the other hand, the standard-based curriculum was introduced to equip students with basic language skills – reading, writing, speaking and listening from primary one (BPK, 2012). The KSSR curriculum is taught using a modular approach, and it was designed to place more emphasis on phonics, language arts and penmanship (Warid, 2015). Also, 'entrepreneurship' as well as 'creative and innovation' are two new additions to the educational emphases. The onset of globalization and a knowledge-based society has spurred the new restructurings that are made to the English curriculum (Hazita, 2015).

Thus, the inception of the standard-based curriculum was aimed at improving the English literacy among Malaysians, and it is vital to note that one major focus of the reform is to attain a 90% literacy by the end of primary 3. The Education Ministry has expanded the Literacy and Numeracy Screening (LINUS) program to include English language as an effort to help pupils acquire the basic language skills. The LINUS program is an early intervention that is carried out from primary one to three to help remedial students to progress at an expected pace and catch up with the mainstream pupils (Teoh, 2014). Hazita (2015) in her paper reported that there was a slight improvement in the English literacy that was introduced as LINUS 2.0 in 2013; the attainment at year one was 59%, 75% at year two, and 83% in year three. Despite the improvement, a score below 90% is deemed unsatisfactory; thus, further interventions are required to address the existing issues.

It is indisputable that the inception of the standard-based curriculum has brought about some hiccups in the process of teaching and learning of English in primary

schools. English teachers, unlike Mathematics and Bahasa Melayu teachers, are expected to double up as remedial teachers, and thus they put in extra effort in preparing separate lessons or approaches for the remedial and mainstream students. Besides, teachers have also lamented that there is a need for the right remedial content and a separate remedial environment (Hazita, 2015). In addition to that, teachers have also asked for expert guidance and support and also assistance as they do not have enough help and time in preparing the teaching aids for the remedial sessions (Ahmad & Mutalib, 2015, Bokhari, Sabariah, & Chan, 2015). Not only that, Hazita (2015) mentioned that teachers have also asked for more professional development programs that could help them improve their own language proficiency. According to Warid (2015), the language skills in the KSSR textbooks are pitched higher than what most students can comprehend, and he asserted that there is an apparent lack in guidance and support provided to teachers in rural and indigenous schools.

Parallel to the inception of the standard-based curriculum in 2011, the Education Ministry introduced a School Based Assessment (SBA) to move from the prevailing exam-oriented culture in Malaysia. Tan and Samyudia (2009) said that Malaysian students are generally taught to drill and memorize; thus, they face difficulties in applying knowledge into practice. Norzila (2013) pointed out that the introduction of SBA in schools is aimed to fulfill the aspiration of the National Education Philosophy in developing learners' physical, emotional, spiritual, and intellectual abilities holistically. Therefore, SBA was implemented to assess students' performance through formative assessments that are carried out in-class, and at the same time to reduce the over-reliance on summative and centralized examinations (Md Ali, Arsaythamby, & Hariharan, 2015). SBA not only assesses the learning outcomes, but it also assesses the learning processes that take place in class.

The implementation of the SBA system has definitely imposed extra burden to all teachers, but especially teachers who have to adapt to the changes in curriculum as well as the changes in the assessment system (Norzila, 2013). One major hiccup in carrying out a SBA is that teachers are not provided with adequate information and trainings to enhance their skills in developing the various formative assessments and in conducting reliable and valid testing of such assessments (Faizah, 2011; Gopala et al., 2014; Md. Ali et al., 2015). Secondly, Norzila (2013) pointed out that changes are often mandated in a top-down approach without taking teachers' readiness into account; she further lamented that the dissemination of knowledge regarding SBA to teachers was unsuccessful and has yielded unsatisfactory results. Md Ali et al., (2015) concurred that teachers face many uncertainties on the types of assessments encompassed by SBA.

One notable deficiency of the implementation of SBA in schools is the time constraint faced by teachers that is brought about by the extra workload that it brings. Besides their teaching duties, they spend so much time keying in data, filing, preparing assessments (Faizah, 2011; Gopala et al., 2014; Md. Ali et al., 2015; Yip & Cheung, 2005). Therefore, it is recommended that teachers should be exposed to more 'domain-specific' and 'subject-focused' trainings to help them deal with the challenges and at the same time fulfill their needs (Md Ali et al., 2015).

Teacher Professional Development

Professional development in education dominates the research literature. The following review of literature includes the work of several scholars to provide an in-depth and broad understanding of the nature of teacher professional development, specifically in the field of education. With the advent of technology, teachers have to

keep abreast of the educational reform developments that are taking place internationally. There is a consensus among educational researchers that professional development is one of the important component in the efforts to improve education (Bredeson & Johansson, 2000; Bredeson, 2003; Housley, Love, Stiles, Mundry & Hewson, 2003; Hammerness et al., 2005; Justi & Driel, 2006). Guskey (2002) added that we live in the day and age where professional development has become a fundamental component in almost every proposal in enhancing the quality of education. Most professional development programs share a common goal to change the professional practices, beliefs, and understanding of teachers towards an articulated end despite the variances in term of their content and format (Griffin, 1983). Professional development programs have plenty effects on the on-going facilitation and stimulation of teachers' professional growth (Abell, 2008) although it is almost impossible to attest the repercussions of specific professional development programs. Gall and Renchler (1985) described professional development more explicitly as "efforts to improve teachers' capacity to function as effective professionals by having them learn new knowledge, attitude, and skills.

However, Garmstone (1991) commended the description of professional development by Gall and Renchler as it portrays teachers merely as "empty vessels" that need to be filled with knowledge, attitude, and skills through professional development initiatives. Feimen-Nemser (2001), on the other hand, typifies teacher development as more of a self-directed professional growth that comes from learner's interests and needs. Several others view development as a mean to bring about a change, and by that, they mean an educational change (Fullan, Hill, & Crevola, 2006; Warren-Little, 2001). To quote Benjamin Franklin, "There is nothing certain except death and taxes", and Roettger (2006) adds that the third certainty is change. One of

the 10 root causes of frustration for America's schools is change with no improvement (Jenkins, 2004). Jenkins believes that the word improvement is an essential substitute for change; thus, one of the most fundamental component of education is to improve continuously rather than change; Roettger (2006) concurs that "change must be synonymous with improvement". Kwakman (2003), however, supported that it is fundamental for teachers to continuously experience professional development throughout their career. According to Kwakman (2003),

> *Keeping up is a core responsibility of professionals, as the professional knowledge base underlying professional work does rely on the input of new information since it is subject to continuous improvement. The main aim of reading is keeping up to date with new insights and developments influencing the professional field such as new subject matter, new teaching methods and manuals, new pedagogical approaches, but also new societal developments which have an impact on education and teaching in general (p.153).*

Several other researchers propose an integrative approach of professional development (Day et al., 2005; Goodall et al., 2005; Lieberman & Miller, 2000, 2001). Dean (1991) emphasizes that teacher professional development should be strongly grounded to the theory. Goodson (1997) supports that a theory oriented approach is significant to teachers' professional development, and six studies on teachers' professional learning as reported by Timperly, Wilson, Barrar, and Fung (2007) showed that professional learning which had less emphasis on theories brought about lower outcomes for the learners. Thus, embedding the professional development with theories does have some implications on the teaching practice.

Dominant Model for Teacher Learning

Clarke and Hollingsworth (2002) pointed out that it is essential for teachers' professional development researchers to comprehend the fundamental learning

processes that support teachers' learning; also, the researchers should understand the conditions in which learning processes occur (Wongsopawiro, 2012). Since teachers play a vital role in implementing new curriculum in classrooms (Fullan, 1998), the new knowledge a well as attitude and beliefs should be parallel with the demands of the curriculum (Cotton, 2006; Pinto, 2005). Guskey (2002) stated that most teachers claim that they participate in professional development programs to be better teachers; it is the most encouraging path to advancement of the job (Fullan, 1991, 1993), and it is also a route to a better competence and also increased professional satisfaction (Huberman, 2009). Thus, teachers believe that professional development programs will magnify their knowledge and skills, contribute to their professional growth, and at the same time, heighten their effectiveness with students (Guskey, 2002). Fullan and Miles (1992) agreed that teachers participate with the intention to develop specific and concrete ideas that can benefit them in their classrooms. Regardless of any other criteria, students' behavior's and activities are the indicator of a teachers' effectiveness in a classroom (Harootunian & Yargar, 1980; Fullan, 1999; Fullan & Hargreaves, 1996); Guskey (2002) further advocated that teachers perceive their accomplishment based on students' learning outcomes.

Model of teacher change. The review of this literature highlights the Guskey's (1986) model of teacher change. Guskey (1986) developed a model of teacher change describing the processes that teachers go through in a professional development program.

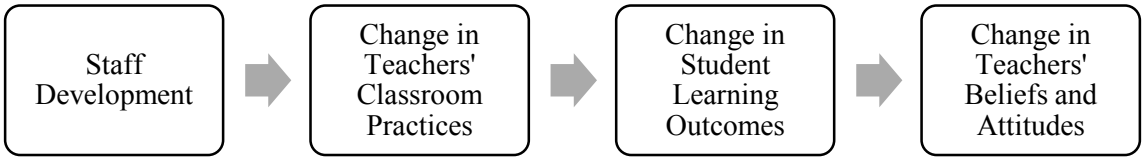


Figure 2.1 Model of teacher change (Guskey, 1986)

This paradigm of teacher change as illustrated in Figure 2.1 evolved from Lewin's (1935) model, an early change theorist who originated his ideas from psychotherapeutic models (Guskey, 2002). Professional development trainings in the past revolved around teachers changing their beliefs and attitudes before they made changes to their classroom practices (Guskey, 1986); however, Guskey's model suggests a reversed order (Laughridge, 2011). Guskey (2002) claimed that programs that advocate a change in attitudes and beliefs precedes changes in instructional practices are strategized to gain commitment and zest from teachers before they can put the new ideas into practice. However, Guskey (1986) proposed this linear model that illustrates a process whereby professional development programs first results in changes in teachers' classroom practices, which eventually leads to changes in students' learning and finally, a change in teachers' attitudes and beliefs (Wongsopawiro, 2012).

The support for this model stemmed from various sources (Guskey, 2002); teachers tend to believe in the new ideas and strategies only after they have seen them work effectively in their classrooms, thus coming to a consensus that change in beliefs and attitudes is preceded by a change in behaviour (Huberman, 1981; Bolster, 1983; Crandall et al., 1982; Fullan, 1985). However, Crandall et al. (1982) noted that in most

cases they studied, the new ideas and practices lost their efficiency when teachers modify them beyond recognition.

Despite the support by the proponents of Guskey's (1986) model, Clarke and Peter (1993) contended it for depicting the process of teacher change as a strictly linear sequence; research on teacher change cautioned that this model is not precise and inadequate when considering professional development programs for teachers with more experience (Huberman & Crandall, 1983; Huberman & Miles, 1984; Guskey & Huberman, 1995; Coenders, 2010). The process in which teacher changes occur is more cyclical than linear (Huberman, 1992, 1995); more changes, which are spurred by changes in attitudes and beliefs are ought to take place (Huberman, 1995). Wangsopawiro (2012) in his study also reported that teacher change, according to other researchers (Borko, 2004; Clarke & Hollingsworth, 2002; Desimone et al., 2002), is not a linear process; teacher learning is a complex learning process in which teachers are involved both actively and meaningfully. Fleet and Patterson (2001) pointed out that the process is dynamic, and it is composed of interactions and experiences among individuals in a complex setting. Coenders (2010) pointed out that cyclic models have been proposed since the linearity of Guskey's (1986) model has been questioned. Teacher change besides being regarded as a progress in learning, is also conceptualized as a natural and an expected outcome of teachers' professional development (Coenders, 2010).

The Paradigms of Teacher Professional Development

Indisputably, professional development for teachers can take many forms. Birman, Desimone, Porter and Garet (2000) stated that professional development falls under two basic categories which are the (i) traditional professional development and

(ii) reform-type professional development. The traditional professional development uses "one-shot" workshops as a medium to equip teachers with the knowledge and skills they need; workshops, which are undeniably the most common type of professional development receives the most criticisms among all (Garet, Porter, Desimone, Birman, & Kwang, 2001). Guskey (1986) elaborated that this type of professional development which was introduced during the post-depression era implied a gap in teacher skills and knowledge. Several researchers have shown evidence on the failure of such "one-shot" workshops (Fullan & Stiegelbauer, 1991; Johnson, 1989; Lovitt & Clarke, 1988).

Apart from workshops, other forms of traditional professional development that share the same features as workshops include institutes, courses and conferences (Garet et al., 2001; Little, 1993) as well as district training, out of district training and post graduate courses (Desimone, Porter, Garet, Yoon & Birman, 2002). These traditional forms of professional development are usually conducted by leaders with expertise in their respective fields (Garet et al., 2001); however, Boyle, While and Boyle (2004) criticized that teachers learn about topics that are irrelevant to them by passively listening to these experts. These traditional forms are also criticized for failing to spur a change in teachers' competence and teaching practice (Boyle et al., 2004; Day & Sachs, 2004; Desimone, 2011; Hawley & Valli, 1999; Kwakman, 2003; Loucks-Horsley, Hewson, Love, & Stiles, 1998).

The ineffectiveness of these traditional forms of professional development has brought about the drive for more research on professional development (Clarke & Hollingsworth, 2002). As a consequence, an alternative to the traditional form is the "reform" form of professional development which include programs such as mentoring and coaching (Garet et al., 2001). Reform activities, unlike workshops, take place

during school time, or sometimes even in classroom, and advocates of the reform form believe that such programs may be easier to sustain over they are carried out within the working context (Garet et al., 2001; Sparks & Hirsh, 1997). As quoted from Wilson and Berne (1999):

> *Some learning, no doubt, goes on in the interstices of the workday, in conversation with colleagues, passing glimpses of another teacher's classroom on the way to the photocopying machine, tips swapped in the coffee lounge, not to mention the daily experience of the classroom (p.174).*

Reform activities are also more responsive to how teachers learn (Ball, 1996), and to their needs and goals (Darling-Hammond, 1997). Kwakman (2003) further supported school as a suitable place for teachers to acquire professional learning through their teaching practice. Researchers claimed that the effectiveness of the reform-type professional development can be seen in terms of changing instructional practices (Hawley & Valli, 1999; Helmer, Bartlett, Wolgemuth & Lea, 2011). However, Ball and Cohen (1999) in their argument countered that learning opportunities are spurred by documentation of effective teaching practices.

Issues and Challenges in Traditional Teacher Professional Development

Many of these traditional (face-to-face) professional development programs that are initiated to equip teachers with knowledge and skills have been futile for numerous reasons (Fullan, 2001; Gordon, 2004; Tinoca, 2005; Wongsopawiro, 2012). Only a mere 12 to 27 percent teachers have seen an improvement in their teaching after attending such professional development activities. Researchers stated that teachers are not voluntarily participating, but are often mandated and obliged to attend the workshops where the programs are characterized by "one size fits all" approach, topics are totally unrelated and are too broad to be applied in classroom settings (Peery, 2002;

Redding & Kamm, 1999; Tinoca, 2005). They are unmotivated to participate as they are not provided any platform or opportunities to express their needs and interests as well as the problems they face in classroom (O'Brien, 1992, Wongsopawiro, 2012); thus, they feel disconnected from the learning experience planned for them (O'Brien, 1992). The designers fail to fit in teachers' practical knowledge in the process of developing the programs (Van Driel et al., 2001; Haney et al., 1996; Klinger, 2000, Wongsopawiro, 2012). Besides, Radford (1998) highlighted that the professional development programs which emphasize on the lecturing strategy are very common and reflect a choice of methodology which is poor and not innovative. Lynch (1997) advocated the ineffectiveness of traditional professional development programs since the ideas and strategies suggested during the programs are not implementable in reality. The new reforms and ideas may sound innovative and interesting, but they can hardly be implemented in real classroom setting, and this happens owing to lack of opportunities provided to teachers in experimenting the new reform themselves. Not only this, Hayes (1997) and Hopkins (1986) identified time constraint and lack of incentives as a reason to not attend traditional professional development programs. However, Guskey and Kwang (2009) described the workshops as a waste of time and money as there rarely is a follow-up workshop to provide sustained support or to get feedback from teachers. They added that most of these workshops are poorly organized and tend to focus on unproven ideas. Bredeson (2002) pointed out that lack of time, money, and appropriate structure contributes to the failure of a continuous learning opportunity for teachers to refine their knowledge and practice.

Effective Teacher Professional Development

Teacher professional development, be it face-to-face or online, can tremendously improve teacher quality by enhancing their pedagogical skills provided that it is conducted under the right conditions (Desimone, 2009; Timperly, 2008; Timperly & Alton-Lee, 2008). Effective professional development refers to professional development programs that are able to bring a change in teachers' teaching practice which results in improved student achievement (Odden, Archibald, Fermanich & Gallagher, 2002). Joyce and Showers (2002a) have outlined some features of successful professional development programs: clear, specific goals and objectives, engage teachers intellectually, actively involve participants, consist of multiple sessions over an extended period of time, and finally, allow teachers to practise and adopt new strategies. According to Hiebart (1999),

> *Research on teacher learning shows that fruitful opportunities to learn new teaching methods share several core features: (a) ongoing (measured in years) collaboration of teachers for purposes of planning with (b) the explicit goal of improving students' achievement of clear learning goals, (c) anchored by attention to students' thinking, the curriculum, and pedagogy, with (d) access to alternative ideas and methods and opportunities to observe these in action and to reflect on the reasons for their effectiveness (p. 15).*

However, Desimone (2009) argued that there is a plethora of experiences that could be regarded as teacher learning, which undeniably makes it difficult to measure the effectiveness of a professional development program. This similar view was shared by Borko (2004) who also pointed out that the myriad of contexts in which teacher learning occurs makes measuring teacher learning challenging. Teacher learning can even take place in the teacher's own classroom via self-reflection or other expert's

observation of the teacher's pedagogical skills (Putnam & Borko, 2000). As pointed out by Borko (2004):

> *For teachers, learning occurs in many different aspects of practice, including their classrooms, their school communities, and professional development courses or workshops. It can occur in a brief hallway conversation with a colleague, or after school when counseling a troubled child. (p.4)*

Thus, Desimone (2009) in her paper proposed a need of having a measurement of core features of professional development so that the abovementioned challenges could be addressed. In efforts to strengthen the knowledge and skills of teachers, Desimone (2009) in her study suggested that there are five characteristics that are paramount in teacher learning: content focus, active learning, coherence, duration, and collective participation or cooperation as tabulated in Table 2.1.

Table 2.1

Features of an effective professional development (Desimone, 2009)

Characteristics	**Definition**
Content focus	Having the knowledge on the particular subject and knowing how learners can acquire this knowledge
Active learning	Observing expert teachers or being observed personally with subsequent interactive discussion and feedback
Coherence	The content in teacher learning and its consistency with teachers' prior knowledge
Duration	Development activities should last for a certain period (20 hours or more contact time between participants)
Cooperation	Teachers learn together from one another (collective participation)

Other researchers (Blank, de las Alas, & Smith, 2007; Corcoran, 2007; Luft & Hewson, 2014; Wayne, Yoon, Zhu, Cronen & Garet, 2008) have agreed to these five core features of effective professional development. Desimone (2011) later proposed that these five features of effective professional development can be used to assess the effectiveness of any professional development programs. Blank, de las Alas, and Smith (2008) as cited in Ho, Jungju, and Bong-Woon (2013) have analyzed several findings conducted on 24 professional development programs and has come to a consensus that these five features of effective professional development has a positive correlation with both the teaching practice and student achievement.

As summarized from Desimone (2009), the type of activity, be it workshops or study groups, does not spur changes in teacher learning, pedagogical skills or student

achievement, but rather it is the features of a professional development activity that makes it effective; this has been supported by a study of a national probability sample of teachers which suggested that it is the characteristics of the program that matters (Desimone et al., 2002; Garet et al., 2001). Studies also show that effective professional development brings about a positive outcome in student achievement (Buczynski & Hansen, 2010; Desimone, 2009; Johnson, Kahle & Fargo, 2007; Wallace, 2009; Yoon et al., 2007).

Therefore, given the fact that there is a consensus on a core set of features as tabulated above, these features are proposed to be included in studies of the effectiveness of any professional development programs (Desimone 2009, 2011). In fact, recent studies have attempted including these core features as components of effective professional development (Jeanpierre, Oberhauser & Freeman, 2005; Johnson et al., 2007; Penuel, Fishman, Yamaguchi, & Gallagher, 2007).

Content focus. Garet et al. (2001) lamented that despite having an extensive literature on professional development, the area on the content of professional development programs is often neglected. Studies have found that teachers' professional development is regarded as a component to enhance teachers' content knowledge as well as their pedagogical skills (Birman et al., 2000; Desimone et al., 2002; Timperly et al., 2007; Odden et al., 2002). Guskey (2003) and Odden et al. (2002) explained that teachers, through effective professional development programs, should be able to gain an extensive understanding on the content they teach, the ways students can learn the content best, and the challenges students may face while learning the content. King and Newmann (2000) reported that teachers are never involved in the planning of the professional development programs and they are normally dictated by the school or district authorities; teachers lamented that they find no connection

between their professional development content and their classroom needs (Murphy, 2000); thus, it is essential that the programs must be matched to teachers' instructional practices and are based on student learning (Sparks, 1997). Trainings or programs that are disconnected from school goals will not be able to cater to teacher's needs (Killion, 1999). Also, programs without a strong content component often fail to change teacher practices (Cohen & Hill, 2000).

Hence, professional development programs should elicit input from teachers to ensure the effectiveness of the programs (Clarke & Hollingsworth, 2002; Gerard, Varma, Corliss, Linn, 2011). Professional development programs should emphasis on enhancing teachers' knowledge, skills and attitudes so that it brings a positive outcome to student learning (Fishman, Marx, Best & Tal, 2003). Hence, Belland, Burdo and Gu (2015) proposed that teachers should be included in the brainstorming of the content so that they can incorporate new ideas and connect their learning to their existing teaching schema. Nonetheless, Joyce and Showers (2002b) mentioned that besides acquiring the knowledge and skills from the training programs, it is essential for teachers to be able to transfer the knowledge they acquired to the classroom practices. Kennedy (2000) stated that the best professional development programs are those which do not prescribe routines on how to teach but rather about the content they will be teaching and how students can learn best from the content using teachers own practices; this is known as the pedagogical content knowledge (Shulman, 1986). Desimone (2009) regarded the pedagogical content knowledge as the core characteristic of effective professional development. In brief, Borko (2004) cited that teachers can deepen their content knowledge and improve on their instructional practices through high quality professional development programs, and to be able to teach well, they should have a rich and flexible knowledge on their subject matter.

Active learning. There are several ways to promote active learning in professional development: teachers can observe expert teachers or be observed by them, review students work, participate in discussions to share ideas to improve pedagogical skills, develop and present lessons as well as get engaged in coaching and mentoring (Banilower & Shimkus, 2004; Birman et al., 2000; Blank et al., 2008; Corcoran, 2007; Desimone, 2009, Garet et al., 2001). The traditional professional development has been criticized for not providing a platform for active learning that is perceived to help sustain the improvements teachers make on their knowledge and skills (Fullan & Mascall, 2000). Thus, Desimone (2009) suggested that teachers should be actively involved in their own learning, and several researchers suggest that it is equally important for teachers to reflect upon their own teaching practice (Heller, Daehler, Wong, Shinohara, & Miratrix, 2012).

Researchers in this field suggest that professional development programs need to provide teachers a platform for active learning (Harris, Cale, & Musson, 2011; Villegas-Reimers, 2003). In fact, studies have shown a positive correlation between active learning through professional development and teacher knowledge and teaching practice (Desimone et al., 2002; Ingvarson, Meiers, & Beavis, 2005).

Coherence. Birman et al. (2000), DuFour (1997) and Garet et al. (2001) mentioned that most new professional development programs are criticized as they fail to synchronize with previous programs. Birman et al. (2000) argued that professional development programs are effective in enhancing teacher knowledge and skills when they are coherent with the opportunities for teacher learning. A number of researchers highlighted that the professional development programs should be consistent and aligned with the national, state, district, and school policies and standards (Desimone, 2009, 2011; Penuel et al., 2007). Garet et al. (2001) elaborated three dimensions to

assess the coherence in teacher professional development program: (1) the alignment between the teacher professional development program with teachers' goals and previous activities, (2) the alignment of the content and pedagogy with the state and district standard and assessments, and (3) the ways in which the professional development activity encourages ongoing discussion with teachers who are also trying to improve on their pedagogical skills.

Birman et al. (2000) conducted a survey with 1000 teachers from the Eisenhower professional development program and found out that teacher learning and classroom practice significantly improve when there is coherence in the professional development activity. "By engaging teachers in active work and by fostering a coherent set of learning experiences, a professional development activity is likely to enhance the knowledge and skills of participating teachers" (Birman et al., 2000). Hence, professional development programs should engage teachers in planning changes in their classroom as well as helping them in identifying the potential challenges they may face when they make changes in their classrooms (Ottoson, 1997). As teachers initiate changes in their teaching practice, mentoring and coaching them is necessary (Grierson &Woloshyn, 2013; Luft et al., 2011; Smith & Ingersoll, 2004); supporting them by providing feedback to their needs and changes also help in improving their teaching practice (Grierson &Woloshyn, 2013).

Duration. It is fundamental that the professional development programs are sustained over time for two reasons; firstly, longer programs allow more opportunities for in-depth discussion on the content and instructional strategies, and secondly, teachers would be able to practise new content in their classroom and obtain feedback (Garet et al., 2001). Professional development programs such as short workshops that have little follow-up does not have much effect on teachers (Pianta, 2011; Spillane

2002). Lawless and Pallegrino (2007) conceded that high quality professional development programs which include follow-up activities should be longer in duration. Similarly, other researchers pointed out that activities conducted in longer duration provide more subject area content focus, more chances for active learning to take place and also more coherence with teachers compared to shorter duration activities (Birman, Desimone, Porter, & Garet, 2000; Lefever-Davis, Wilson & Moore, 2003; Lynch, 1997); programs conducted in a longer duration is more efficient in bringing about a change in teaching practice (Banilower, Heck, & Weiss, 2007; Gerard et al., 2011).

Guskey (1999) however, stressed that providing extra time for professional time does not guarantee effectiveness of the program unless the extended time is carefully organized and structured to maximize teachers' participation in the programs as well as the follow-up activities.

Besides support and resources, teachers must also be provided with ample time to help them introduce new pedagogical skills in the classrooms (Joyce & Showers, 2002a; Joyce & Showers, 2002b; Odden et al., 2002). DuFour (1998) found out that teachers that get limited opportunities for practice often are unable to gain the mastery of the knowledge and skills. Thus, Joyce and Showers (2002b) recommended that teachers need about eight to ten weeks of practice before they can successfully transfer the new knowledge and skill content into their classrooms. Gerard et al. (2011) mentioned that to see the impact of professional development towards the teaching practice, we ought to wait approximately a year. On the other hand, to see the effects of professional development on students' achievement, the program should include fourteen contact hours or more (Yoon et al., 2007).

Cooperation/ collective participation. Working together provides opportunities to teachers, particularly from the same school, to discuss problems that emerge during their teaching experiences, and this helps them to sustain the changes made to their pedagogical skills (Desimone, 2009; Garet et al., 2001, Hochberg & Desimone, 2010; Singh & McMillan, 2002; Odden et al., 2002). Supovitz (2002) concurred that teachers at all levels look forward to opportunities that allow them to work together and share ideas, strategies, and expertise. Research shows that teachers, particularly from the same field collaborating together promotes discussions that eventually lead to change in teaching practice (Banilower & Shimkus, 2004; Birman et al., 2000; Borko, 2004).

Lawless and Pellegrino (2007) stated that collaboration among teachers brings about successful professional development programs. Several studies conducted have vouched for the positive correlation between teacher collaboration and teaching practice (Desimone et al., 2002; Hargreaves, 1995; Penuel et al., 2007). Professional development programs, be it face-to-face (Little, 2003; McLaughin & Talbert, 2001) or online (Barab, Kling, & Gray, 2004; Schager& Fusco, 2004) are effective when there are collaborative communities.

Online Teacher Professional Development (OTPD)

Bransford et al. (2000) claimed that teachers, training facilitators and researchers should move beyond the traditional professional development programs by finding new pedagogies that are offered by the implementation of information and communication technology. With the availability of a wide range of technological devices, online teacher professional development (OTPD) programs have been proliferating (Brown & Green, 2003; Dede, 2006; Mandinach, 2005; O'Dwyer, Carey,

&Kleiman, 2007; Reeves & Pedulla, 2011). Researchers asserted that a few of these OTPD courses have brought upon a remarkable progress in teacher knowledge as well as the quality of teaching and learning (Chitanana, 2012; Masters, DeKramer, O' Dwyer, Dash, & Russell, 2010). Taking into account of the myriad of benefits OTPD offers (Brown & Green, 3003; Carter, 2004), OTPD was introduced to eliminate the barriers that were caused by traditional professional development programs (Jackson, 1999; Reeves & Pedulla, 2011). Roskos, Jarosewich, Lenhart, and Collins (2007) in their paper highlighted that OTPD has the potential of transforming professional development programs from "now and then" to more frequent, consistent and continuous programs.

Capitalizing on the Internet as the prime vehicle and with emerging technologies, OTPD is a promising platform that is known to be convenient with an advantage of "anywhere anytime" access (Carter, 2004; Harlen & Doubler, 2004; Swenson & Curtis, 2003; Vrasidas & Zembylas, 2004). The Internet has revolutionized education by providing opportunities to access information (Glassman & Kang, 2012), and it has also provided a social platform for people to engage (Boyd & Ellison, 2008). Thus, the use OTPD can provide courses and learning opportunities to teachers via online interactions with other teachers or facilitators (Treacy, Kleiman, & Peterson. 2002); it is also a platform that supports collaboration among teachers in the virtual community (Chapman, Ramondt, & Smiley, 2005; Park, Oliver, Johnson, Graham & Oppong, 2007). Also, OTPD promises a flexibility and support by helping teachers learn in their own convenience to the extent that they can even access resources that may not be locally available (Dede, Ketelhut, Whitehouse, & McCloskey (2009). In brief, Fishman et al. (2013) stated that OTPD offers professional development opportunities

to teachers in rural and isolated areas without having them to gather in a place to attend the programs.

To add on, a study conducted by Reeves and Li (2012) found that teachers participating in OTPD have shown a favorable attitude towards online-mediated professional development programs. The same study reported that teachers are amply prepared for online-mediated professional development.

Issues and Challenges in Online Teacher Professional Development

Nevertheless, similar to traditional professional development, research conducted has shown that OTPD presents a number of shortcomings and barriers (Dede et al., 2009; Ginsberg, Gray & Levin, 2004). Despite the exponential growth of emerging technologies and the Internet, studies have shown that teachers have used them limitedly (Rolando, Salvador, Souza & Luz, 2014). The analysis of collaborative activities on blogs has shown very little interest by teachers (Carvalho, 2011). Owing to the fact that technology such as Internet is a huge part of the delivery of online professional development programs, the computer skills of the trainers and teachers are of concern (Reeves & Li, 2012; Roskos et al., 2007); such concerns regarding the computer competency of teachers also exist in the literature of general online learning (Muilenberg & Berge; Tallent-Runnels et al., 2006). Rolando et al. (2014) cautioned that in spite of the exposure provided by researchers on the prospects of a social platform for educational benefits (Martin et al., 2011), it has failed to highlight the ways teachers can make use of these social tools to assist in the professional development of their peers.

Besides computer competency of participants, the access to a computer with reliable Internet connection also provides a challenge towards implementing online

professional development programs (Treacy, Kleaman & Peterson, 2002). Treacy et al. (2002) added that the primary benefit of online professional development which is to provide an "anytime, anywhere" access to learning will be futile without reliable Internet connection.

Studies Comparing Face-To-Face and OTPD

In spite of using the same pedagogical design, content and context, face-to-face professional development and OTPD differs from one another in terms of the media (Fishman et al., 2013); however, Clark (1983) asserted that different outcomes should not be expected when the only change is the medium of delivery. Nevertheless, in an elaboration by Fishman et al. (2013), it can be countered that OTPD provides teachers the flexibility in time to focus on whatever that matters to them whereas in face-to-face professional development, teachers are able to share their practical experiences with others.

A study conducted by Powell, Diamond, Burchinal and Koehler (2010) found no differences between a face-to-face professional development and OTPD; both showed similar improvements in students learning; nonetheless Powell et al. (2010) asserted that OTPD is indisputably a potential alternative to traditional professional development. In another experimental study by Masters et al. (2010) on fourth grade English Language Arts (ELA) teachers, the control group received no professional development but was almost to carry out normal learning activities whereas the other group was provided OTPD opportunities; results from pre-test to post-test showed that teachers who received OTPD had a significant knowledge growth compared to the control group. Also, Fisher, Schumaker, Culbertson and Deshler (2010) conducted a study using a randomized controlled trial design to examine teachers' learning on

utilizing a concept mapping technique to support student learning; in that study, teacher were randomly assigned to either receive an online or a face-to-face professional development. Those assigned with online professional development were given training materials on a CD-ROM which consisted lesson plans and interaction opportunities with facilitators, and the same content was given to the face-to-face workshop participants over the duration of two sessions. No differences were identified between the groups, and both showed significant knowledge growth and improvement.

The recent study by Fishman et al. (2013) also showed no significant differences between the conditions that are provided with the same content as discussed in the studies above. In their paper, they also elaborated that there is no relationship between the time a teacher spends online and the outcome as OTPD is not a "one size fits all" in terms of participation; teachers, however, can move as fast as they want to benefit faster from the materials. Some researchers (Dede et al., 2009; Kleiman, 2004; Means, Toyama, Murphy, Bakia, & Jones, 2009) mentioned that OTPD is more cost-effective than face-to-face condition; however, Fishman et al. (2013) confuted that the cost is highly dependable on the context. For instance, if a program is designed for a limited time in one geographic area, face-to-face workshop would be a better choice in terms of costing; in comparison, if the program is conducted over time and/or repeatedly with teachers who are geographically distributed, OTPD will be more efficient and cost-effective.

