



**University of
Reading**

**Evaluation of CPD Opportunities Offered in TEL for
Lecturers in Saudi Higher Education: A Single Case Study**

Thesis submitted for the degree of Doctor of Philosophy

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Authors' Declaration

I confirm that this is my own work and the use of all material from other sources has been properly and fully acknowledged.

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Date:.....

Abstract

Rapid social and economic development in Saudi Arabia, as well as the international revolution in technological development, have emphasised the need for Saudi Higher Education institutions to meet the demand for knowledge and skills to improve the quality and performance of education. Continuing professional development (CPD) is a key component of effectively addressing the increased demand for technology-assisted learning and teaching approaches. Such CPD opportunities will allow lecturers to update, expand and maintain their technology enhanced learning (TEL) knowledge and skills so they can integrate them effectively into their teaching practices and improve students' achievements. Although the role of TEL CPD in Saudi Higher Education has always been important to lecturers, the increasing importance placed on work effectiveness and productivity has greatly elevated the significance of this role. Previous research and anecdotal evidence suggest that effective TEL CPD is paramount to the successful integration and use of educational technologies in teaching and learning, and that systematic evaluation is needed to examine the practices of current TEL CPD programmes. In this context, the study aimed to achieve a greater understanding of lecturers' experiences of TEL CPD, in general, in order to support the effective provision of TEL CPD programmes and extend the knowledge offered by successful TEL CPD initiatives.

The study adopted an interpretive approach, and combined method investigations (survey and interviews) were used to understand the current situation of TEL CPD and the factors underlying the opportunities and challenges encountered by lecturers in Saudi Arabia. The data consist of 103 survey responses and interviews with 12 lecturers who represent the voices of lecturers in the College of Education at one Saudi university. The results show that most participants appreciated the opportunity to participate in TEL CPD

programmes, and they believe that TEL CPD is valuable to lecturers, students and institutions as a whole. However, the data also identified significant challenges to the lecturers' active participation in TEL CPD programmes, including time and workload, relevant and realistic programme content that address lecturers' needs, opportunities to practise the use of TEL and accessibility to and awareness of TEL CPD courses. With increased expectations for the effective adoption of TEL in learning environments, lecturers need to undertake a range of TEL professional development opportunities that address their specification area, needs and preferences. The general design of the TEL CPD programmes provided reflects some issues in TEL implementation, such as a lack of balance between theoretical knowledge and practice, and an over-emphasis on technology skills. Moreover, the providers of these opportunities and management teams need to adopt the recommended criteria and offer support to lecturers in order to transfer the skills that were learnt from the TEL programmes so they can enhance their teaching practices with technologies. As a result, the study introduces a theoretical framework of TEL CPD practices to investigate the factors of participation, implementation and impact that affect the provision of TEL CPD in Saudi Higher Education. This approach, based on the interrelationships between the concepts examined in this study, provides insights into knowledge in this area. Although the findings of this study cannot be generalised, they may help providers, institutions