Flipped Classroom and Flipped Learning

"If we are to remain relevant, we must embrace change (Slomanson, 2014, p.95). Flipped learning, which is also referred as blended learning and hybrid learning, shifts direct instruction from a group learning space to an individual learning space

(Bergmann & Sams, 2014; Mok, 2014; Slomanson, 2014). However, Noora, McKnight, McKnight, and Arfstrom (2013) argued that regardless of the fact that the video component is used in online, flipped, and blended learning, there is a clear distinction between all of them. Online learning is conducted virtually without the face-to-face component (Oblinger & Oblinger, 2005); blended learning, on the other hand, has the online component, but it is conducted during class time along with the face-to-face instruction (Allen, Seaman, & Garett, 2007).

In flipped learning, however, instruction that is traditionally conducted inside the classroom is flipped with whatever that used to be done outside classroom (Baker, 2000), and this is also referred as "inverted classroom" (Lage & Platt, 2000). Muldrow (2013) lamented that traditional classrooms are not always successful as it is challenging to cater to diverse needs and abilities of the students. Thus, in flipped learning, instructional videos are pre-recorded before class and are uploaded for students to download whenever and wherever convenient to them (Jiang & Zhou, 2014; Mok, 2014, Noora et al., 2013). The intention of flipping the classroom is to maximize face-to-face time with students (Noora et al., 2013) and these instructional materials, be it videos, podcasts, or screen casts can be beneficial in increasing students' knowledge and understanding before class, and for improved comprehension on the particular topic or module, they can watch the videos multiple times at their own pace (Bull, Fester, & Kjellstrom, 2012).

Bergmann and Sams (2014) argued that it is not feasible to deliver instruction to a large group through a face-to-face meeting, and it is best that the face-to-face time is used to help students understand the content. It is said that students are able to reach the higher levels of Bloom's Taxonomy (Gilboy, Heinerichs & Pazzaglia, 2015) as they are provided opportunities to apply, analyze, synthesize, and evaluate knowledge

they developed before class into their group learning environment (Jiang & Zhou, 2014). Han (2015) added that through active engagement in their learning, students eventually develop learner autonomy. Most research studies on the effectiveness of the flipped classroom and flipped learning are restricted to comparative studies of the flipped instruction and the traditional lecture instruction (Hardin & Koppenhaver, 2016).

Flipped Professional Development

Since flipped learning has been proven to be advantageous in addressing to diverse needs and promoting active learning, it is justifiable to attempt it in the teacher professional development programs. Hardin and Koppenhaver (2016) pointed out that the flipped model is a feasible strategy in addressing the challenges in the traditional professional development. Studies on flipped professional development programs are scant, and there are limited studies that discuss the potential and effectiveness of using the flipped model for professional development.

Hardin and Koppenhaver (2016) designed a flipped professional development program for teachers using the Schoology platform, and the teachers' response was uniformly positive. Teachers appreciated that they were given the opportunity to self-initiate the professional development; also, the flexibility of the training offered teachers greater control over their learning by enabling them to engage in learning where and when they choose (Hardin & Koppenhaver, 2016). Hardin and Koppenhaver (2016) also mentioned that the teachers were pleased with the content of the course as it was tailored based on their needs. However, the study also reported that participants did partake in discussions prior to the face-to-face sessions and lamented that it feels like a busywork for them.

On the other hand, blended professional development programs, which are quite similar to the flipped approach have been nascent recently. Belland et al. (2015) conducted a blended professional development to help teachers learn to provide one-to-one scaffolding during a problem-based learning unit. Their study incorporated three 1.5-hours seminars, one 8-hours workshop, and 4-weeks of online education activities.

Professional development programs that are based on only face-to-face activities lack sustainability (Dede et al., 2008; Holmes, Polhemus & Jennings, 2005; alternatively, Owston, Wideman, Murphy, and Lupshenyuk (2008) pointed out that it is difficult to organize and maintain a virtual community through OTPD programs, and this is largely because participants lack trust, support and a sense of belonging in their virtual community of learning (Charalambos, Michalinos, & Chamberlain, 2004). Thus, Owston et al. (2008) stated that experiencing the face-to-face component is no doubt significant in strengthening the bond among participants in a learning community, and this calls for a blended professional development that integrates both the face-to-face and online component (Cooner, 2010; Owston et al., 2008).

With the proviso that the literature supports the integration of both the online and face-to-face component in teacher professional development, researchers and developers of the program can decide whether to flip it, blend it or even mix it. An effective professional development program is said to be coherent, have a content focus, conducted in a longer duration, and promotes active learning and collaboration (Desimone, 2009; Garet et al., 2001); a blended approach in a teacher professional program fits best in the design of an effective teacher professional development (Owston et al., 2008). Owston et al. (2008) in their paper explained that blended professional development can be conducted in a longer duration as teachers do not

have to leave their classrooms or schools to participate. It can fit into teachers' busy schedules by providing opportunities to go through the content at their own pace. Besides, by utilizing the online component, teachers can have a stronger social cohesion in their communities of practice (Dede et al., 2008; Lock, 2006). Owston et al. (2008) elaborated that there are many opportunities for collaboration as teachers can collaborate in face-to-face sessions by applying their knowledge through "hands on" activities and later share their feedback, thoughts and experience through the online component.

Apart from that, as summarized from Owtson et al. (2008), besides collaborating with teachers from the same school, such approach promotes collaboration also with teachers from other schools by engaging in similar activities; this encourages sharing of new ideas and practices among them. Expert facilitators or a more knowledgeable other can introduce new strategies by challenging teachers' existing practices in school. Such approach provides opportunities to learn in different contexts; several researchers supported that learning in one's own physical and social context brings about effective learning (Greeno, Collins, & Resnick, 1996; Lave & Wenger, 1991).

Most professional development models of change believe that teacher change can result in improved student achievement, and that is done by focusing on the needs of all students (Cohen & Hill, 2001; Garet et al., 2001, Guskey, 2000). Therefore, Owston et al. (2008) believed that the blended learning approach through careful designing can address content that will be conducted online and that will be conducted through face-to-face meetings; through a blended approach, teachers are able to implement their new ideas immediately so that they provide feedback to other colleagues (Northrup & Rasmussen, 1999).

Owston et al. (2008) pointed out that despite the many benefits of the blended approach, the application of such approach in teacher professional development has been scarcely investigated. A blended approach study conducted by Owston, Sinclair and Wideman (2008) for Mathematics and Science teachers has shown positive results on teachers' attitudes and teaching practice. Holmes, Polhemus, and Jennings (2005) in their analysis on a blended professional development on integrating technology in instruction found that the K-6 teachers were introduced to efficient technologies and provided scaffolding that eventually resulted in the autonomy of the teachers.

Nonetheless, the problems with this approach are that teachers lack time for participation, are not familiar with online and technology components, not familiar with collaboration, and also issues related to online moderation; thus, these are some of the reasons why researchers are unable to sustain effective online learning communities (Owston et al., 2008). Henderson (2007) emphasized the important role played by the moderator to intervene and encourage teacher participation. Rolando, Salvador, Souza, and Luz (2014) suggested that the moderation could be made by one of the participants itself rather than any mentors or hierarchically different member as this would help in maintaining an autonomy. Regardless of the limitations, Swenson and Curtis (2003) encouraged such blended approach as they allow more flexibility; Motteram (2006) supported such approach as the structure allows teachers to learn the content through face-to-face meetings and later reflect on them through online activities. Oliver, Herrington and Reeves (2006) advocated the blended approach as the design can focus on authentic learning experiences through different modes, and eventually result in improved teacher learning. A study by Owston et al. (2008) also supported that blended approach is a sustainable model in teacher professional development.

Professional Development and Virtual Learning Environment (VLE)

Hammond (2010) pointed out that literature on learning platforms used in continuous professional development is limited. He further elaborated some advantages of having a learning platform in professional development programs: it makes course management more efficient, provides a variety of supported learning opportunities and also a platform for collaboration among teachers. Nevertheless, Hammond (2010) reminded that the term 'Virtual Learning Environment (VLE)' is used more than the term 'learning platform' in literature on professional development.

Comber (2009) found that VLE provided an institutional support to teachers; Robertson (2008), through a study in Australia suggested that Wiki can be used to maximize group works and Prestridge (2009) stated that VLE helps to promote cooperative relationship between colleagues. Also, Romana (2008) and Turvey (2008) promoted online discussion as a way to support cognitive comprehension among teachers. A virtual learning community encompasses of four main characteristics: (1) it is built on a space that is mediated by a computer, (2) the activities are carried out through integration of technology, (3) the content for the program is determined by the participants, and (4) collegiality occurs through interaction among participants. Rolando et al. (2014) investigated the use of virtual learning community in an OTPD and found that teachers maximized the platform to share subject materials and teaching methods with one another, and most construction of new knowledge occurred through communication between the teachers; most of them also agreed to the use of social network such as Ning as a VLE.

Lock (2002) supported the used of virtual communities for learning purposes; VLE even allows collaboration among people who are geographically detached (Yang,

Chen, Kinshuk & Chen, 2007). Researchers also believe participants are able to develop an autonomy by taking control of their own learning which is constructed through sharing, questioning, teaching one another, and even by watching how other people learn (Bransford, Brown, & Cocking, 2000; Clark & Mayer, 2011, Rolando et al., 2014). Fisher, Higgins and Loveless (2006) from their study on using online Teachers' TV found that it has a positive impact on teachers in promoting discussion and sharing. Rolando et al. (2014) suggested a study using VLE as a platform to study the impact of various strategies on teacher sharing.

However, critics of VLE as a learning platform believe that using a learning platform takes more teachers' time (Moore & Chae, 2007); Maor and Volet (2007) stated that there is no sufficient evidence on the impact of an online platform to teacher professional development. Ofsted (2009) typified VLE as "cottage industry" as it is used only as a small scale of learning by interested teachers and students.

Using Facebook as a Platform for a Flipped Professional Development Program

The advent of the Internet has brought about the growth of professional learning communities within the virtual environments (Greenhow, Robelia, & Hughes, 2009). Bledsoe and Pilgrim (2016) opined that social media could be a platform for professional development courses. Social media, also known as social networking sites are primary used to make and maintain connections with people (Davies & Merchant, 2009); Facebook, Twitter, and YouTube are some commonly used sites (The E-business MBA Guide, 2016).

Communication takes place in many ways on social media, from creating individual profiles to groups and pages, tagging, and messaging (Davies & Merchant, 2009). Facebook started off as a student interaction and communication platform at Harvard University in 2004 (Rutherford, 2010). With over 1 billion Facebook users

from all over the world, educational organizations have begun to utilize this platform to also improve teacher education (Bledsoe & Pilgrim, 2016). There is an abundance of educational groups or pages which users can join or like and stay constantly updated with new information, and The Hechinger Report (2012) mentioned that traditional professional development programs might soon be replaced by Facebook and Twitter. A keyword search on Facebook for the word 'teacher' indicates that there are close to 1000 teacher-related groups or pages. Given its user-friendliness, Rutherford (2010) claimed that Facebook creates opportunities for teachers to participate in an easily accessible and collaborative professional development for free. However, research on use of Facebook as an online platform in teacher professional development in scant (Bissessar, 2014). A study conducted by Rutherford (2010) indicated that Facebook is a dominant online platform that teachers can use in efforts to enhance their knowledge and teaching practice. Knowledge sharing in traditional professional development is mostly expert-initiated; conversely Facebook discussions are constructivist in nature, and they are participant-driven (Rutherford, 2010).

Evaluating Professional Development

Researchers indicated that there is no consensus on the assessment of the effectiveness of professional development (Borko, Jacobs, Eiteljorg, & Pittman, 2008). Desimone (2009) reported that the tradition in the past has been to administer satisfaction survey at the end of the workshops. It has also been argued that teachers have not been putting effort to evaluate their own professional development (Guskey, 2002b; Piggot-Irvine, 2006; Rose & Reynolds, 2006). Kilion (2002) pointed out that most of the time, there is no standard set of expectations that is agreed upon before any professional development programs.

Examining a professional development program is undeniably a challenging task (Desimone, 2009; Joyce & Calhoun, 2010). Joyce and Colhoun (2010) further elaborates that professional development is not limited to what occurs in the workshops or courses, but it also takes into account of the changes in pedagogical practices that take place in their classrooms. Saunders (2014) added having a variety of approaches in assessing a professional development also poses as a limitation in comparing data. Desimone (2009) has also mentioned that regardless of the measurement and data collection methods, measuring the quality of a professional development and its effects on teacher practice is a challenging task.

Guskey (2002b), however, mentioned that professional development should be a focused attempt despite of its form. He stressed that many professional developers avoid evaluating their programs for the fear that they would not be able to find evidence that their program is able to yield positive outcomes (Guskey, 2006). Guskey (2000) proposed that effective professional development evaluation requires five critical levels of information.

Table 2.2

Critical levels of professional development evaluation (Guskey, 2000)

1) Participants' reactions
2) Participants' learning
3) Organization support and change
4) Participants use of new knowledge and skills
5) Student learning outcomes

As seen in Table 2.2, Guskey (2006) elaborated that his model of professional development evaluation with five critical levels of information stemmed from Kirkpatrick's (1994) sequential levels of evaluation from training programs. Kirkpatrick (1994) described four levels of evaluation: (1) participants' reaction. (2) participants' learning, (3) participants' behavior or actions, and (4) how the training affected participants' productivity. Guskey (2006) criticized Kirkpatrick' levels of evaluation for not taking into account evaluation of organization support and change. Guskey's evaluation model has three major aspects to be considered: (1) each of the five levels is important in its own way, (2) each level builds on those that come before, and (3) educators are planning their professional development programs by reversing the evaluation model (Guskey, 2006).

However, Guskey (2006) highlighted that a delay in evaluation is bound to happen: information of the first two levels can be gathered immediately after the professional development program, but collecting information of the later three levels takes time, and results might not even be evident for two to three years. Nonetheless, if the evaluation is done on a new curriculum or new approach of professional development, the evidence on teacher reaction and learning must be gathered as soon as the program ends. If the evaluation does not yield any positive results, teachers ought to revert back to the trainings they have been doing in the past (Guskey, 2006).

Summary

Professional development programs are essential in maintaining teacher professionalism, and the approach of the program must constantly fit the demands of educational reforms. It is fundamental that teachers are kept abreast with the ever-changing teaching pedagogies that are brought by the integration of information and

curriculum technology in education. Hence, many themes have emerged through the study of literature on teacher change, features of effective professional development programs, and evolution of the professional development paradigms. The design an effective professional development module for ESL teachers in this studies will be guided the features of an effective professional development that are elaborated in the literature.

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

This chapter outlines the methods utilized to carry out this research and provides an overview of the design of the study; the phases are elaborated in detail in terms of the research procedure, instrumentations, the samples used for this research, and the analysis of the data. This study employed multiple techniques which include the collection of both quantitative and qualitative data. Creswell (2005) supported using multiple techniques to collect data as such approach provides richer and comprehensible data in which data from one source could be used to further support, elaborate, and enhance data from another source. Despite employing multiple techniques in collecting data, the data collection techniques and analysis were conducted either simultaneously or sequentially; also, the qualitative data is to be analyzed qualitatively whereas the quantitative data is to be analyzed quantitatively (Saunders, Lewis & Thornhill, 2007).

Design of the Research

The National Research Council (2002) has highlighted the reality that educational researches do not take into account the authentic problems and issues of daily practices, thus resulting in a "credibility gap" (Levin & O'Donnell, 1999). However, more recently, design-based research (DBR) has been lauded as an emerging research methodology in the field of educational research (Anderson & Shattuck, 2012, Design-Based Research Collective [DBRC], 2003). Barab and Squire (2005) have proposed that improvement in teaching and learning using educational

technology can only be perceived with the implementation of design-based research. Similarly, researchers recommend design-based research as a research methodology to bridge the discontinuity between research and practice (Barab & Squire, 2005; Juuti & Lavonen, 2006; The DBRC, 2003; Wang & Hannafin, 2005); also, a stronger connection between authentic pedagogical problems and educational research could be achieved (Amiel & Reeves, 2008). Wang and Hannafin (2005) described design-based research based on its five characteristics: (1) pragmatic, (2) grounded, (3) interactive, iterative, and flexible, (4) integrative and (5) contextual.

The design-based research approach (Reeves, 2006) which is characterized by four-phases is illustrated in the figure shown below.

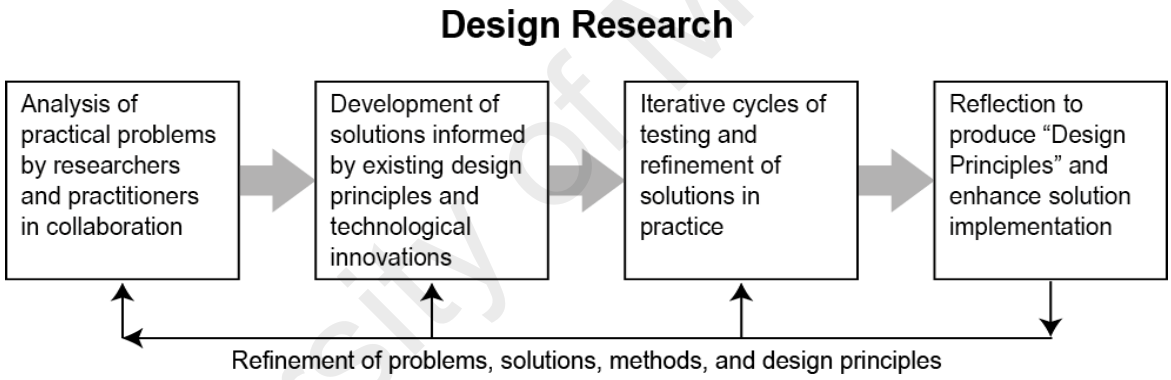


Figure 3.1 Design-based research (Reeves, 2006)

As illustrated in Figure 3.1, design-based research advocates the exploration of practical problems and defining design principles and pedagogical outcome which are refined through cyclic and iterative procedures to create a desirable outcome (Kennedy-Clark, 2013; Reeves, Herrington, & Oliver, 2005; Wang & Hannafin, 2005). Plomp (2007) has stressed that the problems, methods, and solutions are iterated until the intended outcome and realization have been achieved. A holistic intervention within the natural setting takes place to meet the needs of the problem (DBRC, 2003; Mantei, 2008), and this intervention is ratified through interactions

between the teacher, learners, and the materials (DBRC, 2003). Lesh (2003) has found that design research and research in education is naturally aligned as the cyclic and iterative procedures in a design research is similar to the design of an educational research. Herrington, McKenney, Reeves, and Oliver (2007) and Kennedy-Clark (2013) encouraged doctoral students to engage in design-based researches as previous literature by Shulman, Golde, Bueschel, and Garabedian (2006) has demonstrated a lack of impact and rigor in educational research. Thus, Herrington et al. (2007) have proposed that the research-based design methodology is suitable for doctoral students as it is parallel with the stages of a doctoral research, and also, in a long run, helps in producing effective researchers. Kennedy-Clark (2013) concurred that by espousing a design-based research in their higher studies, research students put themselves in the role of an instructor cum researcher, and they execute their research in a natural and authentic setting through a number of iterations and use of expert groups to develop a study that is robust as well as rigorous.

Taking into account the many benefits and potential of design-based research in the educational field, the study of design and development of a Flipped Professional Development (FiT-PD) module design for ESL teachers has adopted the phases suggested in the design based research while at the same time proposing a much robust and thorough design.

Reeves (2006) research based design was used as a basis of the FiT-PD module; however, Reeves' design was modified into seven thorough phases as depicted in the process chart below which begins with analysis of needs and problems faced by teachers, design of the module, validation of the module and re-designing of module, and this is followed by development of the module. Subsequently, the flipped professional development training will be implemented, and finally, evaluation will be

conducted to gauge the success of the FiT-PD training. The refinement of the problems, solutions, and methods can be conducted in future research.

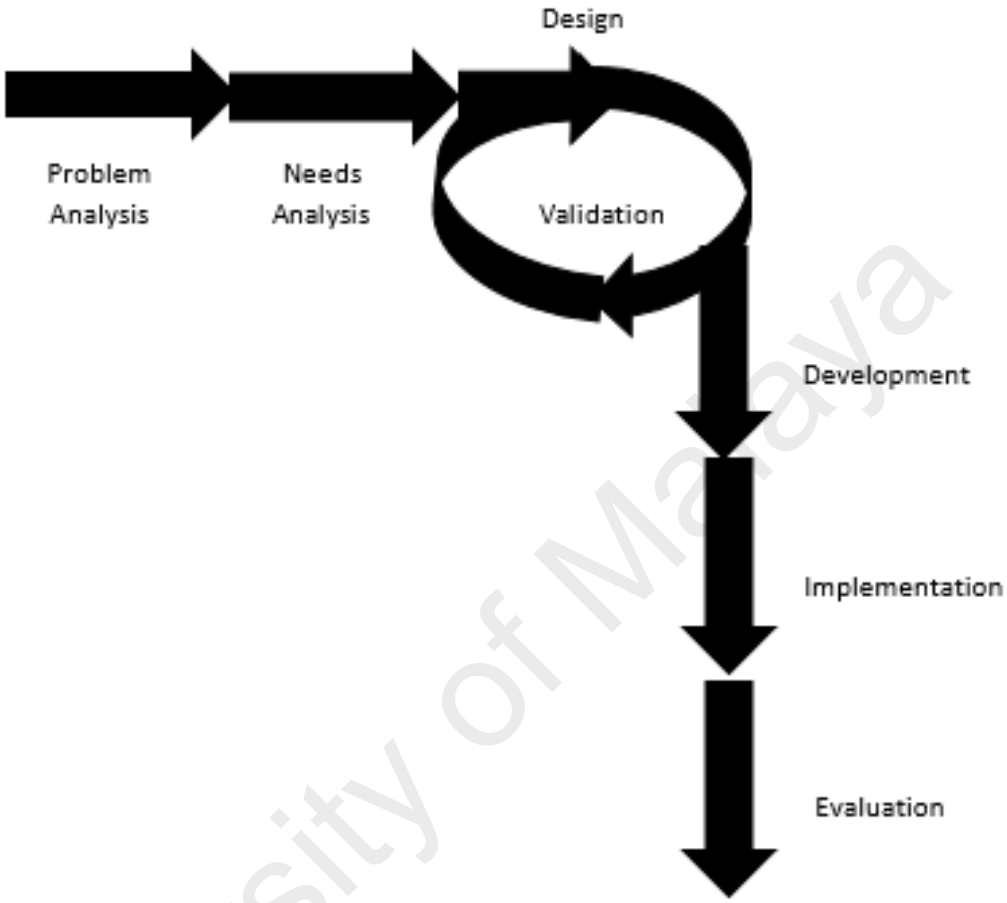


Figure 3.2 A Flipped Teacher Professional Development (FiT-PD) research design

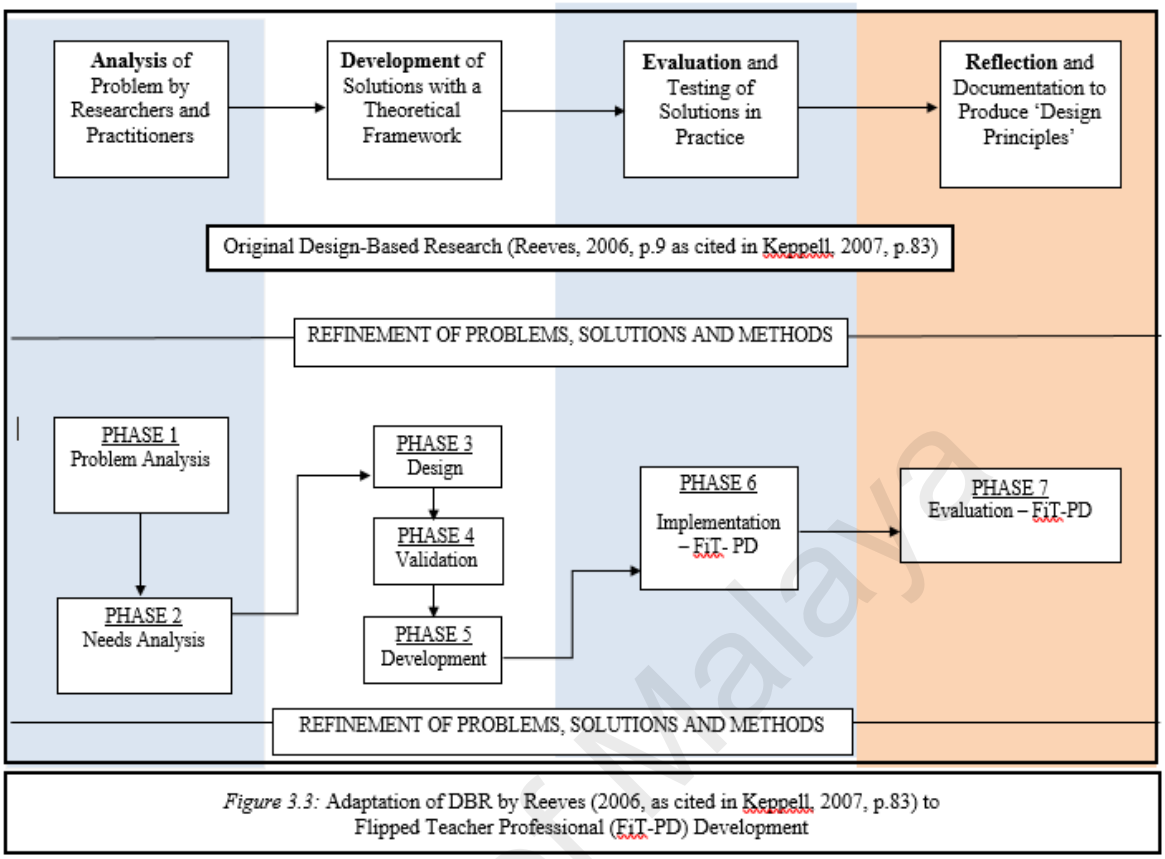


Figure 3.3: Adaptation of DBR by Reeves (2006, as cited in Keppell, 2007, p.83) to Flipped Teacher Professional (FiT-PD) Development

Figure 3.3 Adaptation of DBR by Reeves (2006, as cited in Keppell, 2007, p.83) to Flipped Teacher Professional (FiT-PD) development

Phases of Flipped Teacher Professional Development (FiT-PD) Research Design

Figure 3.3 shows the phases of the flipped teacher professional development (FiT-PD) research design that are adapted from the original Design-Based Research (DBR). The original DBR consists of 4 phases; however, this study has adapted the original 4 stages and introduced a thorough 7 phases model. The phases are elaborated below.

Phase 1 - problem analysis. A thorough review of literature revealed many shortcomings that should be addressed in the field of teachers' professional development – both traditional and online based. Literature showed that teachers that are digital immigrants are incapable of comprehending the contents of online professional development. Thus, an analysis was proposed to explore the practical

problems faced by the practitioners of professional development programs in natural settings, in this case, the English teachers. The analysis in the design-based research is done in one step; however, the analysis in this study was conducted in two phases – problem analysis and needs analysis. Herrington and Reeves (2011) pointed out that the exploration of the problems should be done rigorously by taking into account the perspective of people who go through these problems on an everyday basis, and in this sense, it is vital to have teachers' involvement in this phase as the problems can be analysed in full extent rather than relying on researchers' interpretation. In a design-based research, researchers and teachers are encouraged to collaborate in exploring the educational issues problems that revolve around school and students, and work together in developing a potential solution (DBRC, 2003; Herrington & Reeves, 2011).

Phase 2 - needs analysis. The next phase in this study is the needs analysis. To corroborate previous research and the problems faced by teachers, it was essential to conduct a needs assessment. Kennedy-Clark (2013) proposed that it is essential for a needs and context analysis to be undertaken so that a design based on the articulations of the problems can be initiated in the following phase. Hargreaves and Hopkins (1991) and Coombe (1997) agreed that professional development activities will be more meaningful if teachers are actively involved in planning it. This is also supported by Knowles, Holton and Swanson (2005) who mentioned that adult learners are motivated by content that addresses their professional needs and interests, and encourages them to self-direct their learning. Therefore, in this phase, teachers' needs in a professional development are identified. Research in professional development has shown that teachers are unhappy when the context of the training does not meet their professional needs (Lawless & Pellegrino, 2007); therefore, by identifying their

needs, the flipped professional development module is designed to fulfill their needs in a professional development training.

Phase 3 - design of the FiT-PD module. The intervention in this study is a flipped teacher professional development (FiT-PD) training specifically for primary school ESL teachers, and this solution was underpinned by the emerging themes identified from the data collected in the problem and needs analysis phase. To ground this study, the professional development training module that was designed took account of the needs and the problems related to teachers' knowledge, skills, and experiences identified in Phase 1 and 2 respectively.

To design an effective professional development training, the instructional designer should consider the objectives of the training, the medium to be used, and also the evaluation of the training (Mager, 1984). This training module was grounded by the social constructivism theory in which scaffolding was provided to teachers as stipulated in the Zone of Proximal Teacher Development (ZPTD). Also, the activities for each session was designed based on the cognitive processes in the Bloom's Revised Taxonomy. Although there are a number instructional design models, the training module of this FiT-PD intervention was designed based on Robert Gagné's Nine Events of Instruction. Banas and Velez-Solic (2013) proposed using Gagné's Nine Events of Instruction as it provides the sequence to design instructions.

Gagné (1985) as cited in Banas and Velez-Solic (2013) has proposed nine conditions of learning that can be applied in designing a professional development training. Firstly, attention should be gained to ground the lesson and provide motivation to the participants. Second, the objectives of the training should be informed to help participants be aware of the information presented to them. After that, the recall of their prior knowledge is stimulated so that they can make meaningful

connection of the new information with the existing knowledge or experiences. The fourth step is to present the learning materials, and this is followed by giving guidance to the participants on how to learn the content in the learning materials. In this step, scaffolding is provided to the participants. Next, performance is elicited in which the participants practice the skills acquired in the first few steps. Trainer then provides informative feedback so that the participants can identify their progress in attaining the learning goals stipulated for the training. Their performance is then assessed for the trainer and participants to know if the learning goals has been attained. Finally, retention is enhanced and transfer to real world situations in encouraged.

Banas and Velez-Solic (2013) assured that intended learning objectives can be attained if these nine steps are followed. They added that these nine steps are efficacious when adapted into either a large or a small training module. Therefore, the instructions for the FiT-PD training module was designed based on Gagné's Nine Events of Instructions.

Phase 4 - validation of the FiT-PD module. Upon designing the module for the flipped professional development training, Cognitive Task Analysis (CTA), which aims to illicit the dissimilarities between a novice and an expert in terms of their knowledge of a certain task (Redding, 1989), was used. CTA, which uses a variety of interview and observation as well as document analysis strategies, is essential to be performed before designing the instruction as the descriptions upon conducting a CTA determines knowledge, thought processes, and the attainment of performance goals (Chipman et al., 2000; Jonassen et al., 1999). Staszewski (1988) pointed out that CTA can be used to improve instruction because when the mental model can be comprehended cognitively by the experts, this proves that it can be taught to others as

well. Cooke (1994) highlighted that there are more than 100 types of CTA methods and techniques used in various fields.

Applied Cognitive Task Analysis (ACTA). Since the module of the Flipped Teacher Professional Development (FiT-PD) training involved cognitive tasks, this study adopted the Applied Cognitive Task Analysis (ACTA) method by Militello and Hutton (1998). ACTA is a structured interview method in which three interviews are conducted to elicit and probe knowledge about the task from subject-matter experts (SMEs) (Militello & Hutton, 1998). Crandall, Klein, and Hoffman (2006) pointed out that a successful cognitive research should incorporate three primary aspects: knowledge elicitation, data analysis, and knowledge representation, and ACTA basically fulfills all these aspects in a series of four techniques: 1) task diagram, 2) knowledge audit, 3) simulation, and 4) cognitive demand table. Uden, Tearne, and Alderson (2000) in their paper advocated the use of ACTA as it is a "streamlined version" to analyze complex cognitive tasks, and added that ACTA is useful as well as easier to perform compared to other CTA methods. Uden et al. (2000) recommended the use of ACTA due to its suitability in revising the existing or even creating new training manuals.

This study employed the four techniques in ACTA. An ACTA, according to Stanton, Salmon, & Walker (2005) as cited in Nor'ain and Siti (2012), is one of the CTA techniques that consists of three series of structured interviews which are conducted in focus group discussions. Each technique is explained below.

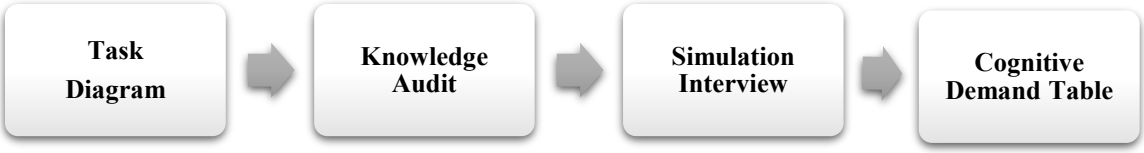


Figure 3.4 Applied Cognitive Task Analysis (ACTA)

a) Task diagram technique.

Militello and Hutton (1998) explained that this technique elicits a holistic, broad, and surface-level overview of the task and difficult cognitive elements are identified. This technique enables the interview to focus on the in-depth interviews that will be conducted later. In this stage, SMEs are asked to elicit the required steps in implementing the ESL module in FiT-PD. They are required to decompose the steps into relevant task steps using the question "Think about what you do when you are required to implement this module in a training program like FiT-PD. Can you break this task down into less than six, but more than three steps?" Subsequently, the experts are asked to highlight the tasks that require the most cognitive skill, and the outcome is recorded in the form of task diagram to guide as a road map for the upcoming in-depth interviews.

b) Knowledge audit technique.

Militello and Hutton (1998) pointed out that knowledge audit technique employs a set of probes that are designed to provide description on types of domain knowledge or skills and to elicit appropriate examples based on experts' personal experience. This technique is used to probe further into the cognitive skills that were identified and to explore further on the skills and strategies that have been used by the experts themselves. They are asked to describe the skills and strategies they employ when they face difficulties or problems in teaching a certain task designed in the FiT-PD module. They also discuss the potential errors that a novice would have made in this situation. The data findings are systematically tabulated in a knowledge audit table.

c) Simulation technique.

The simulation interview, according to Militello and Hutton (1998), is based on a presentation of a challenging scenario of the module design to the SMEs; the scenario could be something that is already existing. After presenting the simulation, four important questions are highlighted in this technique as interview questions.

1. What actions would you take at this point?
2. What is going on here? What is your assessment of the situation at this point of time?
3. What pieces of information led you to these situation assessments and these actions?
4. What errors would an inexperienced person be likely to make in this situation?

d) Cognitive demand table.

Militello and Hutton (1998) describes that the final technique is to integrate all the findings obtained from the earlier three techniques: task diagram, knowledge audit, and simulation. The cognitive demand table is used to sort the data according to themes and analyse them accordingly. As recommended, this technique can be useful for future course design, but in this study, the table was used to improve the design of the FiT-PD module for teachers, which is identified as re-designing phase. The sample headings suggested by Militello and Hutton (1998) was used in the cognitive demand table.

Phase 5 - development of FiT-PD module. After conducting the validation with a panel of experts, the amendments to the training module were made based on the suggestions and recommendations provided by the experts. In this iterative procedure,

the training module was redesigned, and was subsequently developed as a training module. Since this training was conducted both online and face-to-face, an online platform was chosen. Donelan (2016) proposed using social media for professional development and networking purposes. Thus, as many potential benefits of using Facebook are highlighted in the literature of this study, Facebook was deemed as the most fitting social networking platform for this training. Therefore, during the online sessions, the video clips were uploaded on the Facebook group that was created for all the participants of this training.

Phase 6 - implementation of the FiT-PD training. The implementation of the flipped teacher professional development (FiT-PD) training was conducted in the four Train-to-Learn (TL) stages that are shown in Figure 3.5. Literature has revealed many shortcomings of the traditional and online professional development trainings that are widely conducted; thus, a flipped teacher professional development program is proposed in this study. Since the flipped professional development training was conducted in four primary schools in Selangor, the online component was facilitated using the Facebook group whereas the face-to-face (F2F) component was conducted in the participants' respective schools. The participants for this implementation phase were both the ESL and non-option teachers of the respective schools participated in this two-month training.

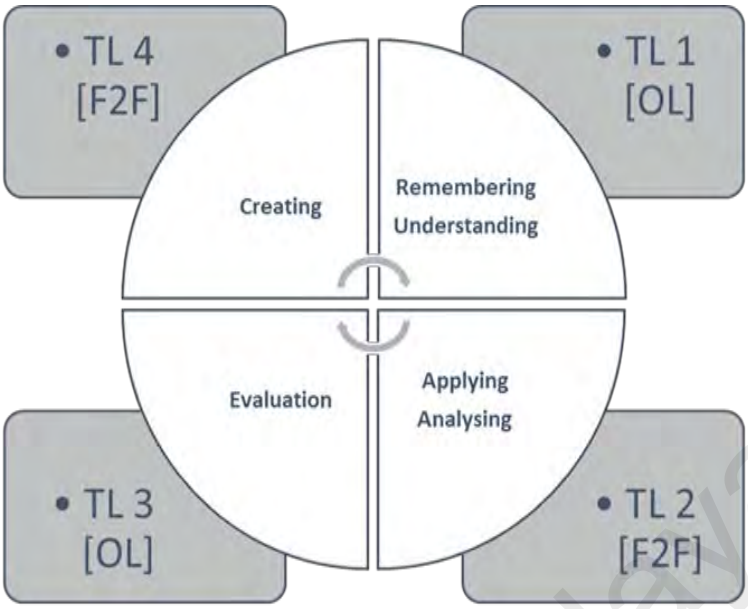


Figure 3.5 Design framework for Flipped Teacher Professional Development (FiT-PD) training

The FiT-PD training began with an online meeting with the teacher participants and this stage was trainer regulated. The two cognitive processes involved in this stage were remembering and understanding; participants recalled their prior experiences and shared their learning autobiographies among one another. Subsequently, they moved to the face-to-face component where small, bite-sized chunks of hands-on activities are conducted through trainer facilitation. At this stage, they applied and analyzed teaching practices based on the proposed module. As the participants' confidence increased, they internalized their learning in an online meeting with other participants in which they go through the evaluation cognitive process. Finally, the training ended with a face-to-face session where participants collaborated and shared with one another through the online learning platform, and simultaneously, worked together to create their own innovative methodologies.

Table 3.1

Proposed instructional plan for FiT-PD training

Stages of Implementation	Zone of Proximal Teacher Development	Cognitive Processes	Proposed Activities
TL 1 ***(Online)***	Self-Assistance	-Remembering -Understanding	-Respond to prompts about prior experiences -Watch video clip on 21st Century Learning Skills (4C's of Education -Watch video clip on the play-based learning approach
TL 2 ***(Face to face)***	Expert Assistance	-Applying -Analyzing	-Analysis of teaching practices based on the videos and prior experiences -Lesson planning -Leading questions and follow up
TL 3 ***(Online)***	Internalization	-Evaluating	-Evaluate different websites on reading comprehension practices
TL 4 ***(Face to face)***	Recursion	-Creating	-Creating a technology integrated language lesson which is planned using the 4C's of education

Phase 7 - evaluation of the FiT-PD training. Plomp (2007) stated that the aim of this final phase is to come to analyze on how the intervention in the study met the pre-determined principles to solve the problems and challenges. In this phase, recommendation for future work may also be generated. Ingvarson, Meiers, and Beavis (2003) highlighted the need for more sophisticated methods of evaluating a professional development program. Just providing questionnaires at the end of the training or just asking questions like "What did you learn from workshop?" does not suffice for an effective evaluation, so Ingvarson et al. (2003) suggested that questions

asked should link professional learning strategies to changes in teacher knowledge, pedagogical skills and even student outcomes.

Data Collection

Creswell (2012) highlighted that the process of data collection consists of five interrelated steps. Prior to conducting the study, participants that are suitable for the study are determined, and permissions from individuals and organizations involved need to be obtained. Subsequently, types of information to collect is considered, and then, instruments that will be used to collect the data are selected. Finally, the data collection process is administered to collect data. The research procedure, research instruments selected and the research samples for phases that are involved in data collection for this study is elaborated in detail.

Phase 1 - problem analysis.

Research procedure. Prior to initiating this phase, a permission letter was sent to Jabatan Pendidikan Selangor to seek permission to conduct a problem analysis survey, and later to implement the FiT-PD training in four primary school in the Petaling district in Selangor. Once the permission was granted, the problem analysis survey was conducted to analyze teachers' acceptance towards existing professional development trainings. The survey was conducted using the instrument from Unified Theory of Acceptance and Use of Technology [UTAUT] (Venkatesh et al., 2003).

Research instrument. The Unified Theory of Acceptance and Use of Technology (UTAUT) instrument was adapted to find out the problems faced by the ESL teachers in the existing professional development trainings. UTAUT which is relatively recent is proposed as a popular theoretical choice in the field of Information Technology (IT)/ Information Systems (IS) adoption and diffusion. Prior to the

existence of UTAUT, Technology Acceptance Model (TAM) was the model that was dominating the research field; however, Venkatesh, Morris, B. Davis and D. Davis (2003) reviewed, integrated, and mapped eight different models (Theory of Reasoned Action (TRA), Technology Acceptance Model (TAM), Motivational Model (MM), Theory of Planned Behavior (TPB), a combined Theory of Planned Behaviour/Technology Acceptance Model (C-TPB-TAM), Model of PC Utilization (MPCU), Innovation Diffusion Theory (IDT), Social Cognitive Theory (SCT). that were previously used in many disciplines to come up with a unified model, which is UTAUT. Venkatesh et al. (2003) lamented that these theories that were previously utilized was said to have constructs that were redundant and similar in nature; therefore, Venkatesh et al. (2003) mapped and integrated these existing models to form a unified model.

In this study, teachers' acceptance is an important factor in determining the success or failure of the flipped professional training approach. Many traditional professional development trainings are initiated to provide educational value to teachers, but they are considered unsuccessful if teachers do not accept and use them. UTAUT postulates four constructs that are direct determinants of the technology acceptance (behavioral intention) and use (behavior) – performance expectancy, effort expectancy, social influence, and facilitating conditions. The author of UTAUT found that self-efficacy, attitude, and anxiety are three constructs that do not have direct influence on intention to use technology, thus they are rarely used in research (Venkatesh et al., 2003).

Also, this theory suggests that these four constructs are moderated by gender, age, experience, and voluntariness of use (Venkatesh et al., 2003). As espoused in the figure below, UTAUT suggests that performance expectancy, effort expectancy and

social influence are theorized to influence behavioral intention to use a technology, which behavioral intention and facilitating conditions influence the use of technology (Venkatesh, Thong, & Xu, 2012). Venkatesh and Davis (2000) pointed out that acceptance can be viewed as users' behavior and attitudes; thus, in this case, teachers' acceptance of the existing professional development trainings will be analyzed.

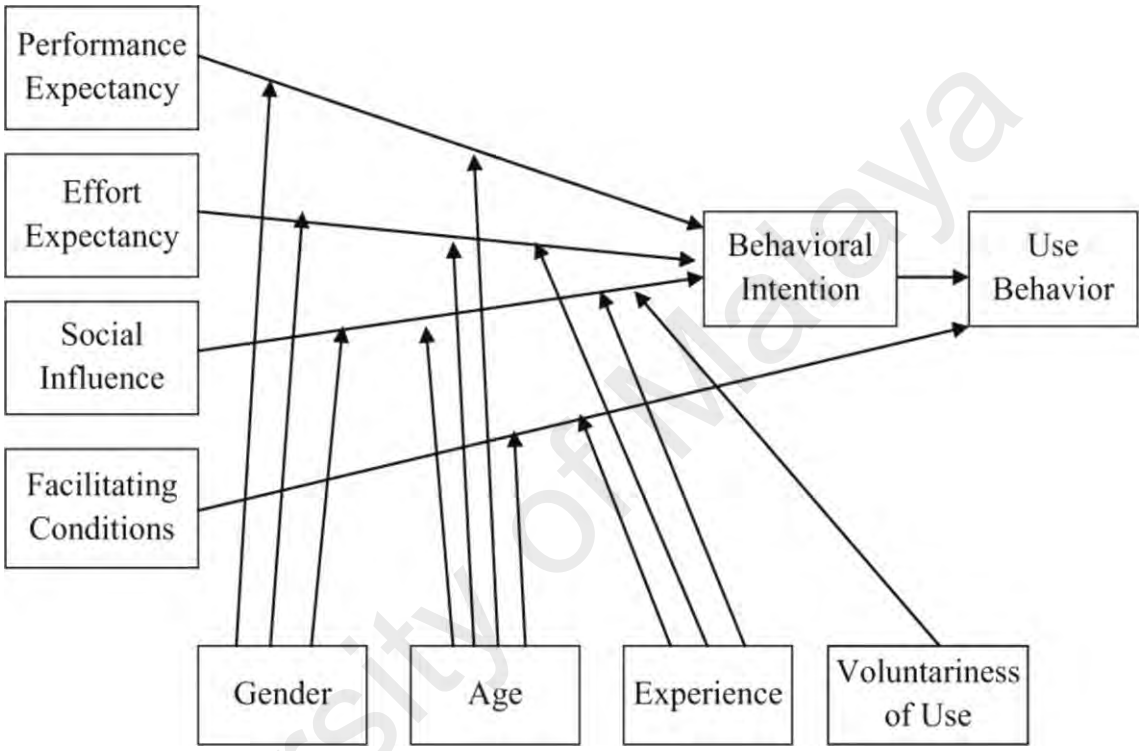


Figure 3.6 Unified Theory of Acceptance and Use of Technology [UTAUT]

a) Proposed research model and hypotheses.

This study, however, aimed to find out the problems faced by ESL teachers in the existing professional development trainings. Accordingly, this study adopted Venkatesh et al.'s (2003) UTAUT model as the primary method to examine teachers' acceptance towards the existing professional development trainings. All the constructs used in the instrument was adapted from Venkatesh et al. (2003) except the variable enjoyment that was adapted from the flow theory (Koufaris, 2002). Although the variables self-efficacy, attitude, and anxiety are not considered as important constructs

by Venkatesh et al. (2003), they were adapted into this study as these variables are considered important in determining teachers' acceptance towards the existing professional development trainings.

Table 3.2

Definitions of the variables

Constructs	Definition
Performance Expectancy (PE)	The degree to which an individual believes that using the system will help him or her to attain gains in job performance
Effort Expectancy (EE)	The degree of ease associated with the use of the system
Social Influence (SI)	The degree to which an individual perceives that it is important others believe he or she should use the new system
Attitude (A)	An individual's positive or negative feelings towards using the network monitoring system
Self-Efficacy (SE)	The individual's judgement about his/her ability to use the network monitoring system to complete a specific work or task.
Anxiety (AX)	Evoking anxious or emotional reactions when it comes to using the network monitoring system
Enjoyment (EN)	The extent which the activity of the using network monitoring system is perceived to be personally enjoyable in its own right.

The proposed hypothesized model for the problem analysis is presented in the figure below (see figure 3.7); there are eight independent variables and one dependent variable. The instrument (see Appendix H) consisted of 34 questions with 31 questions on the independent variables and 3 questions on the dependent variable.

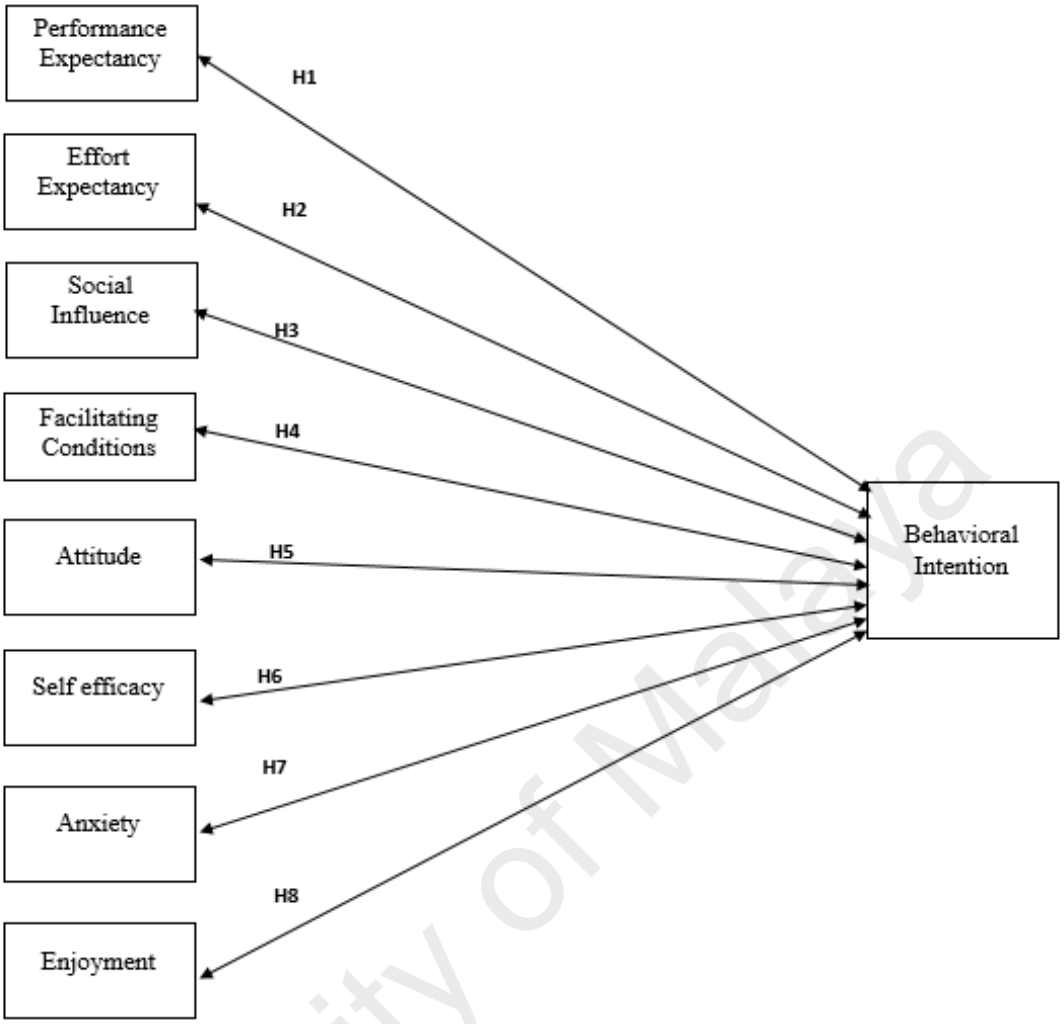


Figure 3.7 Proposed model for the problem analysis

Following are the hypotheses derived from the proposed model for the problem analysis.

H1: There is a significant relationship between the performance expectancy and teachers' intention to participate in the existing professional development trainings.

H2: There is a significant relationship between the effort expectancy and teachers' intention to participate in the existing professional development trainings.

H3: There is a significant relationship between the social influence and teachers' intention to participate in the existing professional development trainings.

H4: There is a significant relationship between the facilitating conditions and teachers' intention to participate in the existing professional development trainings.

H5: There is a significant relationship between the attitude towards the professional development trainings and teachers' intention to participate in the existing professional development trainings.

H6: There is a significant relationship between self-efficacy and teachers' intention to participate in the existing professional development trainings.

H7: There is a significant relationship between anxiety and teachers' intention to participate in the existing professional development trainings.

H8: There is a significant relationship between enjoyment and teachers' intention to participate in the existing professional development trainings.

The respondents of The Unified Theory of Acceptance and Use of Technology (UTAUT) questionnaire was asked to indicate their perceptions and acceptance of the existing professional development programs based on the eight independent variables. The items were adopted from Venkatesh et al. (2003) and were modified to suit the context of this research objective. The items were measured on a five-point Likert scale ranging from "strongly disagree" to "strongly agree", and the items were preceded by demographic questions such as respondents' age, gender, and teaching experience for descriptive statistics. However, no moderators were used in this proposed model.

***Research samples*.** The respondents for this survey are thirty-five ESL teachers from four primary schools in Selangor, Malaysia. The schools that participated in this study were chosen by Jabatan Pendidikan Selangor (JPS), and all teachers, including the non-option teachers who teach English in these schools were asked to participate in this study. These are the same teachers later became the participants of the FiT-PD training. The decision to base this study in Selangor is because it is more practical to choose schools that are closer to the researcher. Besides, these four schools are selected as representatives of this study.

Phase 2 – needs analysis.

***Research procedure*.** The needs analysis was conducted to support the findings in the problem analysis phase, and to find out teachers needs in a professional development training. Creswell (2008) mentioned that the qualitative data collection allows an in-depth exploration of the research problem. Since there are possible limitations of using one method to collect data (Creswell, 2008), the needs analysis was done using interviews as the research instrument to justify teachers' acceptance towards the existing professional development trainings. Herrington and Reeves (2011) proposed that interviews with teachers who are familiar with the problem area of the research will be able to provide valuable and rich insights based on their 'intimate and practical understanding' of the problem.

Research instrument. Creswell (2012) noted that interview which is a popular qualitative data collection method, is used to ask one or more participants general and open-ended questions. Talmy (2010) has also supported that interviews are one of the popular data collection methods to obtain in-depth information about the feelings, beliefs, perceptions and experiences of the interviewees. It is feasible to use interviews to collect rich data as it allows the researcher to enter the inner-world of the teachers

and understand things from their perspective (Johnson & Christensen, 2008). An interview protocol that is adapted from Asmussen and Creswell (1995) was used. A semi-structured interview protocol was used, and probes were used to obtain additional information where the interviewees will be asked to elaborate and clarify certain things wherever necessary (Dörnyei, 2007).

Besides getting primary school ESL teachers to share about the challenges they face with regards to the professional development, these interviews were conducted to also find out the challenges faced by the teachers in their ESL classrooms, particularly looking at the fact that there has been a significant transition from an integrated-based curriculum to a standard-based curriculum known as Kurikulum Standard Sekolah Rendah (KSSR). These interviews also allowed teachers to share their concerns and perceptions on the professional development training, and later their needs in a professional development training were derived from the interviews. The interview for the teachers in this phase was divided into 5 main themes:

i) Teachers' professional development training experience and perceptions on the existing trainings conducted.

ii) Teachers' opinions with regards to the approaches and the modules used in the existing professional development trainings.

iii) Problems and challenges faced by teachers in implementing the new methods or strategies acquired from the existing professional development trainings.

iv) Problem and challenges faced by teachers in the ESL classroom.

v) Teachers' needs for professional development trainings.

A semi-structured interview is suitable to conduct a needs analysis as it provides more flexibility to both the parties, and all interviews were audiotaped.

Research samples. As teachers are seen as the stakeholders of this innovation adoption process, one-on-one semi structured interview was conducted with three experienced primary school ESL teachers and three novice primary school ESL teachers. These two different groups of interviewees were selected based on two criteria: i) they are currently teaching English in a national primary school using the most recent syllabus and ii) they have had at least attended 7 days of professional development trainings. The criteria of at least three years of teaching experience was also applied. Three of the teachers interviewed were experienced teachers who have more than 20 years of teaching experience and other three are novice teachers with at a minimum of 3 years of teaching experience. Teachers meeting these criteria were selected so that teachers are able to provide better insights based on their experiences in existing professional development programs.

The interviewees are recruited using a non-random sampling technique also known as purposive sampling as suggested by Patton (2002). Maxwell (1996) pointed out, "sampling decisions should also take into account your research relationship with study participants, the feasibility of data collection, validity concerns, and ethics" (p.72). These interviewees were conveniently selected by the researcher based on researchers' personal networking. Since the researcher has previously taught English in primary school, the researcher has connections with several experienced and novice teachers. Therefore, the experienced and novice teachers who were interviewed were approached via Facebook and WhatsApp. Although purposive sampling is claimed to be biased (Creswell, 2012), it is in fact a technique that is used to get rich and candid information due to the closeness of the researcher and the participants. Thus, for this study, the samples that were chosen were people who can best help in understanding the phenomenon and can provide a detailed understanding (Creswell, 2012). These

participants were targeted to share on the daily educational problems they face within their work settings so that it can form a basis to design the principles for the intervention in this study.

Consent to participate in the interview was obtained from the interviewees, and the purpose of the research was clearly explained in the consent form. The interview protocol in this research was a comprehensive instrument that was used to analyze various themes of professional development and their effects to the teachers. Initial data that is collected from these interviews prior to the intervention will inform the facilitation of the professional development course in terms of understanding teachers existing beliefs and experiences (Mantei, 2008).

Phase 3 - validation of the design.

Research procedure. To refine the module that was designed in Phase 2, it was validated by a panel of experts using the Applied Cognitive Task Analysis (ACTA). It began with the task diagram technique followed by the knowledge audit, simulation interview and finally the cognitive demand table. Upon the validation, the module was refined and re-designed based on experts' suggestions and recommendations.

Research instruments. An ACTA consists of three series of structured interviews that will be conducted in focus group discussions. These type of interviews are known to be beneficial as the interaction among the interviewees are capable in yielding expansive information. During the experts' validation, the module of the FiT-PD training was vetted. All the proposed recommendations were tabulated in the knowledge audit, simulation interview and cognitive demand tables.

Research samples. Farrington-Darby and Wilson (2006) suggested an expertise framework which highlights a transition from a traditional novice-expert experimental designs to studying tasks in a naturalistic manner; in other words, to elicit real

expertise, it is recommended to study tasks that are adequately challenging. Thus, the selection criteria of experts for this validation phase was instructional designers who have expansive experience in designing modules and conducting professional development trainings for ESL teachers. Militello, Hutton, Pliske, Knight, and Klein (1997) recommend three to five experts in conducting this technique. Thus, three experts were requested to validate the training module for the FiT-PD training. The researcher is a member of the Teacher Development for Beginning English Teachers (TEDBET) which is an official Malaysian English Language Teachers Association's (MELTA) special interest group. Therefore, the researcher sent a Whatsapp message to the advisor of the advisor of TEDBET to request for interview. Later, using the snowball sampling technique, the expert suggested other two experts who are qualified to validate this FiT-PD training module. During the focus group interview, an informed consent form was given to the experts to assure that the content of the session will be confidential.

Phase 7 - evaluation of the FiT-PD training.

Research procedure. In the final phase of the study, the evaluation of the FiT-PD training was carried out to find out to what extent the training participants accept the FiT-PD training. The evaluation was carried out using both the quantitative and qualitative method.

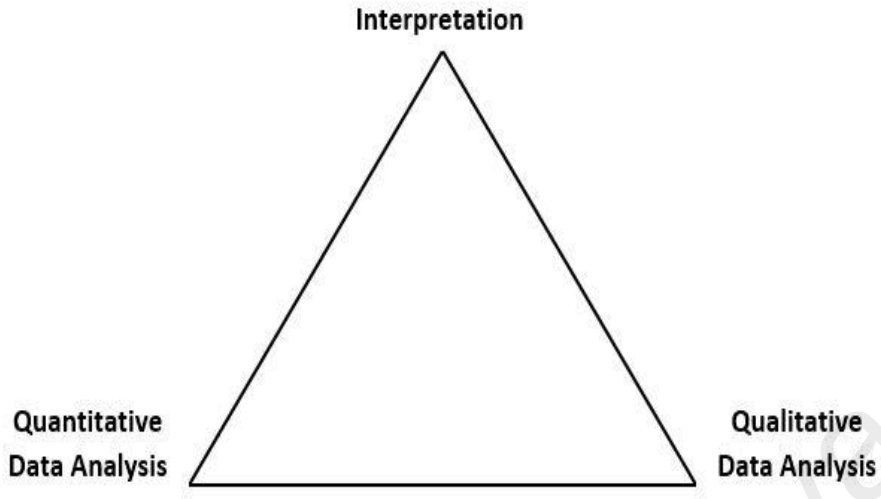


Figure 3.8 Triangulation of the data collected for the evaluation phase

Martin and Bridgmon (2012) pointed out that many studies these days employ both the qualitative and quantitative method, and qualitative is used to support the quantitative data. The data collection in this phase is based on the explanatory sequential mixed method where the quantitative data is first collected and findings are analyzed and then further explained using the qualitative data (Creswell, 2008). Thus, both data sets were analyzed separately and interpretations were made from both the data using the triangulation method.

After completing the last session of the FiT-PD training, the UTAUT survey forms were administered, and a post-training interview was conducted with some of the participants. Belland et al. (2015) in their suggestion recommended that more data sources such as interviews with baseline observation of participating teachers should be added so that teachers are given a platform to voice out the strategies that they found beneficial and how they perceived that their teaching practice has improved or will improve in future.

Research instruments.

a) Survey

The similar survey instrument (see appendix I) that was used in Phase 1 was used for the evaluation of the training; however, it was used to find out if the training participants accepted the FiT-PD training that was implemented. The same number of items were used, and the same proposed model of independent variables and the dependent variable was used in this phase. Nevertheless, the items were changed to match the context of the evaluation phase.

b) Interview

After the survey was administered to all the training participants, a one-to-one interview was conducted with four of the participants from all the four schools that participated in this training. These interviews were conducted to support the findings of the survey. The interviews were conducted to find out the participants' perceptions towards the FiT-PD training, and also to find out the challenges faced throughout the training so that these challenges could be addressed in future research. The informed consent form (see Appendix A) was given to the interviewees, and all the interviews were audiotaped.

Research samples.

a) Survey

Thus, to analyze the outcome of the training, a post-implementation survey instrument (see Appendix I) was administered to all the training participants of the FiT-PD training who has taken the survey in the problem analysis phase. This survey was administered to the same 35 samples in the phase 1 to ensure a test-retest reliability. The survey instrument was used to analyze participants' acceptance on the

FiT-PD training, and both the findings from phase 1 and phase 7 was compared to reach a conclusion about this study.

b) Interview

After the survey, four training participants (one from each school) was purposively selected for a post-implementation interview. Probability sampling was used to randomly select the participants for the interview. The English panel teacher of each school proposed the names of the training participants that was interviewed. However, the criterion that the participants have participated in all the training sessions from the beginning of the FiT-PD training was applied. The interview was conducted to gauge feedback on the effectiveness of the FiT-PD training.

Quantitative Data Analysis

To conduct an analysis of the survey for both the phases 1 and 7 in which the survey instrument was administered, a quantitative data analysis technique was used. The data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 23.0. SPSS 23.0 was used to conduct the reliability analysis, descriptive analysis, Pearson correlation and the paired t-test analysis. The analyses that were conducted are elaborated.

Reliability analysis. The reliability and validity of the questionnaire was determined using Cronbach's Coefficient Alpha reliability analysis; reliability refers to the extent of the consistency in result from the repeatability of the measurements. If there is a high reliability, it means that there is consistency. Therefore, checking the reliability between the different variables is similar to checking the internal consistency of the survey. George and Mallery (2003) provide the following rules of

thumb: "_ > .9 – Excellent, _ > .8 – Good, _ > .7 – Acceptable, _ > .6 – Questionable, _ > .5 – Poor, and _ < .5 – Unacceptable" (p. 231).

The questionnaire was designed in Google Forms and was sent to a number of ESL teachers from primary schools using the convenience sampling. However, 24 ESL teachers participated in this pilot study. Connely (2008) suggested that the pilot study sample should be 10% of the sample of the larger parent study. The summary results of the Cronbach Alpha are tabulated below.

Table 3.3

Summary of the Cronbach Alpha results

Constructs	**No of Items**	**Mean**	**Std. Deviation**	**Cronbach Alpha**
Performance Expectancy	4	14.38	2.552	.922
Effort Expectancy	4	14.62	2.779	.946
Social Influence	4	13.29	2.881	.822
Facilitating Conditions	4	13.62	2.896	.834
Attitude	4	15.17	2.531	.910
Self-efficacy	4	15.33	2.353	.704
Anxiety	4	11.50	2.919	.688
Enjoyment	3	9.71	.999	.648
Behavioral Intention	3	9.88	1.361	.504

Descriptive analysis. The descriptive statistics in SPSS 23.0 was used to analyze the basic characteristics of the demographic information such as gender, age and years of teaching experience of the participants.

Pearson correlation analysis. The Pearson correlation coefficient (r) analysis was used to test the hypotheses in the problem analysis phase. The strength of the relationship between the independent variables and the dependent variable was determined using the findings from the Pearson correlation analysis. Prior to the Pearson correlation analysis, data cleaning was done in which the outliers were removed, and the normality of the data was also checked using the Skewness and Kurtosis findings. The Pearson correlation is calculated for relationships which are linear; the nearer the scatter of points are to the straight line, the stronger the relationship is between the variables. Pearson correlation coefficient (r) ranges from -1 to +1 (Campbell & Machin, 1999). Correlation between point .91 to 1.00 or -.91 to -1.00 indicates a very strong correlation between variables whereas .01 to .30 or -.01 to -.30 indicates a very weak correlation between variables. .00 indicates that there is no correlation between the variables (Chua, 2012).

Paired t-test analysis. The paired t-test was done to compare the before and after implementation survey findings. It is a statistical procedure which is done to determine the mean difference between two observations. A paired t-test is suitable for this study as it is applied in repeated-measures designs with an intervention. The paired t-test was conducted to determine if the mean of the differences is statistically significant after the FiT-PD training intervention. The data was analyzed using SPSS 23.0. If the *p*-value is less than 0.05 (i.e., $p < .05$), it can be concluded that there is a statistically significant difference between the before and after scores.

Qualitative Data Analysis

Thematic analysis. For both the semi-structured interviews that are conducted in Phase 2 and Phase 7, the interviews were transcribed verbatim in the form of 'Q and A', in which Q stands for question and A stands for answer. Following that, the data was analyzed thematically using the steps in the thematic analysis proposed by Braun and Clarke (2006). First, the researcher got familiarized with the data by reading and re-reading the transcripts. Next, initial codes are systemically generated, and then themed are constructed and similar codes are collated. Subsequently, the themes and reviewed and defined, and finally, the report was produce by selecting certain extracts to support. The thematic analysis was opted to analyze the qualitative data because of its flexibility; it also analyzes data in rich details (Braun & Clarke, 2006). The thematic analysis was conducted manually. Codes on the transcripts were highlighted using different colours of highlighters, and was later collated into the themes that were constructed.

To ensure rigor, the themes were checked and made sure that they were coherent and consistent with the themes in the literature review. The data was analyzed and not just described; thus, it was ensured that a balance was achieved between the analysis and the extracts.

Ethical Considerations

The ethical consideration for this study was to protect the confidentiality of each and every participant who participated in the data collection of this study. Therefore, the researcher developed an informed consent form was that signed by the participants before participating in both the surveys and interviews. The main elements of the informed consent form included the purpose and significance of the research,

guarantee of confidentiality and assurance that they can withdraw from this study at any time. The consent form is appended in this thesis. Also, since all the participants, including experts are academics, they have requested to not include their names in the write-up of this study. Thus, the personal information of the participants is protected throughout the write-up. Also, the names of the participating schools are not disclosed in this write up to protect their privacy. Instead of naming the participating primary schools, the acronyms SK 1, SK 2, SK 3 and SK 4 are used. As for the teachers who are interviewed in the needs analysis phase, the acronyms T1, T2, T3, T4, T5 and T6 are used and the acronyms P1, P2, P3 and P4 are used in the interview in the evaluation phase to represent the participants of the study.

Summary

This chapter has elaborated the design of the study which was adapted from Reeves (2006) and later modified and expanded into seven phases: problem analysis, needs analysis, design, validation, development, implementation and evaluation. The mixed-method was employed to collect the data throughout the seven phases. This method was employed to ensure that there was a balance in the findings and so that each method could counterbalance the weaknesses of another method. The findings, and interpretations are reported in the following chapters. Table 3.4 below summarizes chapter 3.

Table 3.4

Research matrix

Research Objectives	Research Question(s)	Data Collection Technique(s)	Instrument(s)	Research Outcome
Problem Analysis: To identify the problems faced by ESL teachers in the existing online professional development programs.	What are the problems faced by the ESL teachers in the existing professional development trainings?	Quantitative	i) Survey	Users acceptance towards existing professional development program.
Needs Analysis: To identify the needs of ESL teachers in professional development training.	What are the needs of ESL teachers in professional development trainings?	Qualitative	Semi Structured Interview	Justification of the needs of an alternative mode of professional development
Validation: To obtain experts' validation of the FiT-PD module.	What are design aspects that should be incorporated in the design of the professional development module?	ACTA Technique	i) Task Diagram ii) Knowledge Audit iii) Simulation Interview iv) Cognitive Demand Table	FiT-PD Design Guideline
Evaluation: To evaluate the users' acceptance and knowledge sharing in FiT-PD.	i) To what extent do the teachers accept FiT-PD?	i) Quantitative iii) Qualitative	i) Survey ii) Semi-structured interview	Users acceptance towards FiT-PD training Evaluation of the challenges faced during the FiT-PD training

CHAPTER 4

FINDINGS AND DISCUSSION

Introduction

In this chapter, the findings of the data collected either qualitatively or quantitatively in all the seven phases is described in detail. Several approaches are used to collect data for every research questions; hence, the findings for all the phases in these research are thoroughly reported, interpreted and discussed. The findings in every phase of the research are guided by the research questions that are tabulated below.

Table 4.1

Phases of the research

Phases	Research Questions
Phase 1 – Problem Analysis	What are the problems faced by the ESL teachers in the existing professional development programs?
Phase 2 – Needs Analysis	What are the needs of ESL teachers in professional development programs?
Phase 3 – Design of FiT-PD module	What aspects are incorporated in the design of FiT-PD?
Phase 4 – Validation of FiT-PD module	What changes have the experts recommended in the FiT-PD module?
Phase 5 – Development of FiT-PD module	How is the FiT-PD module developed?
Phase 6 – Implementation of FiT-PD	How is the FiT-PD training implemented?
Phase 7 – Evaluation of FiT-PD	To what extent do the ESL teachers accept FiT-PD?

Phase 1 – Problem Analysis

The UTAUT survey was used to find the problems faced by the ESL teachers in the existing professional development programs, and this survey gauges teachers' acceptance towards the existing professional development trainings. The survey was administered to 38 English teachers from four different national schools in the Petaling district in Selangor. The four schools are as below:

Table 4.2

Respondents profile for the UTAUT survey

Schools	Number of respondents
SK 1	16
SK 2	8
SK 3	11
SK 4	3

Firstly, the total scores for each variable were obtained. To obtain the total score for Performance Expectancy (PE), the values for all the statements representing this variable was added (PE Score = PE1 + PE2 + PE3 +PE4). The same was done for all other variables. For Effort Expectancy, (EE Score = EE1 + EE2 + EE3 + EE4); for Social Influence (SI Score = SI1 + SI2 + SI3 + SI4); for Facilitating Conditions (FC Score = FC1 + FC2 + FC3 + FC4); for Attitude (A Score = A1 + A2 + A3 + A4); for Self Efficacy: SE1 + SE2 + SE3 + SE4); for Anxiety (AX Score = A1 + A2 + A3 + A4); for Enjoyment (E Score: E1 + E2 + E3) and finally for Behavioral Intention: BI = BI1 + BI2 + BI3).

Data cleaning. Data cleaning was done to identify incomplete data, missing values and outliers. Any data that is incomplete will be deleted and the missing value

will be inputted with a value using a specific approach. In this study, from the initial total of 38 respondents, three of the respondents were deleted during the process of data cleaning. Two out of the three respondents were deleted due to the incomplete data when the surveys were administered. More than 50% of the total questionnaire was left unanswered.

During the data cleaning process, a total of two respondents did not answer all of the questions in the questionnaire. Respondent number 37 did not respond to question in SI2, A1, SE4, and E3 whereas respondent number 12 did not answer question in E3 only. By using the method of inspection-maximization (EM) method (Tabachnick & Fidell, 2013), a value was inputted into the question instead. Thus, for respondent number 37, question SI2 was inputted with value 4, question A1 was inputted with value 4, SE4 was inputted with value 4 and E3 was inputted with value 4. As for respondent number 12, question E3 was inputted with value 3.

The subsequent step was done to inspect the potential outliers in the data. This was done by getting the Z-Score of the data. The Z-score of the variables were computed to check potential outliers. Any Z-score that is great than 3.00 or less than -3.00 are considered as outliers (Tabachnick & Fidell, 2013). Respondent number 12 was detected as an outlier as the z-score of the total SI score is -3.02275. Thus, the respondent number 12 was removed from the total respondents. Thus, the total number of the respondents after data cleaning is 35 respondents.

Normality of the data. A test on normality was conducted to ascertain if the data is normal. The value of skewness and kurtosis are calculated for all the variables to check the normality of the data attained. The data is considered normal if the observed values for skewness and kurtosis are between 1.96 and -1.96 (Tabachnick & Fidell, 2013).

Table 4.3

Skewness and Kurtosis values for the total score of variables

	Skewness	Kurtosis
PE Score	-.274	-.846
EE Score	.166	-1.338
SI Score	-.455	-.335
FC Score	-.618	1.037
A Score	-.742	-.419
SE Score	-1.028	-.361
AX Score	-.086	.065
E Score	-.038	.844
BI Score	-.664	.637

Based on the skewness and kurtosis value obtained, the data for the variables is considered normal (PE Score: Skewness = -.2.74, Kurtosis = -.846; EE Score: Skewness = .166, Kurtosis = -1.338; SI Score: Skewness = -.455, Kurtosis = -.335; FC Score: Skewness = -.618, Kurtosis = 1.037; A Score: Skewness = -.742, Kurtosis = -.419; SE Score: Skewness = -1.028, Kurtosis = -.361; AX Score: Skewness = -.086, Kurtosis = .065; E Score: Skewness = -.038, Kurtosis = .844; BI Score: Skewness = -.664, Kurtosis = .637).

Descriptive statistics. This demographic data of all the 35 respondents is presented in the tables below. All the 35 respondents that participated in this study are female teachers.

Table 4.4

Distribution of gender (n = 35)

Gender	Percent
Female	100.0
Male	0

Table 4.5

Distribution of age (n = 35)

Age group	Percent
21- 30	22.9
31 – 40	28.6
41 – 50	37.1
51 – 60	11.4

As seen in Table 4.5, the age of the respondents was grouped into 4 groups. Thirteen of the respondents are in the category of 41 to 50 years old (37.1%), ten respondents are in the category of thirty-one to forty years old (28.6%), eight respondents are in the category of 21 to 30 years old (22.9%), whereas four respondents are in the category of 51 to 60 years old (11.4%). Majority of the respondents are between the ages of 41 to 50 years old.

Table 4.6

Distribution of level of education (n = 35)

Level of Education	Percent
Diploma	20.0
Degree	77.1
Masters	2.9
PhD	0

Table 4.6 shows the level of the education among the respondents. Twenty-seven respondents (77.1%) has a Degree qualification, seven respondents (20.0%) has only a Diploma qualification, and one respondent (2.9%) has a Masters qualification. None of the respondents has a PhD qualification. Majority of the respondents has a Degree level of education.

Table 4.7

Distribution of years of teaching experience (n = 35)

Years of Teaching Experience	Percent
1 – 5	23.5
6 – 10	23.5
11 – 15	8.8
16 – 20	44.1

Table 4.7 shows the years of teaching experience the respondents have. The years are grouped into five years. The table shows that 15 teachers (44.1%) of the teachers have 16 to 20 years of teaching experience. Eight teachers (23.5%) have 1 to 5 years of teaching experience; similarly, eight teachers (23.5%) have 6 to 10 years of teaching experience. Three teachers (8.8%) have experience between 11 to 15 years. Thus, most teachers have teaching experience between 16 to 20 years.

Table 4.8

Distribution of position grade (n = 35)

Position Grade	Percent
DG 32	2.9
DG 34	14.3
DG 36	2.9
DG 41	42.9
DG 44	34.3

Table 4.8 shows the distribution of the position grade of the respondents. Fifteen teachers (42.9%) are in the DG 41 grade, 12 teachers (34.3%) are in the DG 44 grade, five teachers (14.3%) are in the DG 34 grade, whereas one teacher (2.9%) is in the DG 36 grade and one teacher in the DG 32 grade respectively. Most teachers are in the DG 41 grade, and the highest grade among all the respondents is DG 44.

Table 4.9

Distribution of field of specialization (n = 35)

Field of Specialization	Percent
English	48.6
Art/ English	2.9
English/ Moral	2.9
Counseling	2.9
Mathematics/ English	11.4
Music	2.9
Science	2.9
Science/ English	2.9
Visual Arts	2.9
Physical Education/English	2.9
Nil	17.1

Table 4.9 shows the distributions of the field of specializations that are stated by the respondents. Seventeen teachers (48.6%) stated English as their field of specialization; six teachers (17.1%) wrote Nil in the space for field of specialization, and four teachers (11.4%) stated Mathematics/ English as their field of specialization. One respondent (2.9%) stated Art/English, one respondent (2.9%) stated English/Moral, one respondent (2.9%) stated Counseling, one respondent (2.9%) stated Music, one respondent (2.9%) stated Science, one respondent (2.9%) stated Science/English, one respondent (2.9%) stated Visual Arts and one respondent (2.9%)

stated Physical Education/ English. Although the teachers have stated all different field of specializations, they are all currently teaching English in their respective schools. However, majority of the teachers in this study are from the English field of specialization.

Pearson correlation. The results from the Pearson Correlation analysis are presented in the table below. Correlation between point .91 to 1.00 or -.91 to -1.00 indicates a very strong correlation between variables whereas .01 to .30 or -.01 to -.30 indicates a very weak correlation between variables. .00 indicates that there is no correlation between the variables (Chua, 2012).

Table 4.10

Correlation between the independent variables and the dependent variable

Variables	Behavioral Intention Score
PE Score	0.317
EE Score	0.396*
SI Score	0.424*
FC Score	0.391*
A Score	0.676**
SE Score	0.664**
AX Score	0.205
E Score	0.590**

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

From the table above, the highest relationship was found between the attitude (A score) and behavioral intention (r = 0.676). However, the value indicates that the strength of relationship between these two variables is rather mediocre. The same applies to the relationship between self-efficacy (SE score) and behavioral intention (r = 0.664). This is followed by the relationship between enjoyment (E score) and

behavioral intention which indicates a mediocre relationship too (r = 0.590). The relationship between social influence (SI score) and behavioral intention is weak (r = 0.424); similarly, the relationship between effort expectancy (EE score) and behavioral intention is weak (r = 0.396). This is followed by the relationship between the performance expectancy (PE score) and behavioral intention which is also weak (r = 0.317), and this indicates that there is no significant relationship between the performance expectancy and teachers' intention to participate in the existing professional development program. Lastly, the correlation score between anxiety (AX score) and behavioral intention is very weak (r = 0.205). This shows that there is no significant relationship between anxiety and teachers' intention to participate in the existing professional development programs.

Therefore, the hypotheses H1 and H7 are rejected as the findings show that the performance expectancy and anxiety do not have a significant relationship with the teachers' intention to participate in the existing professional development programs. On the other hand, the hypotheses (H2, H3, H4, H5, H6, H8) are failed to reject as the correlation findings show that these independent variables do have a significant relationship to teachers' intention to participate in the existing professional development training. Teachers' attitude towards the existing professional development training has shown the highest significant among all which shows that teachers generally have a positive attitude when they attend the professional development trainings. Other variables such as self-efficacy, enjoyment, and social influence shows a mediocre relationship with teachers' intention to attend; effort expectancy has the one of the weakest relationship with teachers' intention to participate in the existing professional development trainings, whereas performance expectancy does not have a significant relationship with teachers' intention to

participate in the existing training programs; thus, these are the problems teachers face in the existing professional development trainings.

Though there is a significant relationship between some of the independent variables and teachers' intention to participate in the existing professional development programs, the findings indicate a mediocre and weak relationship; therefore, these findings indicate that teachers do not fully accept the existing professional development programs. Findings indicate that teachers do not find the existing PD modules useful in their jobs, and the modules do not enable them to accomplish tasks more quickly. Also, findings show that the existing PD modules does not increase teachers' productivity.

Phase 2 – Needs Analysis

The main purpose of the qualitative interviews was to support the findings in the quantitative survey and to find out the needs of method was used whereby six in-service primary school English teachers were interviewed. Three of the teachers interviewed were experienced teachers who have more than 20 years of teaching experience and other three are novice teachers with at a minimum of 3 years of teaching experience. Generally, all these teachers were asked the same set of questions during individual interview sessions. However, the probes for all the interviewees depended on their responses. The interviews were conducted to find out the general issues faced by the ESL teachers in the existing professional development trainings held in and out of schools. The findings are organized and guided by the main themes in the literature. These interviews were aimed to

i. illustrate teachers' professional development training experience and their perceptions on the existing trainings conducted.

ii. find out teachers' opinions with regards to the approaches and the modules used in the existing professional development trainings.

iii. find out the problems and challenges faced by teachers in implementing the new methods or strategies from the existing professional development trainings.

iv. find out the problems and challenges faced by teachers in the ESL classroom.

v. identify teachers' needs for future professional development trainings.

Table 4.11

Interviewees profile

Teachers	Qualifications	Years of Experience
T1	B.Ed Teaching English to Young Learners (TEYL)	5 years
T2	B.Ed Teaching English as a Second Language (TESL)	21 years
T3	B.Ed Teaching English as a Second Language (TESL)	4 years
T4	Diploma in Computer Studies, B.Ed Teaching English as a Second Language (TESL), Masters in TESL (MESL)	23 years
T5	B.Ed Teaching English as a Second Language (TESL), Masters in TESL (MESL)	26 years
T6	B.Ed Teaching English as a Second Language (TESL)	24 years

As shown in Table 4.11, all teachers interviewed majored in English and hold a Bachelor Degree in Teaching English as a Second Language (TESL). Two of the teachers have a Masters Degree in Teaching English as a Second Language (MESL). The experienced teachers have more than 20 years of experience in teaching English

whereas the novice teachers have 4 and 5 years of experience in teaching respectively. The teachers interviewed are teaching in urban schools in the Klang Valley. Following are the themes generated for the data in the needs analysis.

Characteristics of the existing professional development trainings.

Duration. Since duration of the training is one of the components of an effective professional development, the teachers were asked about the duration of their training. All the six teachers mentioned that as stipulated by the Ministry of Education, all teachers have to attend at least 7 days of professional development training, also known as *Latihan Dalam Perkhidmatan (LDP)* in a year. However, four of the teachers interviewed have attended at least 15 days of training in year 2016. The other two teachers have attended more than 7 days of training but they are not able to recall the exact number of days attended. All the training sessions are mostly held on weekdays, which are normal school days, and they are normally held full day from morning till evening. A few of them mentioned that they do attend trainings on Saturdays too, which are held in schools. These professional development trainings are normally conducted by the trainers from the district education office (PPD). However, some teachers reported that occasionally, trainings are also conducted by the main trainers (JU) who are senior school teachers with many years of teaching experience; also, the teacher from Putrajaya narrated she has attended trainings that are conducted by trainers from the teachers training colleges such as English Language Teaching Centre (ELTC) and *Institut Pendidikan Guru* (IPG) and also the *Jabatan Pendidikan Wilayah Persekutuan*.

> *We are required to attend 7 days of training, but it always goes beyond that. I think this year I have attended close to 15 days. [laughs in disbelief] Monthly and mostly weekdays from 9 morning till 5pm but sometimes we are required to come on weekends too. The ones that are held on weekdays are usually conducted by the*

PPD officers, and on Saturdays we go to school to attend the workshop conducted by our own school teachers. (T1, interviewed on 10/4/16)

Yes, actually just 7 days of trainings per year but I have done 16 to 18 days now as the Keramat district is always active in all these 'kursus' (trainings). Mostly weekdays, which are regular school days. (T2, interviewed on 13/4/16)

I have attended more than 7 days obviously but can't remember how many exactly. They're not on monthly basis, but mostly in Putrajaya they're on Saturdays. Sometimes we have IPG lecturers, JPW officers and also lecturers from ELTC who conduct these workshops. (T3, interviewed on 13/4/16)

I go for about 15 to 20 trainings, and as the panel teachers, my school sends me for more trainings and I train the teachers in my own school… monthly basis, sometimes almost one two weeks on weekdays. (T4, interviewed on 21/4/16)

I can't recall la but I know more than 7 days of course. Training sessions outside school are mostly on weekdays conducted by JU, sometimes only for a day but sometimes for two to three days. (T5, interviewed on 1/5/16)

So many courses actually, not really sure how many but I think till now about 15 maybe. (T6, interviewed on 5/5/16)

Lecture-based. All the interviewed teachers mention that the professional development trainings held in and out of school are lecture-based. They have never participated in an online professional development training. Trainers explain concepts using a Powerpoint presentation, and teachers are usually divided into groups for discussions or brainstorming activities which are usually followed by quizzes, presentations, and microteaching sessions.

All are lecture style where they spend few hours going through slides, giving talks or lectures and then we are divided into groups for activities. We do BBM (teaching aids) and have microteaching sessions. (T1, interviewed on 10/4/16)

The trainings are both lecture and activity based. They are always face-to-face so we brainstorm activities and do lesson plans. (T2, interviewed on 13/4/16)

Mostly lecture based. We do group activity sometimes. (T3, interviewed on 13/4/16)

Workshops, both lectures and activities. (T4, interviewed on 21/4/16)

All the LADAPs are workshop based. Usually, the morning session is for lectures by 1 or 2 trainers, and after lunch, we are grouped for tasks to prepare the

BBMs (teaching aids), and sometimes to brainstorm activities for kids, and then we have presentations and Q&A sessions. (T5, interviewed on 1/5/16)

Training needs. Two of the teachers mentioned that they fill in a form in the beginning of the year to indicate their needs for professional development trainings. One of the teachers mentioned that the teachers in her school are asked to fill a Progress Form *(Borang Prestasi)* at the end of the year so they could list down the trainings they wish to attend in the following here. However, the teachers mentioned that these forms are usually filled out for trainings that are conducted in-school; their needs for outside school trainings are never identified and they do not have the opportunity to choose the trainings they wish to attend.

We just fill in some sort of form known as 'Borang Prestasi' (progress form) where we get to write what we want. (T1, interviewed on 10/4/16)

Two of the teachers mentioned that they have been asked to fill in a feedback form and survey forms after certain trainings. Others, on the other hand, said that they write reports about the training sessions. Some teachers mentioned that they will normally be required to train their colleagues in schools after they return from their training sessions. In such in-school training sessions, these expert teachers will normally share the new things they have learnt and give feedback in the form of report on the trainings they have attended.

Sometimes got surveys, sometimes just randomly ask feedback like faham tak? (T4, interviewed on 21/4/16)

Yes, we fill in feedback forms after some trainings. (T5, interviewed on 1/5/16)

Repeated. Five out of the six teachers agreed that the training sessions provide them with the necessary knowledge needed for their school teaching. Nevertheless, they have also expressed that the trainings are most of the time repeated and redundant,

thus proving to be draggy and a waste of time. One of the teachers mentioned that although the training provides necessary knowledge, she is feeling frustrated after attending a redundant session on School Based Assessment (SBA) thrice.

> *I am mostly unmotivated when I find the courses are repeated and nothing is really new, so it is basically just a waste of time. I already have so much on my plate and on top of that, I am required to attend the same course again and again, and not only that, there is also no standardization of the content. Whatever that is taught is the modules is too overambitious and does not match the modules at times.* (T2, interviewed on 13/4/16)

> *There are sessions when they are helpful and there are times when they are redundant sessions.* (T3, interviewed on 13/4/16)

> *Being in service for so many years already.. I'm used to all these but sometimes fed up la when they go through the same thing over and over. I went for the SBA kursus three time already, and same thing is watered down. Doing all these computer thing is not easy for me as I am not tech savvy, but they still want us to utilize all these.* (T6, interviewed on 5/5/16)

Mandated. The teachers agreed to the fact that most professional development trainings in Malaysia are cascade type, and on further probes about their attitude towards the professional development trainings, teachers expressed that they feel reluctant and unmotivated to attend these trainings. Among the reasons cited was that trainings take place during class time; thus, they have to leave their classes and struggle later to cover up the syllabus which makes them feel overwhelmed. Besides, they find a lot of information watered down and later gets lost in translation. The novice teachers mentioned that they used to be very keen but they too find a lot of repetition in the trainings.

> *I have never asked to go for trainings. The GB instructs us to attend. [laughs] Most of the times I feel reluctant because we have to leave our classes to attend the training, and sometimes for few days. Another thing is time because we have so many things to do, and when we leave for courses, we come back to school and feel overwhelmed with deadlines to catch up. (*T1, interviewed on 10/4/15*)*

> *I being a new teacher am always sent for all these courses and I have to admit that I used to be very keen but now it has become demotivating especially since*

mostly things are not related to syllabus and can be taught some other time. (T3, interviewed on 13/4/16)

I am usually expected to attend so many different courses so that I will come back and deliver the knowledge to my colleagues in school. Well they are mostly useful but sometimes the courses are draggy ... What could be covered in half day is stretched to a whole day and I just find some trainings to be a waste of time (T6, interviewed on 5/5/16)

Training content. Most of the modules covered during the professional development trainings are on the Literacy and Numeracy program (LINUS) which is taught by the lower primary teachers. Four of the teachers attend such trainings, especially on differentiating instruction since they are teaching the lower primary students. In the trainings on differentiating instruction, they are only lectured on the benefits of differentiating instruction, and no further support on materials and approaches is given. In a like manner, four of the teachers mentioned attending trainings on school based assessments; other modules used in the trainings are creative writing modules, ICT in teaching, and *Dokumen Standard Kurikulum dan Pentaksiran* (DSKP) – language arts modules. Another popular training that most of them attend is on the FROG Virtual Learning Environment system in which they are taught about the features and technicalities of the system. Teachers who are preparing students for the *Ujian Pencapaian Sekolah Rendah* (UPSR) examination mentioned that they were asked to attend quite a number of trainings on the creative writing module as the format of the UPSR English examination was recently revamped. All the teachers agreed that the pedagogical modules are sometimes comprehensible and they fulfill the needs of the teachers. They use the modules as a reference to plan their lesson plans, and the materials provided during the trainings are used in the classrooms.

Some of them are useful provided it is not repeated. It actually depends on the trainers. The Keramat district officers are really good, sometimes they follow up, so we learn quite a lot from them… The writing techniques are quite useful. They teach use on how to use I-think maps, so that is quite okay. But the ICT ones

no lah because as usual the connection is bad and using VLE is difficult I really dread that. (T2, interviewed on 13/4/16)

Yes, the modules are good. I use the modules as a reference when I prepare my lesson plans. Sometimes we prepare different materials in different groups and compile them, so they come in handy when I prepare lesson plans. (T3, interviewed on 13/4/16)

Modules on English are useful and they do fulfill the needs. But I cannot comprehend the trainings on the VLE though I have attended several, including the in-house training. They teach us on how to embed materials, assess on all the other steps but we must prepare own materials for that. (T6, interviewed on 5/5/16)

Incoherent. However, again, two of the teachers lamented that some modules are repetitive, and one teacher mentioned that the LINUS modules are not parallel with the Kurikulum Standard Sekolah Rendah (KSSR). On further probe, the teacher explained that both the KSSR and remedial LINUS students are in one class; thus, she faces difficulty in standardizing the instruction as the LINUS module activities differ from the KSSR learning outcomes.

I find the training notes quite comprehensive as they provide materials to teach weak students in the LINUS classes. They are suitable but I don't think they are parallel with the KSSR syllabus. In my school, we have both KSSR and LINUS in one class, so when I teach, I find the LINUS module activities to be very much different from the KSSR learning outcomes. (T1, interviewed on 10/4/16)

A lot of the modules are helpful as the ideas are fresh, but at times they repeat the same things in other trainings, hmm so if they are not repeating, I find them okay. (T5, interviewed on 1/5/16)

Implementation barriers in existing professional development trainings.

Heavy workload and time constraint. Although the teachers find some of the modules useful, they pointed out that they face several challenges in implemented the strategies and new materials in school. The obvious cited reason among most teachers was time constraint. All the teachers find having a heavy workload as one of the main challenges. In the interviews, one of them mentioned that they teach about 36 hours per week, and they are all also entrusted with many other academic and non-academic

duties. With all the heavy workload they already have, they find it time consuming to come up with interesting and creative teaching materials.

> *The latest we learnt in LADAP by the PPD is on how to differentiate instruction but differentiating instruction in class is very time consuming and too much time is taken just on the coordination. When I plan my lessons, I have to prepare two – one LINUS and one KSSR, well that is still okay so far but to conduct activities in class has become almost impossible as I only have enough time to teach.* (T1, interviewed on 10/4/16)

> *To tell you the truth, it is not practical to apply all these new methods in schools. Firstly, we have our hands full with so many different tasks and responsibilities, and the methods and strategies suggested takes up so much time just preparing and this is why we end up neglecting some ideas.* (T5, interviewed on 1/5/16)

> *The list is very long, I tell you but I think just like many, time constraint. We don't work 7 to 1 like many think. I think I work 7 to 7 you know. When you're unmarried and childless, it gives the school more chances to chuck work and bigger responsibilities on you. Unfair, but saya yang menurut perintah (laughs).* (T6, interviewed on 5/5/16)

Lack of facilities. Besides, teachers mentioned that the lack of ICT facilities is another reason why they cannot implement the strategies. They are taught to implement the ideas into their Frog Virtual Learning Environment (VLE) system, but they find it challenging due to poor Internet connection in their schools. Besides, the teachers highlighted that having limited teaching resources such as LCDs and erratic internet connection in their school can also be challenging; thus, they end up using the textbook most of the time.

> *One is the heavy workload (sighs) and another major issue is the VLE system in which we have to download our lesson plans and assign homework for students. The internet connection is so bad that VLE has become just a pain. We really lack resources to teach using ICT and every time we get observed by PPD, they expect us to teach using ICT, but because of the limited resources, we can't do much.* (T1, interviewed on 10/4/16)

> *The writing teaching techniques are quite useful. They teach us on how to use mind mapping and all in class, so that is quite okay. But the ICT ones no lah because as usual the connection is bad and using VLE is terrible and we really dread using that.* (T2, interviewed on 13/4/16)

Not always. The issues of space, students, time is rarely taken into consideration. (T4, interviewed on 21/4/16)

The internet connection is so bad it takes so much time just uploading files onto the VLE, so we don't use it except when we get observed. Then we have to prepare an ICT based lesson. You see classes are so small and numbers are big, so there's hardly any space for movement and group activities. (T5, interviewed on 1/5/16)

I have a very heavy teaching load this year. Teaching 36 hours because 3 English teachers are away on maternity leave – so, I can say that's my greatest challenge and of course with other work, I'm just so overwhelmed. (T6, interviewed on 5/5/16)

Lack of support. Also, lack of support from the school management is another challenge faced by several teachers. Some school management still prefer traditional teaching and assessment approaches and discourage teachers from implementing the new ideas or approaches in their teaching. Other challenges elaborated in the interviews were issues of space, students, and facilities that are rarely taken into consideration by the school management. The novice teachers mentioned about the lack of support they get from their management and senior teachers in their respective schools. On further probes, they voiced out their frustrations of not being able to teach creatively using fun activities as the senior teachers ridicules them when their class gets too noisy and emphasizes on rigid and traditional teaching methods.

I had a culture shock in my first year of teaching. In maktab (Teacher training institute), we were taught to teach using fun activities and to be very learner-centered, but reality is different when you join school. You have to take out whatever you learn in maktab and adapt to the school culture. I used to prepare lots of fun ABM for my classes, but other teachers used to ridicule me saying that I pergi kelas untuk main dengan budak je (translation: I am going to class to play with the kids.) (T1, interviewed on 10/4/16)

Some are not implementable at all; for example: SBA. I wanted to use my own format for the exam paper but my 'pentadbir' (management) wanted me to use the new UPSR format for my year 4 students, can you believe it? We are taught to use SBA during courses, but in school it is just too exam-oriented. Personally, my biggest challenge is that the management of my school limits creativity in teaching. When you're creative and get students to learn through fun activities like games, they assume that you're not teaching at all. My students are not confident in using

English when I teach rigidly, but when they learn through fun activities, they use, and only I see this. My panel teacher istoo rigid in using the textbook and expects all of us to use all the time, so I ended up in a squabble because I use own supplementary materials and I emphasize a lot on hands on learning. This is basically the biggest challenge I face. No support at all. (T3, interviewed on 13/4/16)

Needs for future professional development trainings. Teachers' needs were identified towards the end of the interviews. All of them suggested some specific teaching challenges that should be addressed in future professional development trainings. All of them expressed interest in learning pedagogical skills that are relevant to their needs. Their needs stem from the problems they face in their own classrooms. Therefore, the majority would like to learn effective ways to teach English to the weak and slow learners, especially those in the remedial. At the same time, some suggested that they should be taught the effective methods to capture students' interest in learning English, especially students who do not enjoy reading. The teachers who teach both LINUS and KSSR students in one classroom were keen to learn about effective ways to differentiate instruction in these classes. One of the teachers expressed interest in learning how to teach grammar without making the students feel bored.

I would really love on learn on how I can motivate weak students when I am differentiating instructions. During the courses, the trainers tell us that we need to differentiate objectives, the delivery of the lesson and the worksheets for all the modules are given. So we prepare two sets of lesson plans and during instruction we teach as normal, but then we have to teach the LINUS kids separately. The problem is when the mainstream students are too active, it's very difficult to focus on the weak students, and they feel unmotivated to learn. Sometimes I end up teaching easy stuff to the whole group because it's so time consuming. (T1, interviewed on 10/4/16)

Yeah perhaps ways to teach grammar without making the students feel bored. I can't help it but the classes are boring every grammar lesson and I have no idea on how grammar can be fun lah. (laughs) (T2, interviewed on 13/4/16)

Hmm.. differentiated instruction is the main thing on my mind now though there are so many. Sometimes, to save time, I teach all of them the same thing but give different worksheets, but how do I teach without making the LINUS students feel left out I wonder. Also, how to convince my school management to get a remedial

teacher and accept change (laughs) Can I have a menu to choose from? (laughs) (T3, interviewed on 13/4/16)

We are asked to use online teaching strategies, but with the erratic internet connection this is impossible, so I would be interested to learn on how I can teach and capture students' interest. (T4, interviewed on 21/4/16)

Teaching slow learners is not easy. So I hope I can learn how to teach them in a better way so they remember better. (T5, interviewed on 1/5/16)

My students do not like to read, so this makes it difficult to teach when they themselves lack interest in learning. Maybe more on how to make learning fun for them. (T6, interviewed on 5/5/16)

Responses from the interviews support the results yielded from the UTAUT survey in phase 1, and it can be concurred that teachers are not willing to participate in professional development trainings as they deal with a plethora of challenges in school besides having to attend repeated and redundant sessions of professional development training. Despite the fact that most professional development trainings provide teachers with comprehensible input that is useful in their everyday teaching, they face different types of challenges whilst implementing. For instance, not getting support from the management and colleagues leads to teachers feeling unmotivated to implement new strategies. Overall, they do not find enjoyment in attending the professional development trainings.

Phase 3 – Design of the FiT-PD Module

The design of the flipped teacher professional development (FiT-PD) module is guided by the responses by the teachers in the needs analysis phase. The FiT-PD module was designed based on the challenges faced by teachers in their daily teaching and their needs for future professional trainings. Also, the principles of an effective professional development training that were discussed in the literature review were also incorporated in the design of the module: content focus, active learning,

coherence, duration, and cooperation. Since the FiT-PD training was conducted for teachers who teach different levels in school, the Year 4 DSKP was used to plan the training notes for this training.

The FiT-PD module consists of six sections: overview, learning outcomes, overview on a flipped professional development training, content mapping of the module, training schedule, and training notes for all the sessions. All the sections of the module will be elaborated in detail.

Overview. In this section, an overview of the training is given to the participants. The main aims and objectives are elaborated in detail. This section is essential so that the training participants will get a general idea of the training from the description. It is clearly elaborated that this flipped teacher professional development (FiT-PD) module is designed to equip in-service English as a Second Language teachers with pedagogic knowledge and skills to deal with weak and slow learners. This training aims to offer an opportunity to teachers to acquire innovative and creative teaching skills to develop as a professional English language teacher, in line with the National Education Philosophy. Thus, this is a thorough training that will be conducted in four sessions through face-to-face and online interaction.

This training focuses on imparting teachers with the knowledge of 21st century learning skills (4Cs) to motivate slow learners in classroom. Sharing and collaboration are indisputably the critical components in this training. This 21st century skills idea draws on the sharing of participants' prior classroom experiences in teaching young learners, particularly the slow learners. This training also engages participants in discussions of current issues and trends related to English language teaching in Malaysia.

Participants critically explore and examine the best practices in teaching slow learners, and they are given opportunities to demonstrate what they have acquired through hands-on and collaborative activities. Such sessions allow participants to consolidate experiences and provide constructive feedback upon implementation. This training emphasizes on the continuous professional development of teachers: thus, this training will prepare them with skills that are needed to develop professionally as an English language teacher. It is intended that upon completing this training, participants will be able to adopt and adapt the strategies and tailor their lessons to suit their students' needs.

Learning outcomes. Stating the learning outcomes is important so that the participants would know what they can achieve towards the end of this training. Thus, the learning outcomes of the training were listed in this section. Upon completion of this training, the training participants (TPs) will be able to:

i. integrate the 21st century learning skills that underpin effective classroom practices into their lessons.
ii. carry out creative and innovative teaching activities in a mixed-ability classroom.
iii. collaborate with teachers from different schools.
iv. flip TPs classrooms using online platforms.

Overview of a flipped professional development training. The participants of this training have never participated in any form of online professional development trainings as all professional development trainings in Malaysia are cascade-type (top-down approach); these existing professional development trainings are conducted face-to-face in lectures or workshop setting. Therefore, it was essential to introduce

the concept of a flipped training in this section. The advent and prevalence of the Internet has even made it possible to flip a professional development training. Opposed to traditional professional development trainings, this training begins outside classroom, through the Facebook platform in which training participants are provided with interactive multimedia and small online activities that takes place through trainer facilitation. Participants are then required to attend a face-to-face session for hands-on activities, and subsequently move to another online session on Facebook. A figure illustrating the flipped professional development program was added into this section to aid participants understanding.

Subsequently, the design framework and the instructional plan of the FiT-PD training are added into this section so that the participants are aware of the stages of implementation, the zone of proximal teacher developments, the cognitive processes that take place in each stage, and also the proposed activities for each stage of the training.

Content mapping of the module. The module of this flipped professional development training is designed based on 4C's of Education. To meet the demands of the complex and competitive 21st century, we have to agree that students need to learn beyond the 3R's (reading, writing and arithmetic) that they are tested in schools. There is a plethora of 21st century skills, but the four most important skills in the primary education are communication, critical thinking, collaboration, and creativity. These 4C's are regarded as the most significant for a positive and advanced revolution in learning. Therefore, the '3R + 4C's' approach should be adopted by all teachers to help our Z-generation flourish in the 21st century.

This training is designed to provide teachers with a number of strategies to deal with the slow and unmotivated students by the inclusion of these 4C's of education.

The content of this training has been thoroughly planned, and a needs analysis has been conducted with a number of primary school English teachers. Interviews with random primary school English teachers have revealed that teachers face challenges in teaching the slow learners, especially in the remedial program. Besides, they have reported that they face difficulties in applying differentiated instruction in their respective classrooms. Teachers also expressed their interest in learning how to deal with unmotivated students in their classrooms.

Therefore, the content mapping of this module has taken teachers' needs into consideration. Throughout this training, teachers are exposed to several pedagogies and practices and skills to deal with slow and unmotivated English language learners. Teachers are encouraged to adopt the 4C's approach in planning their lesson as it does not help to teach weak and slow students, but it also helps in motivating students by engaging them in fun learning activities. Play and academic work are not distinct categories for young learning, and learning and doing are also inextricably linked for them.

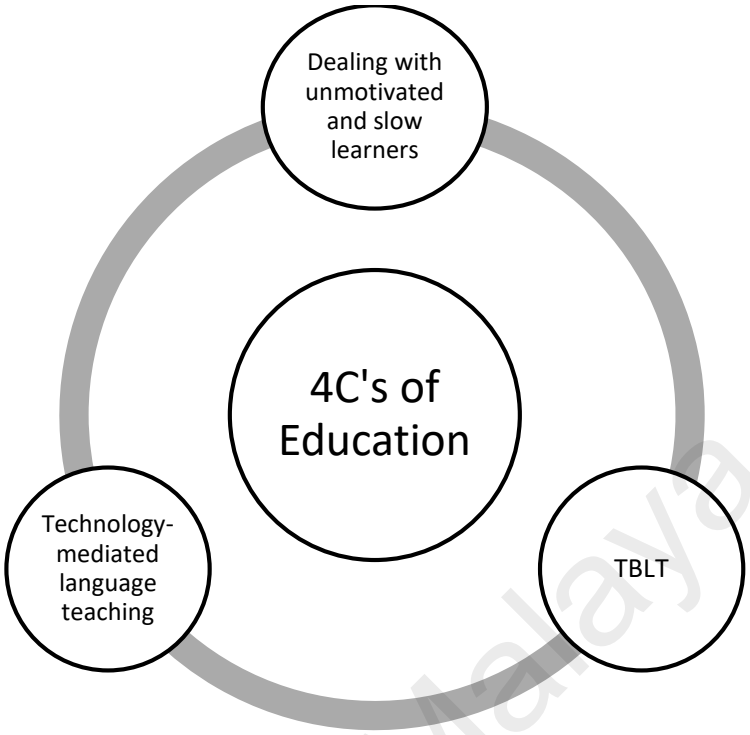


Figure 4.1 Content mapping of the FiT-PD training

It is indisputable that Information and Communication technologies play a crucial role in how the Z-generation students experience learning. Thus, one particularly promising avenue for teaching to these new literacy needs is the technology-mediated language learning. Teachers areintroduced to the concept of a "flipped classroom", and will be taught on how they can flip their classrooms using the existing VLE platform to help the slow learners and at the same time overcome the challenges in differentiating instruction.

Training schedule. A training schedule for the training is added so that teachers are aware of the duration of all the four sessions. Teachers are given one week to watch all the learning materials such as video clips and documents that are uploaded on the Frog VLE system. They are given a longer duration so that they could respond and provide feedback at their own convenience. The face-to-face sessions are held for two to three hours, after school hours.

Training notes. Detailed training notes were prepared for all the four sessions. These training notes enable both the trainer and the participants to be prepared ahead of the training and to know what is expected from them during each session. In the training notes for each session, the following were listed: session title, description, training outcomes, time, resources, session outline and training activities. The training activities are designed based on Gagné's Nine Events of Instruction. This instructional design was chosen to complement the cognitive processes of the Bloom's Revised Taxonomy. The training notes for all the four sessions will be elaborated.

Session 1 (Online – VLE frog). The flipped training begins with an online session where learning materials are viewed by the participants at home before the face-to-face session. The title of this session is 'Integrating 4C's of the 21st Century skills to motivate slow learners'. This session is designed for the training participants to familiarize themselves with the 21st Century Learning skills, especially the 4C's. In this session, the participants identify some of the best practices to motivate slow learners in their classroom. By the end of this session, the participants will be able to share prior teaching experiences in teaching young learners. Besides, they will be able to equip themselves with the knowledge of 21st century learning skills; also, they will be able to identify some best practices and strategies to motivate slow learners. This session is held for a week, and the resources that are used for this are video clips and PowerPoint slides. There are three activities that are outlined for this session; in the first activity, participants uncover beliefs and discuss challenges in teaching English to slow and unmotivated learners. The second activity requires participants to watch video clips on 21st century learning skills, and in the third activity, participants go through the PowerPoint slides on some creative teaching ideas to motivate slow learners in remedial teaching.

The training activities are outlined based on the Gagné's Nine Events of Instruction. Both the trainer's role and training participant's role are elaborated in steps. First, to gain attention, trainer presents a stimulus, problem or situation by using a video clip to ground the session. The training participants respond in the comments section of the video link posted on the Frog VLE. Second event of instruction is to inform the learners of the objectives. Trainer informs the participants on what they will be able to accomplish by the end of the online session. The participants comprehend the objectives of the session. The next step is to stimulate recall of prior knowledge, so trainer asks participants to share their experiences in teaching slow learners. The participants' role is to share the problems they face and the strategies they use to overcome the problems. In the subsequent step of presenting stimuli, trainer uploads a few video clips on 21st century learning skills and the 4C's in education. Participants take notes while they watch the video clips. The final step of this session is to provide guidance; thus, trainer uploads PowerPoint slides on some creative teaching ideas that can be used by participants to motivate their learners in remedial teaching. Participants engage in reflective writing to reflect on their learning in the first session.

Session 2 (face-to-face). In this session, the trainer meets the participants in a face-to-face session and the in-class time is devoted to projects and discussions. The title of this session is 'Planning a lesson using the 4C's'. This session is designed for the training participants to explore different ways of planning a lesson using the 4C's for a mixed-ability classroom. By the end of this session, the participants will be able to explore and identify some activities that can be used by learners with different levels of proficiency. Besides, they will be able to design a writing lesson plan for a mixed-ability class by incorporating the 4C's. Also, this will give them an opportunity to share different ideas among the training participants. The face-to-face session is

scheduled for 4 hours, and the resources for this session are a Year 4 textbook, poster sheets, marker pens and worksheets. Three activities are outlined for this session. First, the participants engage in brainstorming of activities for learners with different levels of proficiency. The next activity is to design a lesson plan using the 4C's for a mixed ability classroom, and the third activity requires the participants to present their lesson plans.

Since the training activities are based on the video lectures in session 1, the sixth Gagné's instruction is implemented here where the performance is elicited. The trainer divides the participants into smaller groups and they sit in their respective groups. Next, the trainer asks the participants to create a mind map of the activities and strategies learnt during the online session. Participants will create a mind map of all the concepts and knowledge acquired in the previous session. Trainer then asks the participants to discuss how these activities can be adapted into the participants' classrooms. Participants discuss and identify how different activities from the previous session can be adapted for learners with different levels of proficiency. In the subsequent Gagné's event which is to provide feedback, trainer provides feedback to all the participants and they take down notes on the feedback provided by trainer.

The next step is to assess performance. Thus, to assess the participants' performance, the trainer assigns each group with a unit from the Year 4 KSSR textbook. Trainer asks each group to design a task-based lesson plan using the 4C's for a mixed ability classroom. The participants design a 4C integrated task-based lesson plan for a mixed ability classroom. After completing the lesson plans, the trainer asks the participants to present their lessons plans and elicits feedback from the others. Other participants provide peer-feedback to other groups. Finally, to enhance retention and transfer, the trainer conducts a whole-group discussion with the participants, and

they engage in the whole group discussion to discuss on the activities suggested and ways to improve further. Trainer ends the session by asking the participants to implement the 4C's in their own classrooms and encourages them to share their work on the Frog VLE.

Session 3 (online – VLE frog). The third session is an online session titled 'Current trends and issues in a technology integrated language classroom'. This session is designed for the training participants to demonstrate an understanding of the current trends and issues related to technology integrated in language classrooms. By the end of this session, the participants will be able to expand knowledge on the constructivism theory and explore trends and issues related to technology integration in language classrooms. Besides, they will be able to equip themselves with the knowledge of flipping their classrooms using FROG Virtual Learning Environment (VLE). Also, they will be able to use Google Docs to encourage collaborative writing among learners. Just like the first session, this session is scheduled for a week, and the resources that are used are internet articles and Google Docs. Three activities are outlined for this session; in the first activity, current trends and issues pertaining to technology-integrated language classroom are discussed. Next, participants are taught to flip their respective classrooms using the FROG Virtual Learning Environment (VLE). The third activity requires the participants to use Google Docs to encourage collaborative writing among students.

Similarly, the Gagné's nine events of instruction are implemented in the third and fourth session. In the first step of gaining attention, trainer presents a stimuli or a problem using a video to ground the session. The participants respond in the comments section of the link posted on the Facebook group. In the next step, the trainer informs the participants of the objectives, specifically on what they will be able to accomplish

by the end of the online session. Participants comprehend the objectives of the session. To stimulate recall of prior knowledge, trainer asks participants to share their experiences and challenges faced in using FROG Virtual Learning Environment (VLE) and other technologies to support teaching and learning in their classrooms. Participants share the problems they face and the strategies they used to overcome the problems. In the next step, stimuli is presented. Trainers asks participants to read the article on the constructivism theory, and participants take notes while reading the article. Finally, guidance is provided. Trainer uploads a video clip on the concept of flipped classroom. Trainer uploads a PowerPoint tutorial on how participants can flip their classroom using the FROG Virtual Learning Environment (VLE). Trainer also uploads a tutorial on how participants can embed Google Docs on their FROG Virtual Learning Environment (VLE) to encourage collaborative writing among students. While watching all these tutorials, participants take down notes.

Session 4 (face-to-face). This is the final session in the Flipped Professional Development (FiT-PD) module. The title of this session is 'Creating a technology-integrated English lesson'. This session is designed for participants to explore different tools and applications to create a technology-integrated English lesson. By the end of this session, the participants will be able to explore and identify some ideas and ways to integrate technology in class. Besides, they will design a technology integrated language lessons. Apart from that, they will present video clips or photographs of a technology integrated language lesson. This face-to-face session is conducted for four hours, and the resources required for this session are Google Docs and Poster Sheets. This session covers three activities; first activity requires participants to brainstorm technology-mediated activities for learners with different levels of proficiencies. The second activity requires participants to design a technology integrated language

lessons whereas the third activity requires participants to present video clips or photographs of a technology integrated language lesson.

The training activities for this session continues from Gagné's sixth event of instruction, which is to elicit performance. In this step, trainer creates a Google doc and asks participants to collaboratively brainstorm and discuss ways, ideas, and online applications to overcome challenges in integrating technology in the language classroom. Participants share ideas, ways and links that can be of use in integrating technology in the language classroom. Next step requires the trainer to provide feedback, so the trainer provides feedback to the ideas brainstormed during discussion. Participants jot down the feedback given by the trainer. To assess performance, trainer assigns everyone with an end-of-course assignment. In small groups, the participants design a technology integrated language lesson plan and implement it in their respective classrooms. Trainer assesses the lesson plans and provides feedback. Participants are also required to share video clips or photographs on the Frog VLE. Finally, to enhance retention and transfer, trainer conducts a whole-group discussion. In the end this session, trainer encourages the participants to continuously collaborate with teachers from other schools and utilize the Frog VLE as an online professional learning platform. The participants engage in the whole group discussion and provide feedback on how the four sessions have benefitted them.

Table 4.12

Pre-validation training notes (Session 1)

TRAINING NOTES
Session No. : 1 (Online – Frog VLE)
Session Title: Integrating 4C's of the 21st Century Skills to motivate slow learners
Description: This session is designed for the training participants (TPs) to familiarize themselves with the 21st Century Learning Skills, especially the 4Cs. In this lesson,

TPs identify some of the best practices to motivate slow learners in their classrooms.	
Training Outcomes	By the end of this session, TPs will be able to: i) share prior teaching experiences in teaching young learners. ii) equip themselves with the knowledge of 21st century learning skills. iii) identify some best practices and strategies to teach – TBLT
Time	5 days
Resources	Video clips
Session Outline	**Activity 1:** Uncovering beliefs and discussing challenges in teaching English to slow and unmotivated learners **Activity 2:** Video clip on 21st century learning skills and the TBLT approach **Activity 3**: PPT slides on some creative teaching ideas to motivate slow learners in remedial teaching

Table 4.12, continued

Gagné's Nine Events of Instruction	**Training activities**	
	Trainer's Role	**Training Participant's Role**
1. Gaining Attention	1. Trainer presents a stimuli/ problem/ situation to TPs to ground the session. *What, for you, are the characteristics of a creative language teacher?*	1. TPs respond in the comments section of the link in the link posted on the Frog VLE platform.
2. Informing the learners of the objectives	2. Trainer informs the TPs on what they will be able to accomplish by the end of the online session.	2. TPs comprehend the objectives of the session.
3. Stimulating recall of prior knowledge	3. Trainer asks TPs to share their experiences in teaching slow students. *i. What are the challenges you face in teaching slow learners?* *ii. What do you do to motivate the slow learners in your classrooms?*	3. TPs share the problems they face and the strategies they used to overcome the problems.
4. Presenting Stimuli	4. Trainer uploads video clips on 21st century learning skills (the 4C's in education).	4. TPs watch the video clips
5. Providing Guidance	5. Trainer uploads a video demonstrating how teachers can integrate the 4C's of Education by adopting the TBLT learning approach. The video highlights some creative teaching ideas that can be used by TPs to motivate the slow learners in remedial teaching.	5. TPs engage in reflective writing.

Table 4.13

Pre-validation training notes (Session 2)

TRAINING NOTES	
Session No. : 2 (Face-to-face)	
Session Title: Planning a lesson using the 4C's	
Description: This session is designed for the training participants (TPs) to explore different ways of planning a lesson using the 4C's for a mixed-ability classroom.	
Training Outcomes	By the end of this session, TPs will be able to: i) explore and identify some activities that can be used by learners with different levels of proficiency. ii) design a writing lesson plan for a mixed-ability class by incorporating the 4Cs and TBLT iii) share different ideas among TPs
Time	8 am – 12pm
Resources	Year 4 textbook Poster Sheets Marker Pens Worksheets
Session Outline	**Activity 1:** Brainstorming of activities for learners with different levels of proficiency. **Activity 2:** Designing a lesson plan using the 4Cs for a mixed-ability classroom. **Activity 3:** Presentation of lesson plans

Table 4.13, continued

Gagné's Nine Events of Instruction	**Training activities**	
	Trainer's Role	**Training Participant's Role**
6. Eliciting performance	6a. Trainer divides TPs into eight groups. 6b. Trainer asks TPs to create a mind map to link the activities/strategies learnt during the online session. 6c. Trainers asks TPs to discuss how these activities can be adapted into TPs classrooms.	6a. TPs sit in their respective groups. 6b. TPs create an i-Think map of all the concepts and knowledge acquired in the previous session. 6c. TPs discuss and identify how different activities (from the previous session) can be adapted for learners with different levels of proficiency.
7. Providing feedback	7. Trainer provides feedback to all the groups.	7. TPs engage in reflection writing.
8. Assessing performance	8a. Trainer assigns each group with a unit from the Year 4 KSSR textbook. Trainer asks each group to design a task-based writing lesson plan for a mixed-ability classroom using the 4C's. 8b. TPs present their lesson plans and elicits feedback from others.	8a. TPs design a 4Cs integrated writing lesson plan for a mixed- ability classroom. 8b. TPs provide peer-feedback to other groups.

Table 4.13, continued

Gagné's Nine Events of Instruction	**Training activities**	
	Trainer's Role	**Training Participant's Role**
9. Enhancing retention and transfer	9a. Trainer conducts a whole-group discussion with the TPs. *i. Which activity did you like the most? Why?* *ii. Which one of the activities will you try in your own classroom?* *iii. What are the new things you have learnt from this session?* 9b. Trainer asks TPs to choose one of the activities and implement it in TPs classrooms.	9a. TPs engage in the whole-group discussion. 9b. TPs should take a short video and photographs of students carrying out the activity and share them on the Facebook group. TPs leave comments on the postings to provide constructive feedback.

Table 4.14

Pre-validation training notes (Session 3)

TRAINING NOTES	
Session No. : 3 (Online – Frog VLE)	
Session Title: Current trends and Issues in a Technology-Integrated Language Classroom	
Description: This session is designed for the training participants (TPs) to demonstrate an understanding of the current trends and issues related to technology integration in language classrooms.	
Training Outcomes	By the end of this session, TPs will be able to: i) expand knowledge on the Constructivism theory and explore trends and issues related to technology integration in language classrooms. ii) equip themselves with the knowledge of flipping their classrooms using FROG VLE. iii) use Google Docs to encourage collaborative writing among learners.
Time	5 days
Resources	Videos, Articles Google Docs
Session Outline	**Activity 1:** Current trends and issues in a technology-integrated language classroom. **Activity 2:** Flip your classroom using FROG VLE. **Activity 3:** Using Google Docs to encourage collaborative writing among students.

Table 4.14, continued

Gagné's Nine Events of Instruction	**Training activities**	
	Trainer's Role	**Training Participant's Role**
1. Gaining Attention	1. Trainer presents a stimuli/ problem/ situation by using a video to ground the session.	1. TPs respond in the comments section of the link posted on the Frog VLE platform.
2. Informing the learners of the objectives.	2. Trainer informs the TPs on what they will be able to accomplish by the end of the online session.	2. TPs comprehend the objectives of the session.
3. Stimulating recall of prior knowledge	3. Trainer asks TPs to share their experiences and challenges faced in using FROG VLE and other technologies to support teaching and learning in their classrooms. *i. Do you use FROG VLE or any other technologies as a learning platform in your language classroom?* *ii. What are the challenges you face in using FROG VLE?*	3. TPs share the problems they face and the strategies they used to overcome the problems.

Table 4.14, continued

Gagné's Nine Events of Instruction	**Training activities**	
	Trainer's Role	**Training Participant's Role**
4. Presenting Stimuli	4. Trainer asks TPs to read the articles on the (i) Constructivism theory and (ii) issues related to language teaching and learning through technology-integrated activities.	4. TPs engage in reflective writing.
5. Providing Guidance	5a. Trainer uploads a video clip on the concept of flipped classroom. 5b. Trainer uploads a PPT tutorial on how TPs can flip their classrooms via FROG VLE/ other online platforms. 5c. Trainer uploads a tutorial on how TPs can use google docs and even embed them on their FROG VLE to encourage collaborative writing among students.	5. TPs take notes while watching the video clip(s) / tutorials.

Table 4.15

Pre-validation Training Notes (Session 4)

TRAINING NOTES	
Session No. : 4 (Face-to-face)	
Session Title: Creating a technology-integrated English Lesson	
Description: This session is designed for the training participants (TPs) to explore different tools and applications to create a technology-integrated English lesson.	
Training Outcomes	By the end of this session, TPs will be able to: i) explore and identify some ideas and ways to integrate technology in lessons ii) design a technology integrated language lesson iii) present their outcomes of implementing a technology integrated language lesson
Time	9am – 12pm
Resources	Google Docs Poster Sheets
Session Outline	**Activity 1:** Sharing of ideas and ways to integrate technology in the language classroom **Activity 2:** Designing a technology integrated language lesson **Activity 3:** Presentation of video clips/ photographs of a technology integrated language lesson

Table 4.15, continued

Gagné's Nine Events of Instruction	**Training activities**	
	Trainer's Role	**Training Participant's Role**
6. Eliciting performance	6. Trainer creates a Google doc and asks TPs to collaboratively and simultaneously brainstorm and discuss ways, ideas or online applications to overcome challenges in integrating technology in the language classroom.	6.TPs share ideas/ ways/ links that are can be of use in integrating technology in the language classroom.
7. Providing feedback	7. Trainer provides feedback to the ideas brainstormed during the discussion.	7. TPs engage in reflective writing.
8. Assessing performance	8a. Trainer assigns everyone with an ***end-of-course evaluation.***	8. TPs design (individual/ pair/ collaborative) a technology integrated language lesson and implement it in their respective classrooms.
	8b. Trainer asks TPs to pick an idea from the previous discussion and create a technology integrated language lesson based on the constructivism principles for their classroom.	8b. TPs share the video clips or photographs of their activities on the Facebook group. 8c. TPs leave comments on the posting to provide constructive feedback.

Table 4.15, continued

Gagné's Nine Events of Instruction	Training activities	
	Trainer's Role	**Training Participant's Role**
9. Enhancing retention and transfer	9a. Trainer conducts a whole-group discussion via Facebook with the TPs. *i. Did your students enjoy the technology integrated activity you implemented?* *ii. What were the challenges you faced during implementation?* *iii. What are the new idea(s) you have learnt from other TPs and wish to implement it?* 9b. Trainer encourages TPs to continuously collaborate with teachers from other schools and utilize the Facebook group as the online professional learning community.	9a. TPs engage in the whole-group discussion.

Phase 4 – Validation of the FiT-PD Module

The design of the FiT-PD module was validated by a panel of subject matter experts (SMEs) from the field of teacher education, professional development, and primary education. This validation was done using the four stages in the Applied Cognitive Task Analysis (ACTA). The four stages of ACTA in which the module was

validated are task diagram interview, knowledge audit, simulation interview and cognitive demand table. Following is the profile of the experts.

Table 4.16

Profile of the experts in the validation phase

Experts	Qualifications & Credentials	Affiliation
E1	B.A TESOL, Masters of Arts and PhD at the School of Humanities, USM Advisor of Teacher Development for Beginning English Teachers (TEDBET), a Special Interest Group under Malaysian English Language Teaching Association (MELTA)	Assistant Professor at School of Education in the University of Nottingham
E2	PhD in Languages (UPM)	Senior Lecturer at the English Language Teaching Centre (ELTC), Malaysia
E3	Masters in Teaching English as Second Language (MESL)	SISC+ Officer in Kinta Selatan, Perak

Task diagram. The module was presented using the LCD projector so that the SMEs could give a broad overview of the design of the FiT-PD training. Since this step serves as the road map of the entire ACTA, SMEs were asked to give an overall impression on the module based on five different themes: module design, content design, content delivery, sources, and evaluation design. Most of the interview questions were formulated to elicit either a yes or no question from the SMEs. The detailed findings are reported in the other three steps of the ACTA. Following is the summary of their responses based on the five themes derived.

***Module design*.** All the SMEs mentioned that the design of this training module provides sufficient information to the participants. However, experts 1 and 2 thought that the training objectives were too broad, and that some were not measurable. Although they complimented the flipped approach, they were worried that some teachers may feel intimidated by such approach in the professional development training; however, they felt that it is worth trying out. All the SMEs also agreed that it is possible for the knowledge sharing to take place in every session of the training. Nevertheless, the SMEs were skeptical about the use of the FROG VLE system as the online platform of this training. The SMEs mentioned that teachers are already unhappy about using FROG VLE as it stands at that moment, so getting them to participate in a flipped professional development training using the VLE may not be helpful.

***Content design*.** The SMEs concurred that the content design is adequate to fulfill the needs of the participants provided that some overambitious objectives are rephrased. The SMEs complimented the idea of using the 4C's of the 21st Century Skills to guide the sessions. However, expert 2 felt that some tasks in the training exceeds the needs of the participants, and they thought that teaching teachers to flip their own classrooms using the VLE system is way too overambitious; thus, this should be discarded. Since this is the participants' first experience in a flipped professional development training, expert 3 advised that the tasks should be simple, relevant, and not too overwhelming.

***Content delivery*.** The SMEs complimented the coherence in the delivery of the content, especially knowing that the content is based on a needs analysis. However, they commented that the language in both the module and video clips should be simple.

Overall, the SMEs believed that the delivery of the content will be able to impact the training that will be conducted.

Sources. All theSMEs were satisfied with the sources used and they felt that the training materials sources used for this module are sufficient. In fact, they agreed to the use of the existing video clips from YouTube for the online sessions. However, expert 3 suggested adding the Know-Watch-Learn (K-W-L) chart into the module so that teachers could utilize in when they watch the video clips during the online sessions.

Evaluation design. The SMEs said that the training evaluation of this module should be revamped as it is too difficult. They suggested to conduct peer evaluation at the end of the training or perhaps something much easier after the changes are made to objectives and tasks that are difficult.

Knowledge audit. Using the broad overview of the module in task diagram, the difficult tasks that are identified by the SMEs in the five themes are further explored using the list of probes tabulated below. Following are the questions that are asked in this step of ACTA.

Table 4.17

Questions asked in Knowledge Audit

Column Title	Questions
FiT-PD themes	What are the example of situations where you experience cognitive task difficulties?
Cues & Strategies	In this situation, what cues would you rely on and what strategies would you suggest?
Why difficult	In what way would this be difficult to a participant? What makes it difficult to do?

In this step, while vetting the design of the module, all the experts explained that some training objectives in the module are too broad, and expert 2 mentioned that there is a mismatch between the research questions and module content. Expert 2 further explained that the first objective is not specifically related the content of the module. Thus, it is difficult to understand the objectives of the training. Expert 1 offered his advice on rephrasing the objectives to ensure that they are measurable and specific. Expert 1 suggested that the training objectives should be written either based on the SMART model, the ABCD model of the Roger Magers theory.

Besides, expert 3 suggested that the training design diagram should not be included in the module as it may overwhelm them. Expert 2 and 3 agreed; expert 2 mentioned that some terms used in the design of the module may be new to many teachers. The experts suggested that the flipped training approach should be explained just in writing, followed by a simple diagram. Also, expert 1 pointed out that some words used may be beyond the participants' comprehension as some participants are also non-option teachers. He suggested to either use simpler words or to add a glossary in the module.

The content design of this module received the utmost attention from the experts. All of them pointed out that the fourth learning outcome – 'flip TPs classrooms using FROG VLE' is way too overambitious for primary school teachers and students. The experts feel that the flipped approach is only implementable in higher learning institutions as it is difficult to get primary students to be independent enough to watch the video clips prior to the school session. Also, expert 2 claimed that using the FROG VLE can be inconvenient to teachers who have not been using it prior to this training. They also mentioned that this approach contradicts the findings in the needs analysis where teachers mentioned problems concerning limited access to Internet, time

constraint, and the unadaptable features of the FROG VLE. Therefore, expert 3 suggested using Facebook as a platform as it is more user-friendly, and teachers can create groups and upload video clips and other relevant instructional materials on it. The other experts echoed this suggestion.

Expert 2 raised her concerns about using the task-based language approach (TBLT) to teach weak and slow learners. It is difficult to train teachers to use the TBLT approach to teach the lower primary students. Therefore, the experts suggested discarding this approach and replacing it with the play-based approach which is more current and relevant to the training as it is applicable to young learners.

On content delivery, expert 1 and 2 pointed out that the trainer speaks too fast in the self-recorded video clip. This could be difficult for the participants to comprehend everything the speaker is saying in the video clip. Therefore, these experts suggested that the trainer should pace the speech by speaking a bit slower.

On the training sources, expert 3 mentioned that there is nothing to ascertain that the participants have watched the video clips, so it would be difficult to know if they have watched the video clips prior to the face-to-face session. Hence, she suggested to attach the K-W-L chart into the module and get participants to fill them up every time they watch the video clips.

The experts were concerned about the evaluation design as they expressed that the researcher who is also the trainer should not be evaluating the participants. Expert 2 added that teachers may feel unmotivated when they know that they are being evaluated; thus they will feel as though they are obligated to do it. Also, expert 1 mentioned that it is difficult for the trainer to observe every participants' video clips as they may face challenges in videotaping their own lessons. Therefore, expert 1 suggested that a peer evaluation can be conducted whereby participants from the same

school observe each other's lesson and expert 2 suggested that they can just evaluate their peer's lesson plan and provide constructive feedback.

Table 4.18

The Knowledge Audit table

Purpose: *Employs a set of probes designed to describe types of domain knowledge or skill which is embedded within FiT-PD and elicit appropriate examples as described below.*

FiT-PD themes	**Cues & Strategies**	**Why difficult**
Module Design	*Cues* • Some training objectives are too broad. • There is a mismatch between the research questions and module content. • The FiT-PD design may seem quite complicated to teachers who are not familiar with module designing. *Strategies* • Rephrase the training objectives to ensure that they are measurable and specific.	• Difficult to comprehend the objectives of the training since they are not specific. • Some terms used in the design of the module may be new to many teachers.

Table 4.18, continued

FiT-PD themes	Cues & Strategies	Why difficult
Content Design	*Cues* • Flipping a primary school English classroom can be difficult. • Using the FROG VLE can be inconvenient to some teachers who have not been using it prior to this training, or who have limited access to the Internet sources. • The TLBT approach is not the best to teach weak/ slow young learners. *Strategies* • Use a social network such as Facebook as a platform to flip the classroom as it is more user-friendly. Teachers can create groups and upload videos and other relevant instructional materials in the group. • Use the play-based learning approach which targets on improving learners' proficiency by using language games.	• It is difficult to get primary students to be independent enough to watch the videos prior to the lesson. • TBLT targets on completing meaningful real-world tasks using the language.

Table 4.18, continued

FiT-PD themes	Cues & Strategies	Why difficult
Content Delivery	*Cues* • The speaking rate of the trainer in the self-record video clip on some of the effective strategies is quite fast. • Some fillers are present in the recording. *Strategies* • Trainer should pace the speech by speaking a bit slower.	• It is difficult for the participants to comprehend everything the speaker is saying in the video clip.
Sources	*Cues* • There is nothing to ascertain that the participants have watched the videos. *Strategies* • Attach a K-W-L table into the module so that participants can fill them every time they watch a video.	• It is difficult to know if the participants have watched the video clips prior to the face-to-face session.
Evaluation Design	*Cues* • The researcher who is also the trainer should not be evaluating the participants. *Strategies* • Conduct a peer evaluation whereby participants from the same school observe each other in person/ each other's lesson plan using a rubric.	• It is difficult for a researcher to observe every participants' video clips as they may face some barriers in videotaping their own lesson.

Table 4.19

The Simulation Interview table

Purpose: *The simulation interview is based on presentation of a challenging scenario found or expected within FiT-PD to the experts, thus the interviewer retrieves a scenario that already exists within the FiT-PD training module and present them to the experts before or during interview session.*

Major Challenging Tasks	Actions	Situation Assessment	Critical Cues	Potential Errors
Participants sharing about their experiences in teaching slow learners	Use probes to encourage them to share their experiences – challenges and difficulties faced in teaching slow learners	Participants write about their experiences by writing down in the comments section of the Facebook group.	- Online (Facebook) - Participants are to share their experiences so that they can learn strategies to overcome these problems.	Participants reluctant to participate in the discussion.
Designing a lesson plan for a mixed ability classroom by integrating the 4Cs in the play-based learning approach	Get teachers to recall some strategies they have learnt in the videos that were posted online and on how they can plan a lesson using those strategies	Participants work in small groups to come up with a lesson plan based on what they have learnt about 4Cs in the earlier video lesson.	- Group activity - Participants discussing on how play-based learning approach and the 4Cs can be integrated to plan a lesson for a mixed-ability group.	Participants may not be able to come up with a single lesson plan which integrates the use of all the 4Cs. They may only manage to integrate 3 of them.

Table 4.19, continued

Major Challenging Tasks	Actions	Situation Assessment	Critical Cues	Potential Errors
Participants learning on how to flip their classrooms	Use video clips to help participants and probe them to think on how they can use this approach in their own classrooms	Participants watch the video clips on the Facebook group and write down their views on it.	- Online (Facebook) - Participants are to share their views on flipping their lessons using Frog VLE.	Participants may not be in favour of using Frog VLE due to the existing challenges faced in using the platform. Participants who have been teaching for years may be reluctant in using the flipped method. It is not feasible to use this method in teaching young learners, and some students may not have access to the Internet.

Table 4.19, continued

Major Challenging Tasks	Actions	Situation Assessment	Critical Cues	Potential Errors
Designing a technology-integrated language lesson for a mixed ability group	Provide some guidelines to participants to integrate principles of constructivism and the 4Cs in planning their lesson	Participants who are teaching the same level plan their lesson using any of the tech & teach ideas that were brainstormed earlier.	- Pair/ Small group - Participants will implement the lesson in their classroom, and the lesson will be evaluated by their peers.	Participants who have never used any form of technology in their teaching may face difficulties in planning the lesson, and may worry on how to implement the lesson. Participants may be keen to integrate technology in their lesson, but they may not have sufficient support and facilities in the classroom, thus they have to consider using facilities such as the computer labs.

Table 4.20

The Cognitive Demand table

Purpose: *After conducting ACTA interviews with multiple experts, it is recommended using a cognitive demands table to sort through and analyze the data. The cognitive demands table is intended to provide a format for the practitioner to use in focusing the analysis on project goals.*

Difficult cognitive elements	**Why difficult**	**Causes of common errors**	**Cues and strategies used**
Developing a flipped classroom *(Creating)*	- Participants may not be in favour of using Frog VLE due to the existing challenges faced in using the platform. - Participants who have been teaching for years may be reluctant in using the flipped method. - It is not feasible to use this method in teaching young learners, and some students may not have access to the Internet.	- Participants do not find FROG VLE to be user-friendly. - It is difficult to get primary students to be independent enough to watch the videos prior to the lesson.	Use a social network such as Facebook as a platform to scaffold students' learning as it is more user-friendly. Teachers can create groups and upload videos and other relevant instructional materials in the group that will help students to solidify the lesson they learnt in their English classroom.

Table 4.20, continued

Difficult cognitive elements	Why difficult	Causes of common errors	Cues and strategies used
Designing a technology-integrated language lesson for a mixed ability group *(Applying & Analysing)*	- Participants who have never used any form of technology in their teaching may face difficulties in planning the lesson, and may worry on how to implement the lesson. - Participants may be keen to integrate technology in their lesson, but they may not have sufficient support and facilities in the classroom, thus they have to consider using facilities such as the computer labs. - Participants may not be able to apply the principles of constructivism into their lesson.	- There are limited facilities and resources available in schools (Eg: LCD/ Internet connection) for teachers to implement a technology integrated lesson - It is difficult for participants who are not good with technology or those who have never tried implementing a technology integrated lesson.	Participants who have lack of resources and experience in using technology are taught on how to integrate a technology-integrated lesson using video clips available online.

Phase 5: Development of the Module

The module was developed after the experts' validation. The amendments to the training module were made based on the suggestions and recommendations by the experts. The module was developed by including several sections that are deemed important and useful for the training participants. The major sections in the module include a general overview of the training, the learning outcomes, a brief description on a flipped professional development training, the content mapping of the module, and the training notes for each training session. The module is appended in this thesis (see Appendix F). Each section of the module is elaborated below.

Overview. The overview section informs the training participants of the objectives of the flipped professional development training for primary school English teachers. This flipped teacher professional development (FiT-PD) module is designed to equip in-service English as a Second Language (ESL) teachers and also the non-option teachers with the pedagogic knowledge and skills to deal with slow learners. This training aims to offer an opportunity to teachers to acquire innovative and creative teaching skills to develop as a professional English language teacher, in line with the National Education Philosophy and the *Pelan Induk Pembangunan Profesionalisme Keguruan (PIPPK)*. This is a thorough training that will be conducted in four sessions through face-to-face and online interaction; this training hinges on mentoring and coaching to provide teachers a platform to develop professionally.

The chief focus of this training is to impart teachers with the knowledge of 21st century learning skills (4Cs) to motivate slow learners in classroom. Sharing and collaboration are indisputably the critical components in this training. This training begins with the sharing of participants' prior classroom experiences in teaching young learners, particularly the slow learners. This training also engages participants in

discussions of current trends and approaches related to English language teaching in Malaysia.

Participants critically explore and examine the best practices in teaching slow learners, and they are given opportunities to demonstrate what they have acquired through hands-on and collaborative activities. Such sessions allow participants to consolidate experiences and provide constructive feedback upon implementation. This training emphasizes on the continuous professional development of teachers: thus, it prepares them with skills that are needed to develop professionally as an English language teacher. It is envisioned that participants will be able to adopt and adapt the strategies and tailor their lessons to suit their students' needs upon completing this training.

Learning outcomes. The training is fortified by Bloom's Revised Taxonomy: hence, upon experts' recommendation, the learning outcomes of the training were constructed based on the six stages in the taxonomy. The learning outcomes are included in the module to help the training participants in understanding the objectives of the training. Upon completion of this training, the training participants will be able to:

1. recall their prior experiences in teaching struggling language learners.
2. explain the 4C's in education.
3. implement the 4C's into lesson plans of a mixed ability classroom.
4. analyze the integration of 4C's into lesson plans.
5. evaluate the interactive websites for English lessons.
6. design a technology-integrated lesson plan using the websites provided.

A flipped professional development training. In this section, the training participants are given an overview on a flipped professional development training.

This section includes a brief description on the flipped concept of the training and on how Facebook is utilized as an online platform for the training. All Malaysian teachers are made compulsory to fulfill and document 7 days [Circular: KPMSP.500-6/8/4 Jld. 2 (89)] of professional development programs per year so that their content knowledge, pedagogical skills and soft skills can be improved. These trainings which are typically cascade type (top - down approach) have always been conducted in lecture or workshop settings.

However, the advent and prevalence of the Internet has even made it possible to flip a professional development training. Opposed to the existing professional development trainings, this training begins outside classroom (Facebook group) in which training participants are provided with interactive multimedia and online activities take place through trainer facilitation. Participants are then required to attend a face-to-face session for hands-on activities and subsequently move to another online session in the Facebook group. On the online platform, participants are given opportunities to share and collaborate with participants from other groups; however, the face-to-face sessions will be conducted in the participants' respective schools. The Facebook group can be accessed by typing'FiT-PD Training for Primary School English Teachers' into the search bar.

Content mapping of the module. This section on the content mapping of the module helps the training participants in understanding the content and the relevance of the content to their pedagogical practices. The module of this flipped professional development training is designed based on 4C's of Education. To meet the demands of the complex and competitive 21st century, students are required to learn beyond the 3R's (reading, writing and arithmetic) that they are tested in schools. There is a plethora of 21st century skills, but the four most important skills in the primary

education are communication, critical thinking, collaboration, and creativity. These 4C's are regarded as the most significant for a positive and advanced revolution in learning. Therefore, the '3R + 4C's' approach should be adopted by all teachers to help our young generation flourish in the 21st century.

This training provides the participants with a number of strategies to deal with the slow learners by the inclusion of these 4 C's of education. The content of this training has been thoroughly planned based on a needs analysis that was conducted prior to this training. Interviews with random primary school English teachers have revealed that teachers face challenges in teaching the slow learners, especially in the LINUS English program. Besides, they have reported that they face difficulties in applying differentiated instruction in their respective classrooms. Teachers also expressed their interest in learning how to deal uninterested students in their classrooms.

Therefore, the content mapping of this module has taken teachers' challenges in teaching and needs into consideration. Throughout this training, participants are exposed to several pedagogies and practices and skills to deal with slow and unmotivated English language learners. They are encouraged to adopt the play-based approach in teaching young learners because it does not only incorporate the 4Cs, but it also helps in motivating learners by engaging them in fun learning activities. Play and academic work are not distinct categories for young learning, and learning and doing are is inextricably linked for them.

It is indisputable that Information and Communication technologies play a crucial role in how the Z-generation students experience learning. Thus, one particularly promising avenue for teaching to these new literacy needs is the technology-mediated language learning. Participants will be introduced to some user-

friendly websites to download teaching materials, and they will work on lesson planning that integrates the 4C's and technology.

Although the chief focus of this training is on implementing the 21st Century skills in teaching and learning, the teachers will also learn that a 21st century learning does not solely rely on the integration of Information and Communication Technology (ICT). The 4C's of the Education can be integrated in any lesson planning, be it English or any other subjects.

Training notes. The training notes are developed based on the recommendations made by the experts during the validation of the module. One major change suggested by the experts is the change of the online platform. The initial decision of using Frog VLE as the training platform has to be changed to Facebook due to many barriers school teachers face in using the Frog VLE. The training notes are thoroughly prepared for all the four sessions. These training notes enable both the trainer and the participants to be prepared ahead of the training and to know what is expected from them during each session. In the training notes for each session, the following were listed: session title, description, training outcomes, time, resources, session outline and training activities. The training activities are designed based on Gagné's Nine Events of Instruction. This instructional design was chosen to complement the cognitive processes of the Bloom's Revised Taxonomy. The training notes for all the four sessions are elaborated below.

Session 1 (online – Facebook). The flipped training begins with an online session where learning materials are viewed by the participants at home before the face-to-face session. The title of this session is 'Integrating 4C's of the 21st Century skills to motivate slow learners'. This session is designed for the training participants to familiarize themselves with the 21st Century Learning skills, especially the 4C's. In

this session, the participants identify some of the best practices to motivate slow learners in their classroom. By the end of this session, the participants will be able to share prior teaching experiences in teaching young learners. Besides, they will be able to equip themselves with the knowledge of 21st century learning skills; also, they will be able to identify some best practices and strategies to motivate slow learners. This session is held for a week, and the resources that are used for this are video clips and PowerPoint slides. There are three activities that are outlined for this session; in the first activity, participants uncover beliefs and discuss challenges in teaching English to slow and unmotivated learners. The second activity requires participants to watch video clips on 21st century learning skills, and in the third activity, participants go through the PowerPoint slides on some creative teaching ideas to motivate slow learners in remedial teaching.

The training activities are outlined based on the Gagné's Nine Events of Instruction. Both the trainer's role and training participant's role are elaborated in steps. First, to gain attention, trainer presents a stimulus, problem or situation by using a video clip to ground the session. The training participants respond in the comments section of the video link posted on the Facebook group. Second event of instruction is to inform the learners of the objectives. Trainer informs the participants on what they will be able to accomplish by the end of the online session. The participants comprehend the objectives of the session. The next step is to stimulate recall of prior knowledge, so trainer asks participants to share their experiences in teaching slow learners. The participants' role is to share the problems they face and the strategies they use to overcome the problems. In the subsequent step of presenting stimuli, trainer uploads a few video clips on 21st century learning skills and the 4C's in education. Participants take notes while they watch the video clips. The final step of this session

is to provide guidance; thus, trainer uploads a play-based learning video to demonstrate how teachers can integrate the 4C's of Education by adopting the play-based learning approach in their pedagogical practices. Participants engage in reflective writing to reflect on their learning in the first session.

Session 2 (face-to-face). In this session, the trainer meets the participants in a face-to-face session and the in-class time is devoted to projects and discussions. The title of this session is 'Planning a lesson using the 4C's'. This session is designed for the training participants to explore different ways of planning a lesson using the 4C's for a mixed-ability classroom. By the end of this session, the participants will be able to explore and identify some activities that can be used by learners with different levels of proficiency. Besides, they will be able to design a writing lesson plan for a mixed-ability class by incorporating the 4C's. Also, this will give them an opportunity to share different ideas among the training participants. The face-to-face session is scheduled for 4 hours, and the resources for this session are a Year 4 textbook, poster sheets, marker pens and worksheets. Three activities are outlined for this session. First, the participants engage in brainstorming of activities for learners with different levels of proficiency. The next activity is to design a lesson plan using the 4C's for a mixed ability classroom, and the third activity requires the participants to present their lesson plans.

Since the training activities are based on the video lectures in session 1, the sixth Gagné's instruction is implemented here where the performance is elicited. The trainer divides the participants into smaller groups and they sit in their respective groups. Next, the trainer asks the participants to create a mind map of the activities and strategies learnt during the online session. Participants will create a mind map of all the concepts and knowledge acquired in the previous session. Trainer then asks the

participants to discuss how these activities can be adapted into the participants' classrooms. Participants discuss and identify how different activities from the previous session can be adapted for learners with different levels of proficiency. In the subsequent Gagné's event which is to provide feedback, trainer provides feedback to all the participants and they take down notes on the feedback provided by trainer.

The next step is to assess performance. Thus, to assess the participants' performance, the trainer assigns each group with a unit from the Year 4 KSSR textbook. Trainer asks each group to design a task-based lesson plan using the 4C's for a mixed ability classroom. The participants design a 4C integrated task-based lesson plan for a mixed ability classroom. After completing the lesson plans, the trainer asks the participants to present their lessons plans and elicits feedback from the others. Other participants provide peer-feedback to other groups. Finally, to enhance retention and transfer, the trainer conducts a whole-group discussion with the participants, and they engage in the whole group discussion to discuss on the activities suggested and ways to improve further. Trainer ends the session by asking the participants to implement the 4C's in their own classrooms and encourages them to share their work on the Facebook group.

Session 3 (online – Facebook). The third session is an online session titled 'Current trends and issues in a technology integrated language classroom'. This session is designed for the training participants to demonstrate an understanding of the current trends and issues related to technology integrated in language classrooms. By the end of this session, the participants will be able to expand knowledge on the constructivism theory and explore trends and issues related to technology integration in language classrooms. In this session, they will be able to explore different websites that can be used in a technology-integrated language classroom. A list of the websites

is included in the module. Also, they will be able to compare and contrast different online websites that provide teaching resources. Just like the first session, this session is scheduled for a week, and the resources that are used are internet articles and K-W-L charts. Two activities are outlined for this session; in the first activity, participants explore useful websites that can be used in a technology-integrated language classroom. In the second activity, the participants compare and contrast all the reading websites and list the benefits and limitations of the websites that are suggested by the trainer.

Similarly, the Gagné's nine events of instruction are implemented in the third and fourth session. In the first step of gaining attention, trainer presents a stimulus or a problem using a video to ground the session. The participants respond in the comments section of the link posted on the Facebook group. In the next step, the trainer informs the participants of the objectives, specifically on what they will be able to accomplish by the end of the online session. Participants comprehend the objectives of the session. To stimulate recall of prior knowledge, trainer asks participants to share their experiences and challenges faced in looking for reliable online sources and other technologies to support teaching and learning in their classrooms. Participants share the problems they face and the strategies they used to overcome the problems. In the next step, stimuli are presented. The trainer asks the training participants to go through the websites (links given by the trainer) that can be used in a technology-integrated lessons. The participants go through the links to the websites that are posted by the trainer. Finally, the trainer provides guidance by asking the participants to compare and contrast the links and make a list of the benefits and limitations of using each website. The trainers, thus make a list of the benefits and limitations of all the websites suggested by the trainer.

Session 4 (face-to-face). This is the final session in the Flipped Professional Development (FiT-PD) module. The title of this session is 'Creating a technology-integrated English lesson'. This session is designed for participants to create a technology-integrated English lesson. By the end of this sessions, the training participants will be able to explore the benefits and limitations in the websites with interactive resources. Besides, the participants will be able to design a technology integrated language lesson. Finally, they will be able to present their outcomes of implementing a technology integrated language lesson. This face-to-face session will be carried out for three hours, and the resources required for this session are poster sheets, laptop, Year 4 English textbook, marker pens, and LCD projector with screen. In the first session, participants will share the benefits and limitations in the websites with interactive resources. In the subsequent session, participants will design a technology integrated language lesson, and in the final session, participants will present photographs of a technology integrated language lesson.

The training activities for this session continues from Gagné's sixth event of instruction, which is to elicit performance. In this step, trainer asks the participants to brainstorm and discuss ways, ideas on online applications/ links that can be used to overcome challenges in integrating technology in the language classroom. Participants share ideas, ways and links that can be of use in integrating technology in the language classroom. Text step requires the trainer to provide feedback, so the trainer provides feedback to the ideas brainstormed during discussion. Participants jot down the feedback given by the trainer. To assess performance, trainer assigns everyone with an end-of-course assignment. In small groups, the trainer asks the participants to pick an idea from the previous discussion and design a technology integrated language lesson plan by integrating the 4C's in education and implement it in their respective

classrooms. The participants design a lesson plan that can be implemented in their classroom. Trainer assesses the lesson plans and provides feedback. Participants are also required to share video clips or photographs on the Facebook group. Finally, to enhance retention and transfer, trainer conducts a whole-group discussion. In the end this session, trainer encourages the participants to continuously collaborate with teachers from other schools and utilize the Facebook group as an online professional learning platform. The participants engage in the whole group discussion and provide feedback on how the four sessions have benefitted them.

TRAINING NOTES		
Session No. : 1 (Online – Facebook)		
Session Title: Integrating 4C's of the 21st Century skills to motivate slow learners		
Description: This session is designed for the training participants (TPs) to familiarize themselves with the 21st Century Learning Skills, especially the 4Cs. In this lesson, TPs identify some of the best practices to motivate slow learners in their classrooms.		
Training Outcomes	By the end of this session, TPs will be able to: i) share prior teaching experiences in teaching young learners. ii) equip themselves with the knowledge of 21st century learning skills. iii) learn the play-based approach to teach slow learners	
Time	5 days	
Resources	Video clips, K-W-L chart	
Session Outline	**Activity 1:** Uncovering beliefs and discussing challenges in teaching English to slow and unmotivated learners **Activity 2:** Video clip on 21st century learning skills **Activity 3**: Video clip on the play-based approach	
Gagné's Nine Events of Instruction	**Training activities**	
	Trainer's Role	**Training Participant's Role**
1. Gaining Attention	1. Trainer presents a stimuli/ problem/ situation to TPs to ground the session.	1. TPs respond in the comments section of the link in the link posted on the Facebook group.

	What, for you, are the characteristics of a creative language teacher?	
2. Informing the learners of the objectives.	2. Trainer informs the TPs on what they will be able to accomplish by the end of the online session.	2. TPs comprehend the objectives of the session.
3. Stimulating recall of prior knowledge	3. Trainer asks TPs to share their experiences in teaching slow students. *i. What are the challenges you face in teaching slow learners?* *ii. What do you do to motivate the slow learners in your classrooms?*	3. TPs share the problems they face and the strategies they used to overcome the problems.
4. Presenting Stimuli	4. Trainer uploads video clips on 21st century learning skills (the 4C's in Education).	4. TPs fill out the K-W-L chart prior to and while they watch the video clips.
5. Providing Guidance	5. Trainer uploads a play-based learning video demonstrating how teachers can integrate the 4C's of Education by adopting the play-based learning approach.	5. TPs engage in reflective writing.

*Video links

1) 4C's in education - https://www.youtube.com/watch?v=QrEEVZa3f98

2) Play-based approach - https://www.youtube.com/watch?v=W2wWDEBktC0

<table>
<tr><th colspan="3">TRAINING NOTES</th></tr>
<tr><td colspan="3">Session No. : 2 (Face-to-face)</td></tr>
<tr><td colspan="3">Session Title: Planning a lesson using the 4C’s</td></tr>
<tr><td colspan="3">Description:
This session is designed for the training participants (TPs) to explore different ways of planning a lesson using the 4C’s for a mixed-ability classroom.</td></tr>
<tr><td>Training Outcomes</td><td colspan="2">By the end of this session, TPs will be able to:

i) explore and identify some play-based activities that can be used by learners with different levels of proficiency.
ii) design a writing lesson plan for a mixed-ability class by incorporating the 4Cs.
iii) share different ideas among TPs</td></tr>
<tr><td>Time</td><td colspan="2">3 hours</td></tr>
<tr><td>Resources</td><td colspan="2">Year 4 textbook and DSKP
Poster Sheets
Marker Pens
Worksheets</td></tr>
<tr><td>Session Outline</td><td colspan="2">Activity 1: Brainstorming of play-based activities for learners with different levels of proficiency.
Activity 2: Designing a lesson plan using the 4Cs for a mixed-ability classroom.
Activity 3: Presentation of lesson plans</td></tr>
<tr><td rowspan="2">Gagné’s Nine Events of Instruction</td><td colspan="2">Training activities</td></tr>
<tr><td>Trainer’s Role</td><td>Training Participant’s Role</td></tr>
</table>

6. Eliciting performance	6a. Trainer divides TPs into eight groups. 6b. Trainer asks TPs to create a mind map of the play-based activities/strategies learnt during the online session. 6c. Trainers asks TPs to discuss how these activities can be adapted into TPs classrooms.	6a. TPs sit in their respective groups. 6b. TPs create an i-Think map of all theconcepts and knowledge acquired in the previous session. 6c. TPs discuss and identify how different activities (from the previous session) can be adapted for learners with different levels of proficiency.
7. Providing feedback	7. Trainer provides feedback to all the groups.	7. TPs engage in reflection writing.
8. Assessing performance	8a. Trainer assigns each group with a unit from the Year 4 KSSR textbook. Trainer asks each group to design a task-based writing lesson plan for a mixed-ability classroom using the 4C's. 8b. TPs present their lesson plans and elicits feedback from others.	8a. TPs design a 4Cs integrated task-based writing lesson plan for a mixed-ability classroom. 8b. TPs provide peer-feedback to other groups..
9. Enhancing retention and transfer	9. Trainer conducts a whole-group discussion with the TPs.	9. TPs engage in the whole-group discussion.

<table>
<tr><th colspan="3">TRAINING NOTES</th></tr>
<tr><td colspan="3">Session No. : 3 (Online – Facebook)</td></tr>
<tr><td colspan="3">Session Title: Current trends and Issues in a Technology-Integrated Language Classroom</td></tr>
<tr><td colspan="3">Description:
This session is designed for the training participants (TPs) to demonstrate an understanding of the current trends related to technology integration in language classrooms.</td></tr>
<tr><td>Training Outcomes</td><td colspan="2">By the end of this session, TPs will be able to:

i) explore different websites that can be used in a technology-integrated language classroom
ii) compare and contrast different online websites that provide different resources</td></tr>
<tr><td>Time</td><td colspan="2">5 days</td></tr>
<tr><td>Resources</td><td colspan="2">K-W-L chart
Articles</td></tr>
<tr><td>Session Outline</td><td colspan="2">Activity 1: Explore useful websites that can be used in a technology- integrated language classroom.
Activity 2: Compare and contrast all the websites and list the benefits and limitations of each suggested website.</td></tr>
<tr><td rowspan="2">Gagné’s Nine Events of Instruction</td><td colspan="2">Training activities</td></tr>
<tr><td>Trainer’s Role</td><td>Training Participant’s Role</td></tr>
</table>

1. Gaining Attention	1. Trainer presents a stimuli/ problem/ situation by using a video/ article to ground the session.	1. TPs respond in the comments section of the link in the link posted on the Facebook group.
2. Informing the learners of the objectives.	2. Trainer informs the TPs on what they will be able to accomplish by the end of the online session.	2. TPs comprehend the objectives of the session.
3. Stimulating recall of prior knowledge	3. Trainer asks TPs to share their experiences and challenges faced in looking for online resources to support teaching and learning in their classrooms. *i. Do you use online websites or any other technologies as a learning platform in your language classroom?* *ii. What are the challenges you face in using the online websites?*	3. TPs share the problems they face and the strategies they used to overcome the problems.
4. Presenting Stimuli	4. Trainer asks TPs to go through the websites that can be used in a technology-integrated lesson.	4. TPs go through the links to the websites that are posted by the trainer.

5. Providing Guidance	5a. Trainer uploads more important links that can be used by any primary school teacher. 5b. Trainer asks TPs to compare and contrast the links and make a list of the benefits and limitations of each website.	5. TPs make a list of the benefits and limitations of all the websites suggested by the trainer.

TRAINING NOTES	
Session No. : 4 (Face-to-face)	
Session Title: Creating a technology-integrated English Lesson	
Description: This session is designed for the training participants (TPs) to to create a technology-integrated English lesson.	
Training Outcomes	By the end of this session, TPs will be able to: i) explore the benefits and limitations in the websites with interactive resources ii) design a technology integrated language lesson iii) present their outcomes of implementing a technology integrated language lesson
Time	Three hours
Resources	Poster Sheets Laptops Year 4 textbook and DSKP

	Marker Pens LCD Projector and Screen	
Session Outline	**Activity 1:** Sharing of the benefits and limitations in the websites with interactive resources. **Activity 2:** Designing a technology integrated language lesson **Activity 3:** Presentation of photographs of a technology integrated language lesson	
Gagné's Nine Events of Instruction	**Training activities**	
	Trainer's Role	**Training Participant's Role**
6. Eliciting performance	6. Trainer asks TPs to brainstorm and discuss ways, ideas or online applications (from the previous session) that can be used to overcome challenges in integrating technology in the language classroom.	6.TPs share ideas/ ways/ links that canbe of use in integrating technology in the language classroom.
7. Providing feedback	7. Trainer provides feedback to the ideas brainstormed during the discussion.	7. TPs take notes on the feedback provided.
8. Assessing performance	8a. Trainer assigns everyone with a task.	8.TPs design (individual/ pair/ collaborative) a technology integrated language lesson and implement it in their respective classrooms.

	8b. Trainer asks TPs to pick an idea from the previous discussion and create a technology integrated language lesson by integrating the 4C's for their classroom.	8b. TPs share the video clips or photographs of their activities on the Facebook group.
9. Enhancing retention and transfer	9a. Trainer conducts a whole-group discussion via Facebook with the TPs. *i. Did your students enjoy the technology integrated activity you implemented?* *ii. What were the challenges you faced during implementation?* *iii. What are the new idea(s) you have learnt from other TPs and wish to implement it?* 9b. Trainer encourages TPs to continuously collaborate with teachers from other schools and utilize the Facebook group as the online professional learning community.	9a. TPs engage in the whole-group discussion.

K-W-L chart. This form will be used by the training participants (TPs) to keep track on what they know, want to know, and ultimately learn after watching the video clips.

KNOW *Before watching – What do you know about this approach?*	**WANT** *While watching – What do you want to know about this approach?*	**LEARN** *After watching – What have you learnt from this video?*

Phase 6 – Implementation of the FiT-PD training

The following is the audit trail of the implementation of the Flipped Teacher Professional Development (FiT-PD) training. A formal letter of permission was sent to the *Jabatan Pendidikan Selangor (JPS)* to sought approval to conduct this flipped professional development program in four schools in the *Petaling* district. The FiT-PD training was implemented in July 2016 after getting permission from the *JPS.* These participants are the teachers who participated in the UTAUT survey in phase 1. The implementation of the training was grounded using the module that was developed based on experts' review. Thus, to commence the training, the trainer went to all the four schools to give a briefing about the structure of the training to school management; a step-by-step guideline on the implementation of training was given to the heads of the schools so that they can brief and pass the guidelines to the English teachers that participated in this training.

Since the first session of the flipped training begins in the online platform, teachers from all the schools started joining the Facebook group known as 'FiT-PD Training for Primary School English Teachers'. On 28th July 2016, the trainer welcomed all the participants on the Facebook platform, and this post was seen only

by 27 participants. In the post, the trainer has asked the participants to introduce themselves, but none of them responded.

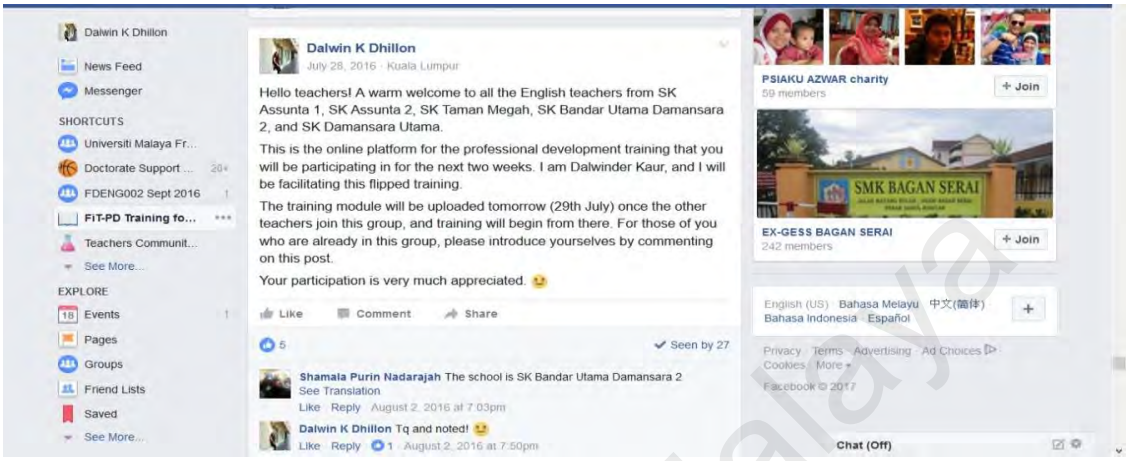


Figure 4.2: Screenshot of the Facebook post on welcoming participants (28/7/16)

Although the trainer wanted to upload the module on the following day, the module was only uploaded two days later as the trainer waited for the participants to introduce themselves and to familiarize with each other. The trainer uploaded the FiT-PD module on the Facebook group and advised the participants to go through the module, and also to inform them that the training begins from that moment onwards. Nevertheless, the module was only seen by 5 participants.

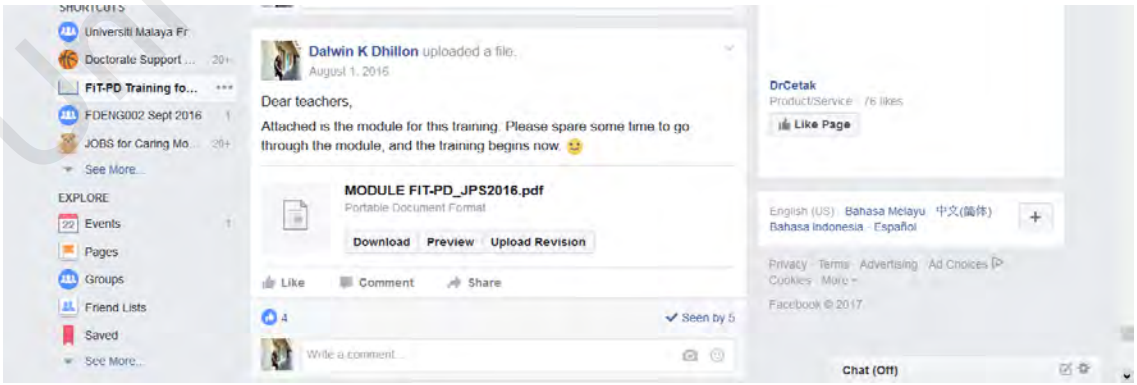


Figure 4.3: Screenshot of the Facebook post on training module (1/8/16)

Following that, the trainer posted a question based on the training notes in session 1. This question was intended to gain participants attention and also to get them to go through the module. Participants were reminded to go through the training notes, and also to respond in the comments sections of all the post. Although the post was seen by 24 participants, none of them responded. Therefore, the trainer took the initiative to give another round of briefing to the participants, and also to urge them to participate in the online discussions.

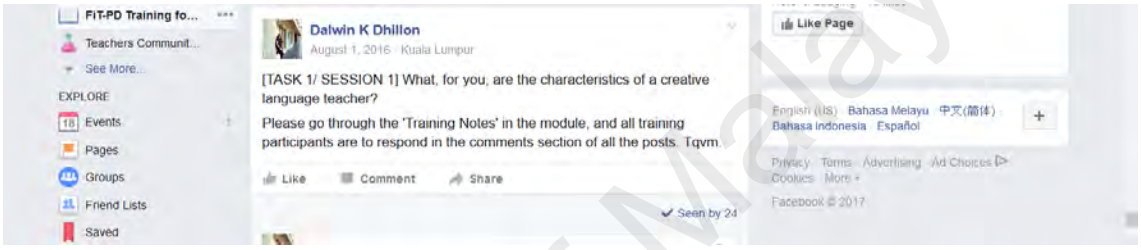


Figure 4.4: Screenshot of the Facebook post of Task 1 in Session 1 (1/8/16)

The following day, on 2nd August, the trainer proceeded with the second task in session 1 where participants were asked to share their experiences in teaching slow learners, and to share their ways in motivating the slow learners in their classroom. Even though the post was seen by 26 participants, only 1 teacher, Harvinder Gill responded in the comments section.

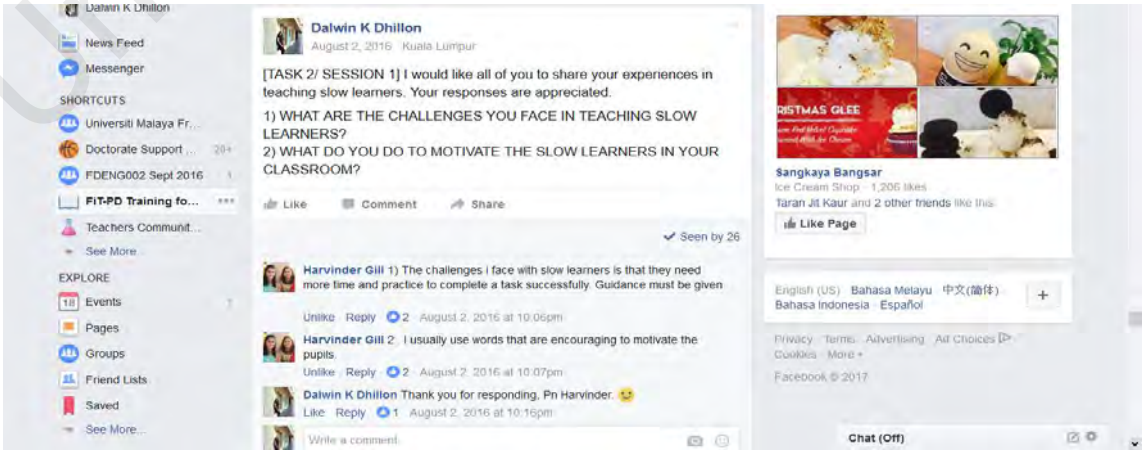


Figure 4.5: Screenshot of the Facebook post of Task 2 in Session 1 (2/8/16)

Since the participation for the past two discussion questions was close to none, the trainer recorded a video of her giving details about this training and uploaded it on the 3rd of August. Although the video clip was seen by 24 participants, again, there were no responses in the comments section.

Hence, besides uploading a video clip on the details of the training, the trainer wrote a post to inform the participants on the significance of this training. The trainer informed the participants about the next task based on the training notes, and at the same time, urged the participants to participate by commenting on the Facebook posts. Even though the post was read by 24 participants, there were no responses to both the video and the post.

Figure 4.6: Screenshot of the Facebook post on the video by trainer (3/8/16)

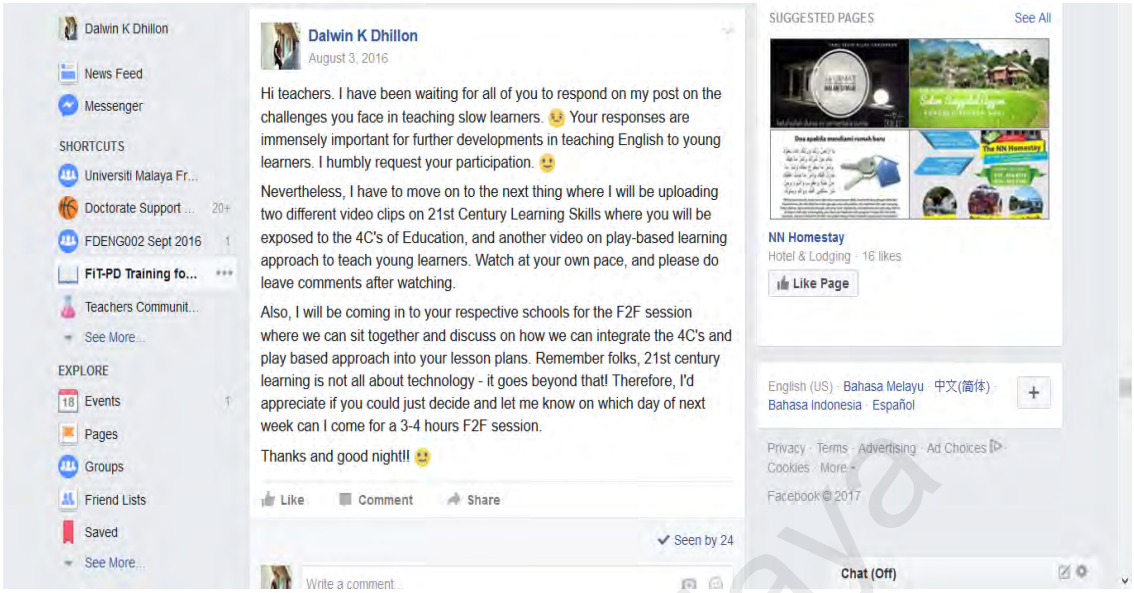


Figure 4.7: Screenshot of the Facebook post by trainer (3/8/16)

Since the trainer noticed a lack of participation from the teachers, the trainer assumed that most of the participants are occupied with the upcoming UPSR examinations; thus, the trainer posted a message on August 4th informing the participants that the training is postponed to September.

Figure 4.8: Screenshot of the notice on postponement of the training (4/8/16)

The training resumed on 20th September, and the trainer posted a message to humbly request for participation from all the participants. Also, the trainer asked if the teachers have gone through the training module that was uploaded a month back. However, despite 26 views, no response was given by the participants.

Figure 4.9: Screenshot of the notice on recommencement of the training (20/9/16)

The trainer moved on to the next task on September 27th, which is to introduce the participants to the 4C's of the 21st Century Skills. A video clip introducing the 4C's was posted, and teachers were asked to write their own reflections. Knowing the fact that the participants may be busy with other responsibilities, they were given about week and a half to watch the video clip. This video clip was viewed by 30 participants; however, no comments were left on the post.

Figure 4.10: Screenshot of the video clip on the 4C's of Education (27/9/16)

The next video clip on play-based learning was posted on 10th October. Assuming the participants have watched the earlier video on the 4C's, the trainer highlighted in the post that the lesson planning session during the face-to-face session will incorporate both the 4C's and play-based approach. This post was seen by 24 participants, but no comments were left.

Figure 4.11: Screenshot of the video clip on the Play-based learning (10/10/16)

from all the four schools to fix a date for the trainer to come to the respective Since both the concepts have been introduced in the video clips, the trainer tried to get the teachers schools for the face-to-face session. As shown in figure 4.13, the trainer posted a message on this on September 27th, shared the same post on Sept 29th and posted another message on October 10th after posting the video clip on the play-based learning. On October 10th, the trainer asked if the trainer should wait for a response or should the trainer liaise with the *Guru Besar* to fix a date. Not soon after that post, although none of the posts were commented on Facebook, personal messages were

sent to the trainer's mobile phone to fix a date for the trainer to conduct the face-to-face session at all the four schools.

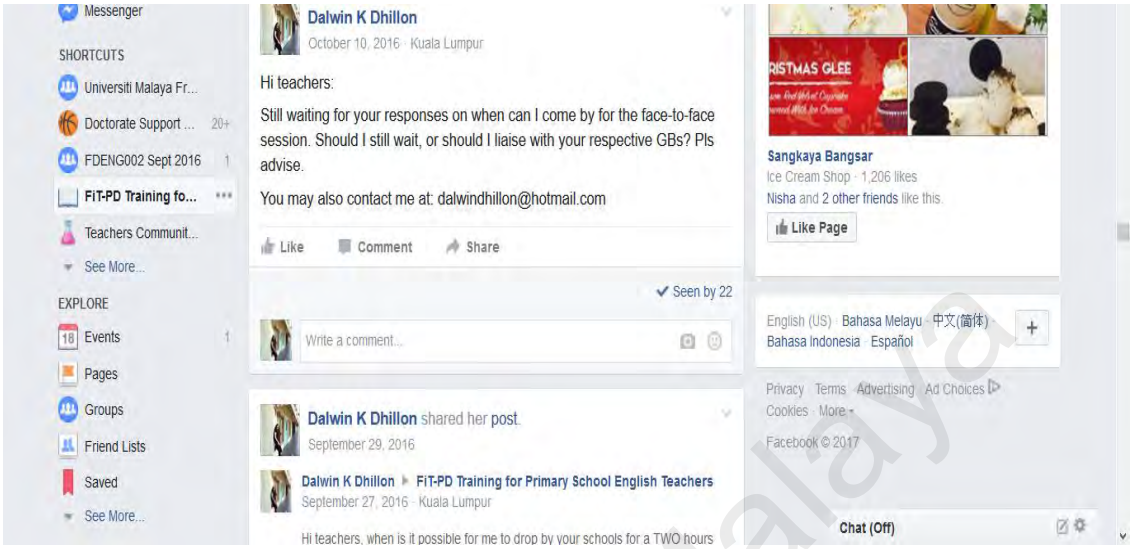


Figure 4.12: Screenshot of the request for a face-to-face session meeting (10/10/16)

All the dates for the face-to-face session were fixed through the short messaging service (SMS) and Whatsapp with the teacher representatives from each school. Thus, the trainer uploaded the agenda of the face-to-face session so that participants are well-informed on the expectations of the session. This post was seen by 12 participants.

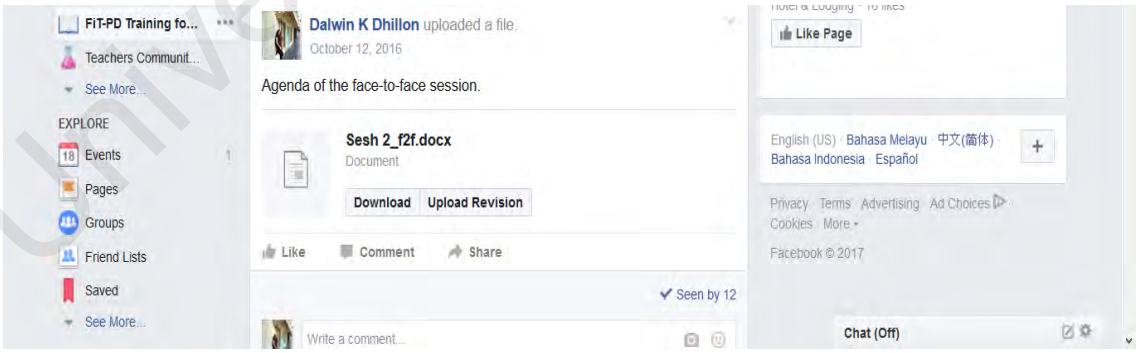


Figure 4.13: Screenshot of the agenda for session 2 (12/10/16)

The first face-to-face session was held on October 14th in SK Assunta 1. There were 16 participants, and the session was carried out for about 3 hours after school. During this session, the trainer spoke to the participants about the lack of participation,

and found out the challenges faced by the group of participants. All the challenges were recorded during the formal interviews. Even though no lectures are supposed to be conducted in the face-to-face session of a flipped approach, the trainer spent a few minutes introducing the participants to the 4C's in education and the play-based learning approach, which some of the participants have watched on the Facebook group. This was then followed by the pre-planned tasks and activities in Session 2, and this session was successfully carried out based on the pre-planned training notes.

The similar face-to-face session was held in SK Bandar Utama Damansara 2 on October 17th, SK Assunta 2 on October 19th, and SK Taman Megah on October 20th. The face-to-face session in all these schools were held either before or after their school hours, so class time was not disrupted. Participants were very participative during the face-to-face sessions. Following are the screenshots of the photographs that were posted on the Facebook group after the face-to-face session in each school. There were 'thank you' comments from the participants that were also posted on the Facebook group.

Figure 4.14: Screenshot of the photographs taken during Session 2 (14/10/16)

Figure 4.15: Screenshot of the photographs taken during Session 2 (17/10/16)

Figure 4.16: Screenshot of the photographs taken during Session 2 (17/10/16)

Figure 4.17: Screenshot of the photographs taken during Session 2 (19/10/16)

Figure 4.18: Screenshot of the photographs taken during Session 2 (20/10/16)

A few days after the face-to-face session, the session 3 was continued on the Facebook group on October 25th. Since the session 3 training activities focus on the integration of ICT in lessons, teachers were introduced to several online reading comprehension websites. Also, on the same day, a file on language games and

newspaper activities were posted for participants use. There were no responses on the Facebook group, but the head of English panel of each school has assured that the information on the Facebook group was shared on their respective English panel Whatsapp groups.

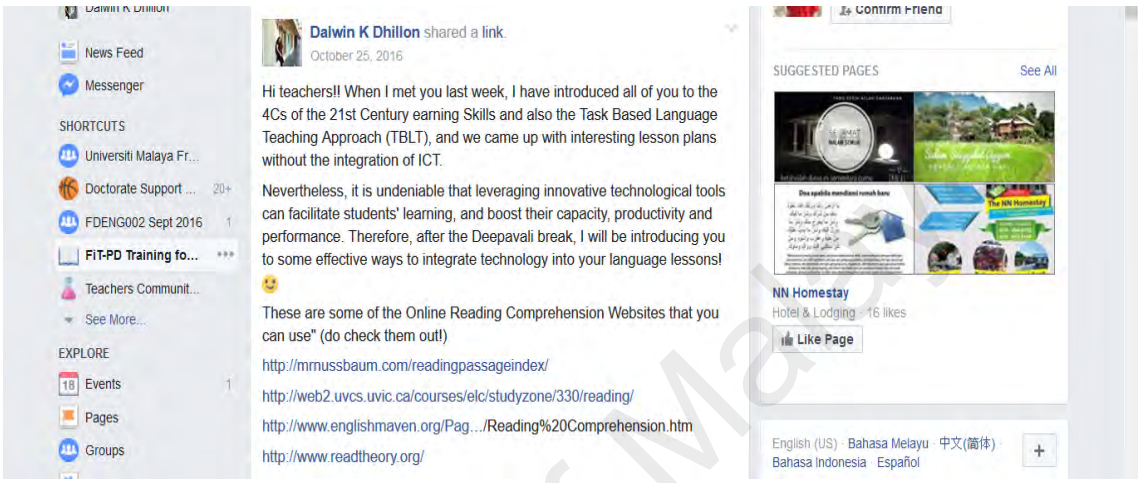


Figure 4.19: Screenshot of the online reading comprehension websites (25/10/16)

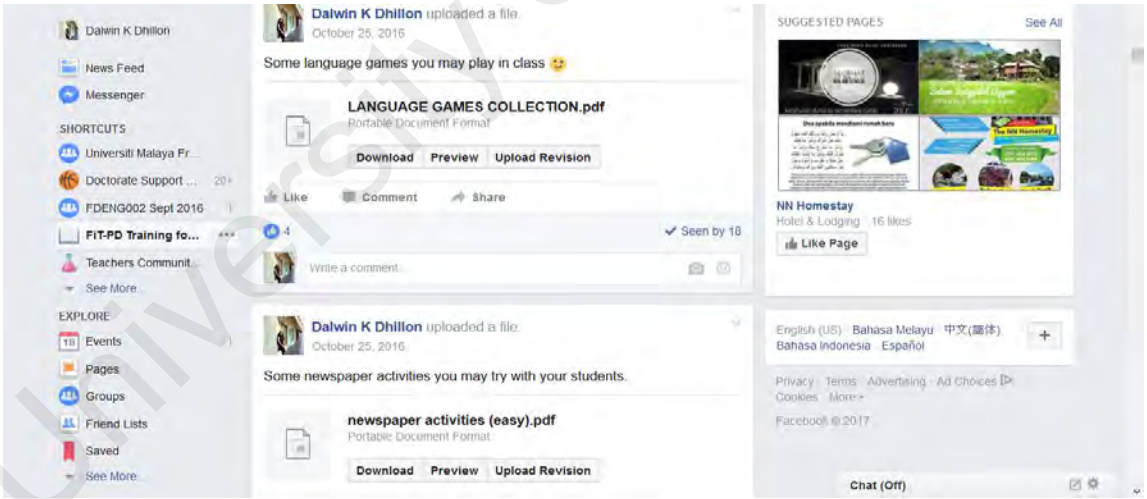


Figure 4.20: Screenshot of the language games and newspaper activities pdf (25/10/16)

On November 2, just a few days before the scheduled face-to-face session, another post on the 20 websites every teacher should know was posted so that these can be used during the face-to-face meeting. The participants were asked to create a

list of the benefits and drawbacks of each suggested website, and that the sharing will be done in the subsequent session. There were six 'likes' on this post, and a posted 'Thanks!'

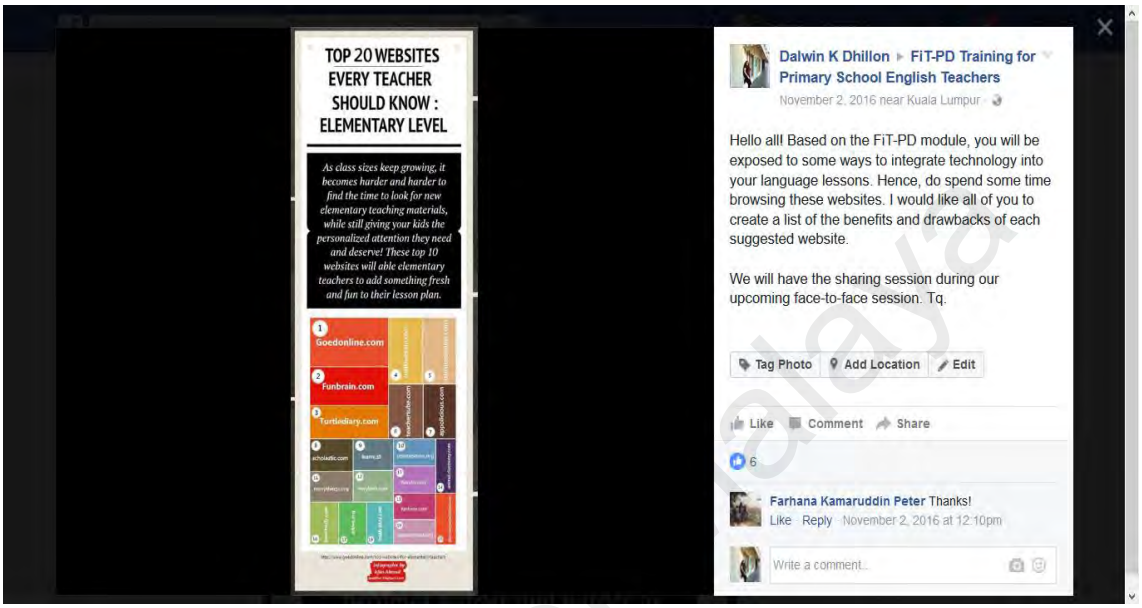
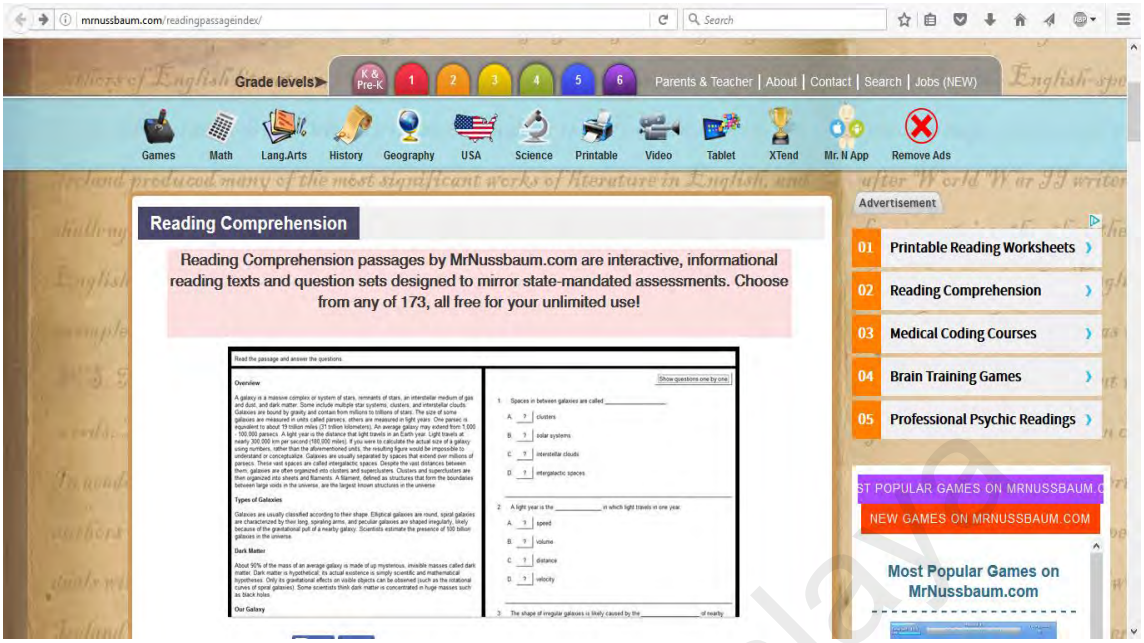


Figure 4.21: Screenshot of the website link for primary school teachers (2/11/16)

This FiT-PD training ended with a face-to-face session (session 4) with the participants in their respective schools. The face-to-face session at SK Assunta 1 was held on November 4th, SK Assunta 2 on November 7th, SK Bandar Utama Damansara 2 on November 8th, and SK Taman Megah on November 9th. These sessions were held for 2 hours either before or after the school hours, no class time was disrupted.

However, as the previous face-to-face sessions, teachers did not go through the materials on the online platform. Some just browsed through, and found the websites given useful. Therefore, during the face-to-face session, trainer spent most of the time going through all the websites with the teachers, and discussing on how they could use materials and readymade lesson plans from these websites to plan a technology-integrated lesson. Among all the websites, most teachers preferred the mrnussbaum.com website as it is more user-friendly.



Most of the time during this face-to-face session was spent browsing the websites and conducting a whole group discussion whereby the trainer gave suggestions on how these materials could be used in mixed-ability classroom. Therefore, some of the pre-planned activities in the module could not be carried out as stipulated in the training notes. The trainer asked the teachers to design a technology integrated language lesson and implement it in their own classrooms; however, none of the teachers shared the video clips or the photographs while implementing these lessons in their classrooms.

Phase 7 – Evaluation of the FiT-PD

This is the final phase of the research. Two data collection instruments were used to evaluate the effectiveness of the flipped professional development module and training. First, the UTAUT survey was administered to the similar respondents in phase 1, who later took part in the FiT-PD training. However, this UTAUT survey was administered to find out participants' acceptance towards the FiT-PD module. Thus,

the survey forms were distributed after session 4 which the final session of the FiT-PD training.

Quantitative findings. To know if the participants accept the FiT-PD module, a repeated measures t-test was done using SPSS 23.0. The repeated measures t-test in conducted because the same subjects participated in two conditions of the experiment – the traditional professional development training and the flipped professional development training. A paired-samples t-test was conducted to compare teachers' intention to participate in the existing professional development trainings and their intention to participate in the flipped teacher professional development (FiT-PD) training. The tables below summarize the findings of the paired t-test.

Table 4.21

Paired sample statistics

		Mean	Standard Deviation
Pair 1	PE Score	13.66	1.781
	PE After Score	14.5714	1.97463
Pair 2	EE Score	13.69	1.659
	EE After Score	15.0857	2.20122
Pair 3	SI Score	13.54	2.105
	SI After Score	14.1429	2.43918
Pair 4	FC Score	12.46	1.945
	FC After Score	13.1429	1.94245
Pair 5	A Score	14.14	2.031
	A After Score	15.8286	2.54934
Pair 6	SE Score	14.66	1.589
	SE After Score	14.5714	2.03334
Pair 7	AX Score	12.23	2.327
	AX After Score	11.2000	2.67670
Pair 8	E Score	9.26	1.521
	E After Score	9.8286	1.12422
Pair 9	BI Score	9.7429	1.97548
	BI After Score	9.5714	2.09039

Table 4.22

Paired sample test

	T	df	Sig. (2-tailed)
Pair 1 PE Score – PE After Score	-2.442	35	.020
Pair 2 EE Score – EE After Score	-.3616	35	.001
Pair 3 SI Score – SI After Score	-1.149	35	.259
Pair 4 FC Score – FC After Score	-1.425	35	.163
Pair 5 A Score – A After Score	-3.184	35	.003
Pair 6 SE Score – SE After Score	.214	35	.832
Pair 7 AX Score – AX After Score	1.868	35	.070
Pair 8 E Score – E After Score	-1.928	35	.062
Pair 9 BI Score – BI After Score	.403	35	.689

Table 4.23 shows the mean score and the standard deviation of the variables in the two different conditions. There is a significant difference in the scores for performance expectancy (PE) in the existing PD trainings (M = 13.66, SD = 1.781) and the performance expectancy in the FiT-PD training (M = 14.5714, SD = 1.97463). Also, there is a significant difference in the scores of effort expectancy (EE) in the existing PD trainings (M = 13.69, SD = 1.659) and the effort expectancy in the FiT-PD training (M = 15.0857, SD = 2.20122). Similarly, there is a significant difference in the scores for social influence (SI) in the existing PD trainings (M = 13.54, SD = 2.105) and the social influence in the FiT-PD training (M = 14.1429, SD = 2.43918).

There is also a significant difference in the scores for facilitating conditions (FC) in the existing PD trainings (M = 12.46, SD = 1.945) and the scores for facilitating conditions in the FiT-PD training (M = 13.1429, SD = 1.94245). There is a significant difference in the scores of the attitude (A) in the existing PD trainings (M = 14.14, SD = 2.031) and the scores in the FiT-PD training (M = 15.8286, SD = 2.54934). A significant difference is also reported for the enjoyment scores in the existing PD

trainings (M = 9.26, SD = 1.521) and the scores in the FiT-PD training (M = 9.8286, M = 1.12422).

The paired-samples test table shows that the *p* value of three out of the eight variables is less than .05. For performance expectancy (PE), t(35) = -2.444, *p* = .020; for effort expectancy (EE), t(35) = -.3616, *p* = 0.01; and for attitude (A), t(35) = -3.184, *p* = .003. Therefore, the null hypothesis that the population mean difference is equal to 0 at the .05 level is rejected. Although there is significant difference in the mean score of a few variable, they have not reached the significance as reported by the *p* value. To sum up, the paired t-test findings suggest that there there is an improvement in teachers' performance expectancy, effort expectancy, and attitude after the implementation of the FiT-PD training.

Qualitative findings. Second, a one-to-one interview was conducted with four teachers who participated in this training from the beginning. One teacher from each school participated in the interview. The interview was conducted after administering the UTAUT survey forms to all the FiT-PD training participants; these interviews were done to find out their overall perceptions towards the flipped teacher professional development training, and also, at the same time, to justify and support the quantitative findings. These interviews were aimed to

i. illustrate participants' professional development training experience and their perceptions on the FiT-PD training conducted.
ii. find out participants' opinions with regards to the module used in the FiT-PD training.
iii. find out the problems and challenges faced by participants throughout the FiT-PD training

Teacher's professional needs. The FiT-PD training participants mentioned that the content in the FiT-PD is substantial to their professional needs. All of them mentioned learning about the 4C's of education for the first time. In previous trainings and during observations by the district education officers, they have always been urged to implement the 21st century skills in their lessons, but their perceptions on the 21st century skills was always on the class arrangement and using computers and other ICT gadgets to teach. Since teaching the weak and slow students is one of the main challenges among the ESL teachers, the participants are confident that engaging their students in the 4C's integrated play based approach will motivate their slow and weak students.

> *To be honest, what I thought was 21st century skills and what I learnt from this training are absolutely different [sic]. When I think about 21st century, I think about traffic lights, parking lots and all different class arrangements, and I used to be scared thinking that all 21st century lesson plans are about using ICT. But this training taught me that 4C's is about getting teachers to take charge of their own learning, and this is the first time I heard about the 4C's.. I haven't plan my 4C's lesson plan, but I will start using that next year.* (P2, interviewed on 7/11/16)

Also, participants pointed out that the play-based method integrating the 4C's suggested in the training is more realistic approach than differentiating instruction. Also, a teacher mentioned learning about the user-friendly interactive language websites for the first time. These websites would help them plan the activities for the ICT integrated lesson plans or even to be uploaded as enrichment practices on the existing FROG VLE system.

> *I think the strategies is useful [sic] … especially about using language games. I hope to learn more about the games in training as I can use games with both my KSSR and remedial students. This is my first time teaching English and I learn a lot from this training.* (P1, interviewed on 4/11/16)

> *I learnt about the 4Cs, well that is useful to us and the websites suggested are also something new … so we can actually put this up into our VLE system as we are expected to give students something to do on VLE as enrichment.* (P3, interviewed on 8/11/16)

Convenience.

Small group. The FiT-PD training participants mentioned that they felt comfortable during the face-to-face session as it was held in a small group, among the teachers from the same school. Many non-option teachers normally felt intimidated during large training workshops, and they feel unmotivated to participate. However, they mentioned feeling good about speaking and sharing among teachers from the same school as they are familiar with one another.

> *I like this training because I don't have to speak in front of big groups. My English is not so good as I am actually a Mathematics teacher, so when I went to big group trainings, I feel shy and I cannot share with them. So I prefer a small group like this so I can share without feeling shy in front of my friends. My friends was also happy [sic].* (P4, interviewed on 9/11/16)

In-school. The FiT-PD training was held in the participants on school. The trainer went to all the four schools to conduct the face-to-face sessions. Thus, the participants found this training from the traditional ones where they have to attend trainings at other places or other schools.

Lack of participation on the Facebook group.

Time constraint. When questioned about the lack of participation on the Facebook group, the FiT-PD participants mentioned time constraint as one of the main reasons. They mentioned the other roles and responsibilities that keep them occupied besides the daily teaching left them with no time to participate on the online platform. The participants are occupied with so many different types of academic and administrative duties. They also mentioned having to attend the Common European Framework of Reference (CEFR) trainings in other places as far as Sepang, Selangor at the same time as this FiT-PD training. Thus, they were so overwhelmed that they had no time to even watch the video clip, and to give feedback. Many of them did not

even opened the module file that was uploaded on the Facebook group, so they were not aware what a flipped training was all about.

We didn't participate online because we really had no time … even after UPSR and school exams. We had Sukan 1Malaysia, and so many other things during this. And we have so many things to do online, so normally what you posted on the Facebook group was also posted into our school English panel Whatsapp group, so we just read from there. We are at school mostly till evening, and when we come home we still got work to do like keying in into SAPS, so that's why we didn't write comments. (P1, interviewed on 4/11/16)

We really didn't have time to go through the Facebook materials. I am the penyelaras for MBMMBI in my school, so I am really occupied plus I had to attend CEFR training in Sepang for a week, and we have really few teachers as so we teach more classes. I'm sure you know how the workload is, so how to find time for Facebook lah? (P2, interviewed on 7/11/16)

FiT-PD participants from the High Performance School were not happy that their school was asked to take part in this training. They mentioned that there is no need for them to learn the strategies to teach slow and weak students as there is hardly such students in their school. Also, since they teach in a high performance school, they are actively involved in student exchange programs with school abroad, thus leaving them no time for this training.

I don't think our teachers need this training in the first place. We are teaching in a high performance school, so there is no need to learn all these strategies to teach the weak and slow students. All of our students are smart, and we do collaborations with schools in Singapore, and this year, our students are going to Australia, so all of us are busy preparing them for the two weeks program. Yesterday, we had a visit from a school in Africa. They were here to talk to us about students' exchange … so you see of us are really busy. (P3, interviewed on 8/11/16)

Unclear instructions. Besides, participants also lamented about not getting clear instructions about the training. They were just asked to join the Facebook group by the headmaster, so they had no idea on how to go about with the training. One teacher even suggested that it would have been better if the trainer would have given a briefing before the implementation. This was their first time participating in such a training, so they had difficulties understanding the concept of the training.

The briefing by our guru besar was not clear. This is our first time hearing about such thing and we did not know what to do. We were just given the guidelines, and we joined the Facebook. I think some teachers in my school do not have Facebook too, so they had to create one for this. (P2, interviewed on 7/11/16)

It would have been better if you met us before the training, so we could understand it better, you see. We were all so lost. We got the guidelines, so we just joined the group, but sometimes I felt lost because I log in after days. So one of our teachers normally kept us posted in our WhatsApp group. (P3, interviewed on 8/11/16)

Preference of face-to-face sessions. The FiT-PD training participants mentioned that this training was different and better from the other professional trainings because they were conducted in their own schools, and that no classes were disrupted during the face-to-face session. Also, the face-to-face sessions were short and succinct and did not take much of their time.

> *I think this training is better in the sense that the sessions were short and concise, as normal ones can be quite draggy. The plus point is that we did not have to go out of the school for this training, and it was held after school, so that's really very convenient to most of us.* (P1, interviewed on 4/11/16)

Besides, some participants mentioned that they still prefer having the face-to-face trainings compared to online trainings. The face-to-face sessions with their colleagues give them an opportunity to learn from the more experienced teachers. The participants pointed out that some of them only use Facebook to keep in touch with close friends, and they are have never used it for formal purposes. Some teachers only log in to their Facebook once a week, or sometimes not at all. Also, one participant pointed out that the trainin8g should begin with a face-to-face session followed by the online session so more follow-up could be done online.

> *I prefer the face-to-face session more as I can work and discuss with my colleagues who are more experienced than I am. Most times in school, we don't get the time to have such sharing of ideas. We hardly talk about lesson plans but we talk more about other duties and all … I somehow like the face-to-face interaction more than the online… maybe just not used to it yet. To me, honestly, starting the training with the online session is confusing. It would be better to start with the face-to-face session as I personally acquired more duringthe sessions in school.* (P2, interviewed on 7/11/16)

The face-to-face session was definitely much better cos some of us don't even use our Facebook as used by the young people these days. You can see our accounts, they're just empty and some even reactivated or made an account for this training. Some more we have never used Facebook for work you see, so we just not used to such sudden exposure. (P3, interviewed on 8/11/16)

I like these face-to-face sessions better, and I can participate better. It is more relaxing than the normal trainings. (P4, interviewed on 9/11/16)

P3, however, also lamented that all teachers are asked to participate in this training, and she added that those who have teaching for more than 20 years should have excluded from such training. She also mentioned the privacy concerns since some of them wish to be private on social media. She further proposed that only the novice teachers should participate in this training since they require more exposure on the current teaching methodologies and strategies.

I think not all teachers should be required to participate in this training lah. Just like other trainings, normally the school sends the new teachers, but this training required all of us to participate. Some of us have been teaching for 20 plus years, and I think we have participated in so many of these trainings and this Facebook thing is so new to many of us. We only use it to keep in touch with close people you know, so I don't think we want to expose our accounts in such a platform with so many unfamiliar people. It's better to get the young ones to participate because they need such exposure. (P3, interviewed on 8/11/16)

Mentoring.

Building rapport. The FiT-PD training participants mentioned that it was good to work and have sharing sessions with their own colleagues, as many of them shared ideas and activities they conduct in school. This helped to build a rapport among them, and such a rapport will benefit them in the long run. They also preferred such a face-to-face session as the trainer facilitated the session by giving individual attention and by sharing ideas and giving feedback.

I have learnt some new things from the training, especially from my senior teachers when we had group discussions. Also, I like when you come around and

share new ideas with us. You gave us good feedback after the presentations, and I will try to improve myself for sure. (P1, interviewed on 4/11/16)

I for sure enjoyed the fun session with my colleagues. It was not dry. We wanted it to be short but when we started, we took more time than planned (laughs). So I think this also gave us an opportunity to bond and we have to thank you for sharing the websites. That will definitely be helpful in many ways. We hope you can keep posting more from time to time on that group. (P4, interviewed on 9/11/16)

Motivation. The FiT-PD participants revealed on how unmotivated they were to join this training as it was not voluntary, but they were expected to join by the school management as it was instructed by the *Jabatan Pendidikan Selangor*. However, learning new things that are relevant to teaching has appealed them to stay on this training session. Also, it was revealed that such personalized approach has motivated some novice teachersin school. This shows that this training has managed to increase their motivation to participate in the professional development trainings when their needs are fulfilled.

I have to admit we were very unhappy to join plus one-month training is a scary thing amid all the things we do, but we are glad we learnt the new websites. I think some of our teachers only started joined your Facebook group after the first face-to-face session because they commented it was quite new to learn that 21st century is not only restricted to using ICT. Some teachers just joined a year ago, and they have not much exposure to many things, so this training was really motivating to them. (P3, interviewed on 8/11/16)

Yes.. my school teachers were not motivated when we saw the module and got to know that this training will be for one month and online. Now that I think it's beneficial as I am able to implement new things in my lesson and I get to discuss with my teachers too ... and, since you will be there to assist on the Facebook group, we can always count on you, right? (laughs) (P4, interviewed on 9/11/16)

The findings from the interviews indicated that the content in the training was relevant to teachers' needs, especially in teaching the slow and weak students. Teachers were positive about the face-to-face trainings as they had a sharing session with the more experienced teachers, and the sessions were closely facilitated by the trainer. They participated actively during the face-to-face sessions and applied the new

strategies in their lesson planning. However, teachers did not participant actively in the online component of the training due to a heavy workload which leads to time constraint. Also, teachers were not well-informed about the structure of the flipped training as the module was also uploaded online. This supports the quantitative findings which show that the there was a significant difference in the performance expectancy, effort expectancy and attitude towards the FiT-PD training after the implementation of this training. However, there was no significant difference in the teachers' intention to participate in future flipped professional development trainings. This was supported by the challenges faced by the teachers during the implementation of the training.

Summary

The findings and the analysis in chapter four were elaborated based on the design of this study. Firstly, the findings of the problem analysis were reported, which was followed by the findings of the needs analysis. Both these analysis phases were important in deciding the content of the FiT-PD training. The FiT-PD training was designed to introduce approaches that could help teachers to teach and at the same time motivate slow and weak learners in their English classes. The design was validated by a panel of experts with experience and expertise in conducting professional development trainings and in teacher education. The improvements were made onto the module based on the constructive feedback from the experts, and was later developed and implemented among 35 primary school ESL teachers from four primary schools in Selangor. An evaluation was finally conducted to gauge the effectiveness of the FiT-PD training and both the quantitative and qualitative findings were analyzed

and reported accordingly. The key findings will be discussed and summarized in the following chapter.

CHAPTER 5

SUMMARY, IMPLICATIONS, AND CONCLUSIONS

Introduction

This study was conducted to design and develop a flipped teacher professional development (FiT-PD) module for English as a Second Language (ESL) teachers in primary schools. The module was designed based on the Constructivism theory: thus, the conceptual framework for the training module was developed using the stages in the Zone of Proximal Teacher Development (ZPTD) and the cognitive processes in Bloom's Revised Taxonomy. The FiT-PD training was conducted among thirty-five ESL teachers, and the findings in all the phases of study was analyzed. This chapter highlights the summary of the main findings, implications of the study to the professional development trainings, and recommendations for further research in the area of flipped professional development.

Discussion of Key Findings

ESL teachers' perceptions on existing professional development trainings and their needs for professional development. Prior to designing a flipped professional development module, a problem analysis and a needs analysis was conducted to find out the problems faced by ESL teachers in the existing professional development trainings. Subsequently, during the needs analysis, ESL teachers highlighted the problems they faced, and their needs in professional development trainings. Many studies have failed to conduct a needs analysis to identify the problems and challenges faced by ESL teachers in general; hence, in still study, both these

analyses were conducted in two separate phases, and the findings have been found to complement each other.

Although there is a significant relationship between some of the independent variables and teachers' intention to participate in the existing professional development programs, the correlation findings indicated a mediocre and weak relationship. The performance expectancy does not have a significant relationship in teachers' intention to participate in the existing professional development modules. Therefore, these findings from the present study indicate that teachers do not fully accept the existing professional development programs. Findings indicate that teachers do not find the existing professional development modules useful in their jobs, and the modules do not enable them to accomplish tasks more quickly. Also, findings show that the existing professional development training modules does not increase teachers' productivity. Responses from the interviews support the results yielded from the survey in problem analysis phase, and it can be concurred that teachers are not willing to participate in professional development trainings as they deal with a plethora of challenges in school besides having to attend repeated and redundant sessions of professional development training. Despite the fact that most professional development trainings provide teachers with comprehensible input that is useful in their everyday teaching, they face different types of challenges whilst implementing them.

Responses from the interviews support the results yielded from the UTAUT survey in phase 1, and it can be concurred that teachers are not willing to participate in professional development trainings as they deal with a plethora of challenges in school besides having to attend repeated and redundant sessions of professional development training. Despite the fact that most professional development trainings

provide ESL teachers with comprehensible input that is useful in their everyday teaching, they face different types of challenges whilst implementing. These findings are supported by several researches on teacher professional development that were conducted in Malaysia (Kabilan, 2004; Kabilan et al., 2008).

The present study has found out that ESL teachers attend professional development trainings beyond the required hours. Teachers are only required to attend 7 days of professional development training as stipulated in the secular KPMSP.500-6/8/4 Jld. 2 (89). However, they are often instructed to attend more than 7 days of training, in extreme cases, up to 20 days. Most of the times, they end up attending redundant trainings, and this proves to be just a waste of time as the content is repeated. Most of the professional development trainings held in Malaysia are lecture-based. Previous studies have pointed out that ESL teachers do not find professional development training programs as they are not catered for their needs, and they are often mandated (Kabilan, 2004; Kabilan et al., 2008). Kabilan et al.'s (2008) study showed that ESL teachers are often sent to trainings that are not relevant to them because no needs analysis is done prior to these trainings, and the organizers plan the training based on their own assumptions.

Kabilan and Kasthuri's (2013) research on teacher professional development training has also pointed out that the professional development workshop consists of lecture sessions and are too general to benefit the teachers. When there is no proper planning and assessment of teachers' needs, ESL teachers end up attending repeated and redundant sessions which are sometimes conducted by inexperienced trainers. ESL teachers also lamented that some of the LINUS trainers were promoted to train teachers despite having less than five years of experience in the field of education. This was supported by Pennington (2016) who stated that top-down training programs are

mostly irrelevant to teachers needs and gets stale over time. In brief, this supports why there is no significance between the performance expectancy and teachers' intention to participate in the existing professional development trainings.

The present study has also found that ESL teachers have been asked to attend professional development trainings on managing and using the FROG Virtual Learning Environment (VLE) system. Besides the fact that these trainings are repeated and redundant, teachers also fail to utilize the FROG VLE system due as there is no standardized pedagogical content that teachers can use in the FROG VLE. Thus, they have to find and develop own materials for their students, and they also face difficulties using this system due to the poor internet connection. Kaur and Noorma (2015) cited that a number of teachers have failed to implement the VLE system in their pedagogical practice despite attending numerous related trainings; teachers attend the trainings merely to fulfill the attendance requirement, and most of the time, they do not acquire any skills that are relevant or beneficial to them. Such trainings are futile as they do not provide training that allows teachers to grasp or skills that can be utilized in the implementation of VLE, thus contributing to this failure.

Most importantly, Fadzleen et al. (2013) mentioned that previous research has shown that the Ministry of Education (MOE) of Malaysia did not develop any specific framework on the deployment of the VLE system in Malaysia; research also showed that in spite of providing a comprehensive pedagogical content to teachers and students to use the VLE, it focuses more on the features, aspects and other technicalities of the system. Hence, to improve and ensure the success of the VLE system in Malaysia, developing pedagogical content is paramount to support the teachers and students (Fadzleen et al., 2013). Disney (2008) cautioned that the aim of any training initiative

is to provide guidance and equip the participants with skills that are relevant and apt to their careers.

In addition to that, teachers do not implement the learner – centered lessons that are taught during the professional development trainings due to the facilitating conditions. Lack of facilities and technology hampered teachers' intention to implement the new skills in learner-centered lessons. One, the number of the students is big and it can go up to forty students in one class. Thus, teachers cannot conduct activities in such limited space. Also, there is a lack of teaching and learning tools that could facilitate a learner-centered classroom. For instance, teachers lamented that they are not provided with sufficient interactive materials and also tools such as LCD projector and computer labs. Samira, Faizah, and Marzila (2013) have mentioned that the lack of facilities such as computer resources and technology has been a perpetual barrier in most Malaysian schools.

Besides, the present study has found out that ESL teachers do not fully participate in the existing professional development training because of their heavy workload which leads to time constraint. Besides their demanding academic duties, they also have a plethora of administrative duties such as managing student records online and manually, keying in marks into the system, coordinating events and programs in school and many others. Although they attend the trainings, they find it challenging to implement the strategies in their classrooms due to time constraint. A plethora of recent studies supported that teachers are overwhelmed with a lot of data entry work under the School Based Assessment (SBA) since its inception a few years ago (Faizah, 2011; Gopala et al., 2014; Ruzlan Md Ali et al., 2015). Teachers also spend long time preparing teaching materials and attending trainings due to apparent

lack of information and teaching materials related to the implementation of SBA (Norzila, 2013).

Also, the present study has reported that the ESL teachers do not participate in the existing professional development trainings due to the institutional barriers. One of the main challenges faced by teachers is the lack of social influence and support from the school and peers. The novice teachers lack the in-school professional support from their senior teachers. Some senior teachers expect the novice teachers to follow the traditional teaching and assessment methods; thus, novice teachers do not get to implement the new strategies acquired during the professional development methods. For instance, teachers get ridiculed when they teach English using fun activities, and other teachers get the impression that these teachers are not doing their job well. In another occurrence, a teacher prepared a Year 4 English paper using the SBA format, but she was asked to change it to suit the *Ujian Pentaksiran Sekolah Rendah* (UPSR) format. Hence, these teachers feel that they do not get support from the school and colleagues when they intend to implement the more current approaches. According to Bismillah Khatoon Abdul Kader (2007) as cited in Thang et al. (2010), the Malaysian education system is very exam-oriented, thus most time is spent preparing students for the examinations. This leaves them with no opportunity to introduce creative and learner-centered lessons as encouraged in training because the schools resist changes and prefer their teachers to focus on teacher-centered lessons. Thang et al. (2010) also mentioned that schools do not provide adequate support to teachers who participate in professional development trainings.

Basically, these challenges have hampered ESL teachers' intention to participate in professional development programs. Overall, such situational, organizational, and

institutional barriers have shown that teachers generally do not have a positive attitude towards the existing professional development trainings.

Therefore, in this study, a needs analysis was carried out to identify the ESL teachers' needs in professional development trainings. The recommendations of trainings were derived from the challenges faced by the ESL teachers. Most importantly, these teachers want to engage in trainings that will be beneficial to them, and at the same time, implementable in schools. Kabilan and Kasthuri's (2013) study supported that ESL teachers in Malaysia want their pedagogical needs to be considered so that they would be able to improve the students' learning in their own classrooms. Teachers' needs were identified towards the end of the interviews. All of them suggested some specific teaching challenges that should be addressed in future professional development trainings. Most of them would like to learn effective ways to teach English to the weak and slow learners, especially those in the remedial. At the same time, some suggested that they should be taught the effective methods to capture students' interest in learning English, especially students who do not enjoy reading. The teachers who teach both LINUS and KSSR students in one classroom were keen to learn about effective ways to differentiate instruction in these classes. Some primary schools in Malaysia lack remedial teachers for the LINUS program, and this is supported by Gopala et al. (2013); thus, both the LINUS and the mainstream students are taught in one class. Teachers mentioned difficulties in planning two different lesson plans and to teach and motivate the weak and slow students in the mixed-ability groups. Teaching two groups of students in a challenging endeavor; what is more, the unending roles and responsibilities puts the teachers in a situation that is impossible to surmount.

Since differentiating instruction is a relatively new practice in primary schools, several teacher professional development trainings have been conducted but only to lecture them about the perceived benefits of such approach. Teachers lamented that they were not taught on how to differentiate instruction effectively, and most importantly on how to teach the weak and slow students. In existing professional development, they are merely told than taught. ESL teachers were told to differentiate the objectives, the delivery and the worksheets but they were not taught how to do all these. Teachers have expressed their frustration on differentiating instruction as they feel that at times, the weak students feel left out and are unmotivated to learn. Thus, it can be seen that the teachers' demands for this needs stem from the pedagogical barriers they face in their own classrooms. Needless to say, a teachers' main goal is to help their students to learn the target language better (Diaz – Maggioli, 2003).

Till date, no research about differentiating instruction in English classrooms of Malaysian primary schools has been conducted. However, quoting Delisle (2015), "Differentiation is a failure, a farce, and the ultimate educational joke played on countless educators and students" (p. 28). Mohd Hasrul, Hazita and Azizah (2015) in their study on differentiating instruction in the English class in PERMATApintar has found that only some students benefit from differentiating instruction in classroom, and it is an unnerving task for teachers as a lot of time is spent planning two sets of lessons, and two different sets of teaching resources. Delisle (2015) criticized this approach as a single teacher is expected to teach both the struggling and the average students; Joseph, Thomas, Simonette, and Ramsook (2013) mentioned that it is also difficult to cater to students' individual needs when differentiating instruction in a mixed-ability class. Brondley (2011) mentioned that failure to provide adequate trainings on differentiating instructions may make teachers feel overwhelmed and may

possibly lead to a burn out. Hence, it is essential to provide these teachers with the necessary trainings (McQuarrie & McRae, 2010) as it is crucial for teachers who implement differentiated instruction in their classrooms to stay motivated and committed (Tomlinson et al., 2013).

Experts validation of the FiT-PD training module. The findings in the needs analysis showed that the ESL teachers would like to learn teaching approaches that can be implemented in a mixed-ability classroom, and at the same time to motivate the weak and slow learners in their classrooms. The design of the flipped teacher professional development (FiT-PD) module was guided by the responses by the teachers in the needs analysis phase. Also, the principles of an effective professional development training that were discussed in the literature review were also incorporated in the design of the module: content focus, active learning, coherence, duration, and cooperation The FiT-PD module consists of six sections: overview, learning outcomes, overview on a flipped professional development training, content mapping of the module, training schedule, and training notes for all the sessions.

During the module validation that was carried out using the Applied Cognitive Task Analysis (ACTA) methodology, three major considerations to the module were proposed by the panel of experts. First, the panel mentioned that the learning outcomes in the module were not specific and some were not measurable. Some objectives were also too overambitious that may hamper the interest of the training participants. Thus, considering this is the first ever flipped professional development training conducted among teachers in Malaysia, the experts proposed that the learning outcomes should be refined to ensure that they are measurable. The experts suggested that the learning outcomes in any curriculum design should be SMART: specific, measurable, attainable, relevant, and time –oriented, and this is supported by Blemberg (2009) who

mentioned that SMART learning objectives improves the efficiency and efficacy of a training.

Also, since the training module is guided by the Bloom's Revised Taxonomy, the experts mentioned that the learning outcomes should be written based on the hierarchies in the Bloom's Revised Taxonomy. This is supported by McKimm and Swanwick (2009) who mentioned that Bloom's model is one that can make a participant move from a novice to an expert in any professional development. In writing learning outcomes, Bloom (1956) has suggested three domains: cognitive, psychomotor and affective; however, the revision to the original taxonomy that was done by Anderson and Krathwohl (2001) has suggested a new dimension to the cognitive processes. The three original domains: cognitive, psychomotor, and affective have been organized and renamed to factual knowledge, conceptual knowledge and procedural knowledge, and metacognitive knowledge is added to the dimension. In short, the experts suggested that the verbs for the outcomes of the training should be written based on the framework proposed by Anderson and Krathwohl (2001).

The second key recommendation by the panel of experts was to not use the existing FROG Virtual Learning Environment (VLE) as the platform for the online component in this flipped professional development training. The experts were skeptical about the use of the FROG VLE as a platform for this training as teachers have expressed their perpetual frustrations in using the FROG VLE during the needs analysis interview and in previous studies. Therefore, the experts cautioned that using the FROG VLE would not be a good option for the online platform. Although there are several other free online platforms for professional development, the experts warned that teachers, especially those who are not tech-savvy may find it difficult to

comprehend the features of such platforms. Hence, the experts recommended using social media to group all the participants for the online component.

One particular social networking site suggested during the validation was Facebook as it is Web 2.0 tool that is used among most Malaysians from all walks of life. Donelan (2016) in her study reported that using social media for professional development led to self-development and also contributed to networking opportunities in academia. Despite its popularity, very scant research has been conducted in gauging the effectiveness of using social networking sites, particularly, Facebook as an online platform in teacher professional development (Ranieri, Manca, & Fini, 2012). Bissessar (2014) supported that there are limited studies on using Facebook at a platform in teacher professional development programs irrespective of the collaboration benefits it provides. However, studies have shown that Facebook can be used as an informal professional development where teachers motivate and support one another by venting, sharing, laughing, playing, and growing together (Bissessar, 2014; Radzuwan, Mohd Firdaus, Mohd Fazry & Kamariah, 2016).

The third key recommendation by the experts was to introduce a play-based approach to teach struggling students rather than using a task-based language teaching (TBLT) approach. The experts, however, applauded the inclusion of the 4C's of education – communication, collaboration, creativity, and critical thinking. They agreed that teachers need exposure to these 4C's when they plan their lessons for a differentiated instruction, or even when they teach a normal mixed-ability class. Nonetheless, the experts pointed out that despite being a popular, the TBLT approach is not much of help struggling learners in the lower primary, and this is supported by studies done by Bruton (2002) and Swan (2005). TBLT is a method that focuses on communication and meaning of the task, so it may not be feasible to teach to teach

weak language learners. However, Ellis (2009) argued that TBLT has shown improvement in language use among low-level learners using the grammar ability they have.

Notwithstanding the fact that this training targeted teachers from all levels, the experts suggested that best approach that can be integrated with a 4C's lesson to teach, and at the same time motivate struggling learners is the play-based approach. Also, the experts cautioned that despite the fact that the primary students are taught English using a modular-approach in the standard based curriculum, it is a known fact that the education system in Malaysia still emphasizes on an exam-oriented approach. Thus, the experts suggested using the play-based approach to solidify learning in classroom. Language games are fun, and they stimulate students' interest in learning (Chen, 2005); also, students engage in more communication when they play games (Mayer, 2005). Besides enlivening the class, learning becomes more palatable to students; not only that, they are able to retain the new things learnt in class and games can help to solidify the newly-acquired knowledge (Fuszard, 2001). Therefore, experts suggested that the training should expose teachers to language games that can be used to improve retention and gain students' interest in class. Some language games suggested by the trainers were boggles, sight words games, tic tac toe, and bingo that can be adapted into many different types of games.

ESL teachers' perceptions on the FiT-PD training. The evaluation of the FiT-PD training was done to gauge participants' reaction and participants' learning based as proposed in Guskey's (2006) critical levels of professional development evaluation. Guskey (2006) highlighted that a delay in evaluation is bound to happen; therefore, information of the first two levels can be gathered immediately after the professional

development program, but collecting information of the later three levels takes time, and results might not even be evident for two to three years.

The findings on the ESL teachers' perceptions on the flipped teacher professional development (FiT-PD) training in this study are multidimensional. The quantitative findings demonstrated that the there was a significant difference in the performance expectancy, effort expectancy and attitude towards the FiT-PD training after the implementation of this training. This shows that the content of the training was clear and teachers believe it would help them to increase their productivity. Also, the paired t-test findings indicate that teachers have a more positive attitude towards the FiT-PD training compared to the existing professional development trainings. However, there was no significant difference in the teachers' intention to participate in future flipped professional development trainings. This was supported by the challenges faced by the teachers during the implementation of the training.

This corroborates with the findings in the interview which indicated that the content in the training was relevant to teachers' needs, especially in exposing them to the integration of 4C's in lesson plan. This was their first exposure to the 4C's, and they were taught on how to integrate these 4C's to gain students' attention in learning and how they can differentiate instruction by integrating the lesson plans using the 4C's. It is evident from the findings of this study that teachers' professional needs for a more relevant professional development was fulfill; thus, this concurred the importance of needs assessment before designing and developing a professional development module. These findings are parallel with several studies that indicated that teachers find the professional training substantial and relevant when their needs are fulfilled (Coombe, 1997; Hargreaves & Hopkins, 1991; Kabilan & Kasthuri, 2003).

Apart from that, the findings also revealed that teachers preferred the convenience of this flipped professional development training as the face-to-face sessions were held in their own school, and classes were not disrupted as they were held either after or before school. This is their first experience of having a trainer to train them in a small-group as opposed to the existing professional development trainings. The teachers participated actively during the face-to-face sessions and applied the new strategies in their lesson planning tasks. No studies have suggested on an optimum number of participants in a professional development; however, studies have shown that traditional workshops with large number of participants are futile.

However, the FiT-PD training was not successful in gaining teachers' participation in the Facebook group which was the online platform of this study. The FiT-PD training began with an online session; nevertheless, teachers were passive during the online sessions on Facebook. Findings revealed that teachers did not participate actively in the online component of the training mainly due to a heavy workload which led to time constraint. Teachers are very much occupied with both the perpetual academic and administrative duties, more so, since the inception of the School Based Curriculum (SBA). The FiT-PD training was implemented in September 2016, a few days after the UPSR examination. However, teachers were busy attending other courses, organizing and coordinating programs in school, and mainly preparing students for their LINUS assessments. Most of their time is normally spent in in managing SBA which entails doing a lot of data entry and paper work (Faizah, 2011; Gopala et al., 2014).

Besides, teachers also attributed their lack of participation on the online platform to the lack of understanding on the flipped approach used in this professional development and training, and that no face-to-face session was held to communicate

to them about this approach. The flipped approach in this training indicates that this is a participant-driven training where teachers' take responsibility of their own learning; however, the aim of this form is to provide a platform for a self-directed professional development (Mushayikwa & Lubben, 2009; Mushayikwa, 2013). Kabilan and Kasthuri's (2013) study concurred that teachers generally do not practice any form of self-initiated or self-directed professional development as postulated in the theory of constructivism. This validates the reason why teachers prefer to begin with a face-to-face session and subsequently, have follow-ups via the online platforms.

Previous studies on using an online platform in teacher professional development support this with a number of shortcomings and barriers that were highlighted (Dede et al., 2009; Ginsberg, Gray & Levin, 2004). Despite the exponential growth of emerging technologies and the Internet, studies have shown that teachers have used them limitedly (Rolando, Salvador, Souza & Luz, 2014). The analysis of collaborative activities on blogs has shown very little interest by teachers (Carvalho, 2011). However, Rolando et al. (2014) cautioned that in spite of the exposure provided by researchers on the prospects of a social platform for educational benefits (Martin et al., 2011), it has failed to highlight the ways teachers can make use of these social tools to assist in the professional development of their peers.

The findings have also revealed teachers' preference for face-to-face sessions as they are regulated by the trainer. The face-to-face sessions with their colleagues give them an opportunity to learn from the more experienced teachers. The teachers also pointed out that some of them only use Facebook to keep in touch with close friends, and they are have never used it for formal purposes. Some teachers only log in to their Facebook once a week, or sometimes not at all. Radzuwan et al. (2016) in their study concurred that teachers in Malaysia choose not to discuss work-related issues on social

networking sites as education issues and policies are considered sensitive issues to be discuss on social media. This is possibly the reason why teachers chose not to discuss the challenges they face in the Facebook group; not only that, they do not want to be perceived negatively by the other teachers in the group.

Apart from that, the findings of the present study have revealed that teachers managed to build a rapport with the teachers from their own school through the collaborative activities that were held in their respective schools. Working together provides opportunities to teachers, particularly from the same school, to discuss problems that emerge during their teaching experiences, and this helps them to sustain the changes made to their pedagogical skills (Desimone, 2009; Garet et al., 2001, Hochberg & Desimone, 2010; Singh & McMillan, 2002; Odden et al., 2002). Supovitz (2002) concurred that teachers at all levels look forward to opportunities that allow them to work together and share ideas, strategies, and expertise. Research shows that teachers, particularly from the same field collaborating together promotes discussions that eventually lead to change in teaching practice (Banilower & Shimkus, 2004; Birman et al., 2000; Borko, 2004).

Lawless and Pellegrino (2007) stated that collaboration among teachers brings about successful professional development programs. Several studies conducted have vouched for the positive correlation between teacher collaboration and teaching practice (Desimone et al., 2002; Hargreaves, 1995; Penuel et al., 2007). Professional development programs, be it face-to-face (Little, 2003; McLaughin & Talbert, 2001) or online (Barab, Kling, & Gray, 2004; Schager & Fusco, 2004) are effective when there are collaborative communities.

Implications of FiT-PD towards Teacher Professional Development

There are several theoretical implications of the FiT-PD training towards the teacher professional development that can be drawn from this study. The conceptual framework for the FiT-PD training was proposed by conjoining the cognitive processes in the Bloom's Revised taxonomy and the stages in the Zone of Proximal Teacher Development (ZPTD).

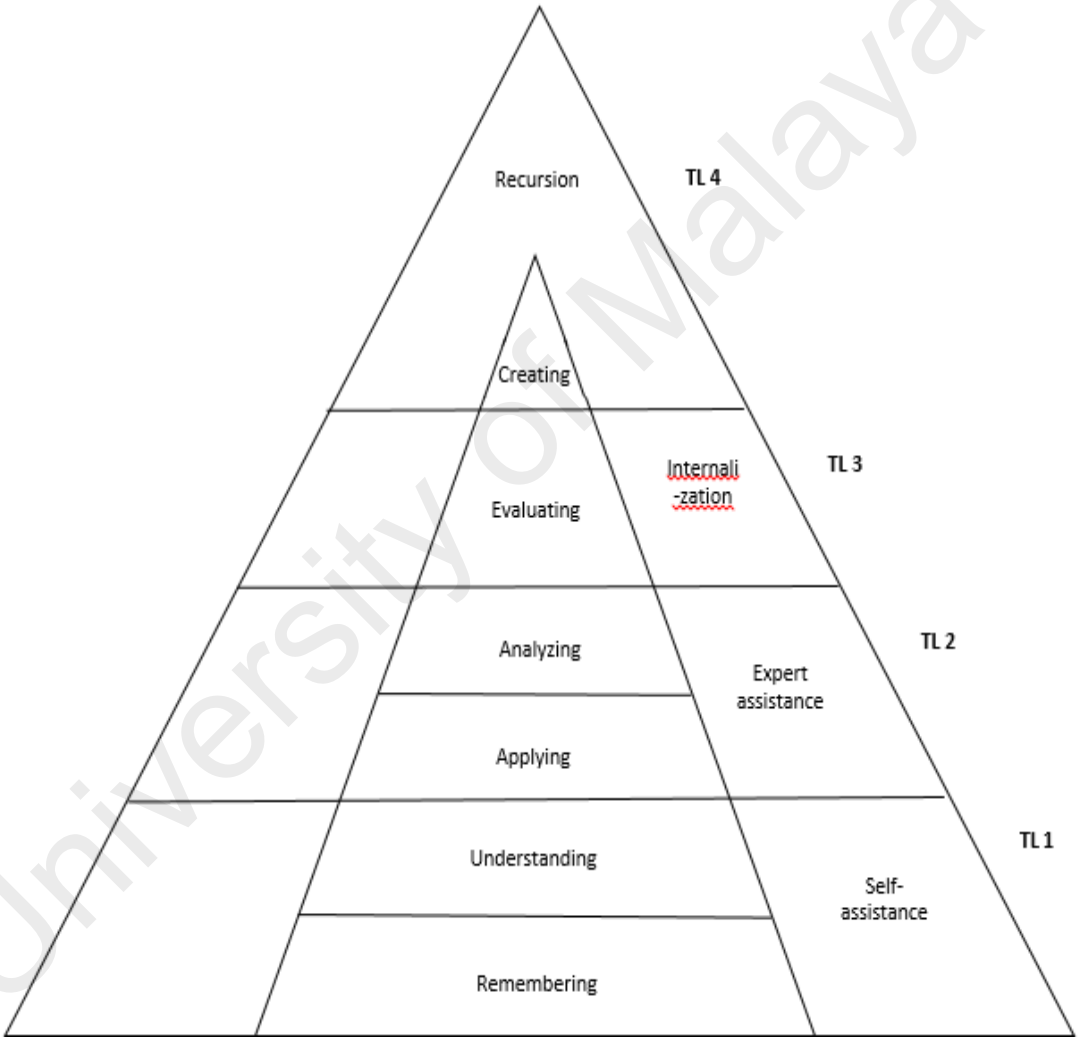


Figure 5.1 A pyramidal teacher professional development training

This conceptual framework was developed to introduce a self-directed professional development training among ESL teachers, in which the training was

initiated through an online session. Upon completion of this training, teachers were expected to be able to:

1. recall their prior experiences in teaching struggling language learners (remembering).
2. recognize the 4C's in education (understanding).
3. implement the 4C's into the lesson plans of a mixed-ability classroom (applying).
4. analyze the integration of 4C's in lesson plans (analyzing)
5. compare the interactive websites (evaluating).
6. design a technology-integrated lesson plan using the websites provided (creating).

Although the FiT-PD training was conducted in four stages (TL1 to TL 4), the learning objectives that were achieved are those constructed for the cognitive processes in TL 1 to TL 3. The final learning outcome was not achieved due to non-participation by the teachers during the online session.

Table 5.1

The findings of the FiT-PD training based on the conceptual framework

Stages	Cognitive processes based on FiT-PD framework	Findings	Learning Objectives
TL 1 (Online)	Remember Understand	No cognitive processes involved	-
TL 2 (F2F)	Apply Analyze	Remember, Understand, Apply, Analyze	LO. 1, 2, 3, 4
TL 3 (Online)	Evaluating	No cognitive processes involved	-
TL 4 (F2F)	Creating	Evaluating	LO. 5

Firstly, the findings imply that Malaysian teachers are not prepared for a self-directed approach in a professional development program. Opposed to existing cascade trainings in which teachers are spoon-fed with information and knowledge deemed important for their pedagogical practices, this study introduced a self-directed approach using a flipped approach. Hinging on the theory of constructivism, teachers who participated in this study were expected to take responsibility of their own learning in a session that was mediated by the expert. In spite of cramming teachers with facts and information, this approach provides them a platform to create their own meaning by using the learning tools espoused by Vygotsky's theory. Nevertheless, the lack of participation by teachers hampered the process of learning that was planned for the online phase. Teachers were unmotivated and were reluctant in participating in online discussions that were initiated for them to reflect on their prior knowledge.

Therefore, this implies that the teachers who participated in this study have never been exposed to any self-directed professional development trainings. This further entails that Malaysians in general are not exposed to independent learning practices.

Since principles of constructivism are slowly seeping into the teaching and learning practices in Malaysia, it is about time for teachers to also reflect on their own professional development practices and goals. Prior to any professional development training, teachers ought to reflect on their pedagogical goals and practices to boost their motivation. Findings of this study also imply that the experts or facilitators play a major role in boosting the teachers' motivation before any professional development trainings. Teachers should be provided with more scaffolding in the initial stages of self-directed professional development trainings to help them work independently in future. In this technology-equipped era, teachers will have to be the drivers, not the driven; having said this, it is fundamental for the Ministry of Education to encourage more self-directed professional development trainings based on principles postulated by the theory of constructivism. A great deal of effort and emphasis is put on introducing effective learning practices in the 21st century classrooms; nonetheless, there is a pressing need to look into the professional growth of teachers and to apply similar principles in the professional development training of teachers.

Secondly, the findings of this study also imply that Malaysian teachers are not accustomed to online-based trainings, especially on social media platforms. In a typical workshop setting, teachers are exposed to ICT-integrated teaching in a lecture-based demonstration, and on the whole, Malaysian teachers have been found to be hesitant and uncomfortable in integrating technology into their pedagogical practices. This flipped based professional training program not only exposes them to an online-based training, but also uses Facebook as the platform for the training, and this certainly came as a shocker to the teachers who participated in this study. In Malaysia, the social media platforms such as Facebook and Twitter are typically used as a platform to socialize, and rarely used as an educational platform. However, with the

prevalence of educational resources that can be found in pages and groups on Facebook, Facebook has garnered some attention as a potential educational platform in the recent years. There are many educational pages and groups that engage teachers in constructive discussions besides providing them with teaching resources and ideas. Such pages and groups are however commonly used by the younger or novice teachers, whereas, teachers who have been in the profession for many years may find this to be a hassle instead of a blessing.

Thirdly, the findings of this study imply that Malaysian teachers are by and large not passionate about professional development programs. This apparent lack of interest stems from the extra roles and responsibilities teachers are expected to take besides carrying out their primary job: teaching. This is not a new scenario; in fact, teachers' plight has been many times debated and discussed in politics, media, and aplenty researches. The findings yield pre and post this study have highlighted that teachers are overburdened with unending administrative work; hence, they are unable to devote much time and effort into academic responsibilities. A great deal of literature has highlighted this issue as one of the biggest challenges in the field of school education. Moreover, teachers are frustrated with the flip-flop in policies; whenever a new policy is introduced, teachers are expected to equip themselves with the relevant knowledge by attending mandated professional development trainings – most of the times more than what they are required to. Some processes introduced in new policies, for example, the school-based assessment (SBA) is not only tedious, but also time-consuming; hence, teachers find themselves burning out when they spend so much time and effort on such rigid tasks, which may eventually affect their quality of teaching. Thus, they were also demoralized and demotivated when they embarked on

this flipped professional development training; this resulted from the long depressing trend of ineffective professional development trainings that have been held in the past.

Limitations of the Study

There are several limitations of this study which may be addressed in future research on teacher professional development. Firstly, the participants of this study were English teachers from Selangor, Malaysia; hence, the results of this study cannot be generalized to all teachers in Malaysia. The conclusion reached in this study are only true for the teachers to participated in this study. Nevertheless, the predicaments faced by these teachers may be generalized to all other teachers in Malaysia as extra burden that comes with teaching has always been a national plight. Future research in this area could be conducted for teachers teaching other subjects as it may yield different conclusions.

Besides, another limitation of this study is that a large number of the participants were non-option English teachers. These were teachers who have qualifications in different subject matter but are asked to teach English in schools for a temporary basis due to an apparent shortage of English teachers. Therefore, many of them lacked the skills in teaching a second language classroom, and due to the challenges they face in their pedagogical practices, their participation in this research was affected.

Conclusions of the Study

In the final analysis,the findings from this study have shown that this research has to a certain extent failed to generate all the desired outcomes. The flipped approach implemented in this teacher professional development training was not very promising among the ESL teachers as the teachers in this study favoured having the face-to-face

sessions compared to the online session. This also brings to a consensus that the teachers are not able to self-direct their own professional development as they are burdened with unending academic and non-academic duties in school. Also, they have been exposed to any form of self-directed professional development training prior to this, so they had difficulty understanding such form of training.

Nonetheless, according to Desimone (2009), the type of activity, be it workshops or study groups, does not spur changes in teacher learning, pedagogical skills or student achievement, but rather it is the features of a professional development activity that makes it effective; this has been supported by a study of a national probability sample of teachers which suggested that it is the characteristics of the program that matters (Desimone et al., 2002; Garet et al., 2001).Thus, the design and development of the FiT-PD module for this study has included the core features of an effective professional development that were highlighted by Desimone (2011). Therefore, it is worth noting that the teachers who participated in this study have revealed that they have gained an understanding on the content knowledge and pedagogical skills that they can implement in their own classrooms.

Despite the challenges faced in implementing this flipped based training, the findings of this study synthesized the features of an effective professional development training. The module of the training had a content focus; active learning was encouraged through interactive discussions; also, the content was consistent with teachers' prior knowledge. In addition to that, the training was conducted for more than 20 hours as a longer duration allows development activities to last for a certain period. The fifth feature that was apparent during the training was cooperation among the teachers from the same school that was exemplified during the face-to-face sessions in schools. Nevertheless, in spite of the several attempts in encouraging

cooperation among the teachers from different schools, it was futile as none of the teacher participants cooperated during the online sessions.

Regardless of implementing the features of an effective professional development proposed by Desimone (2009), the present study has shown that participants motivation is an integral component in any professional development training. A professional development training will not be successful if the participants are unmotivated in participating in the training. The findings throughout the present study have magnified the findings of previous teacher professional development research in Malaysia – it is nothing but a depressing trend of dispirited teachers attending a training which they perceive to be futile to their current pedagogical practices.Therefore, it is imperative that motivation should be added to the features of an effective professional development because a professional development is considered successful if it boosts the spirit of the participants and motivates them to learn more. Hence, the design and development of modules for professional development should consider including pre-training activities to encourage and motivate the participants to partake an active role in the training.

Recommendations for Future Research

Several recommendations for future research propelled from this study. Firstly, besides identifying their needs for a professional development, it is also very crucial to gauge teachers' readiness for a different form of professional development. Teachers in the present study were not ready for a self-directed professional development which began with the online phase. Thus, before implementing a self-directed training in the future, the trainer should arrange a face-to-face session with all the participants to explain about the new form of training, to get their feedback and to actively engage them in the planning of the training module. A pre-training face-to-

face session would be able to motivate and encourage the participants to be participate actively.

Second, it is vital for future researchers to conduct an iteration after developing the module of a new form of professional development. Before the implementation phase, an iteration can be done by piloting the training in one or two schools. A pilot training would allow the trainer to identify the deficiencies in the module and to improve on it before implementing it to the target group.

Third, future studies related to the professional development of English teachers should examine if the needs and perceptions towards professional development of English teachers in other states of Malaysia or other countries are similar to the ones highlighted by the English teachers in Selangor, Malaysia. If yes, how are they similar? If no, how are they different? Future studies in the professional development of English teachers could also gauge teachers' readiness in implementing technology into their professional development practices.

Lastly, future researchers interested in the area of professional development training could adapt the module that was designed and developed in the present study. The content focus of the module, which is the 4C's of Education could be adapted to a training for teachers of other subjects. It is worthy to continue investigations and studies on flipped professional development as it is cost effective and allows more collaboration opportunities.

Summary

To recapitulate, this study on the flipped professional development is a breakthrough as studies in this area prior to this were focus on traditional professional development. Even though this study did not generate all the desired outcomes, it has

highlighted the potential of flipping the professional development practices. Above all, the Ministry of Education of Malaysia should tackle the issue of teachers being overburdened with non-academic duties. If this carries on, teachers will be losing sight on the primary responsibility, which is to teach. Flipping the professional development not only reduces teachers' burden, but it is also cost-effective and time-saving.

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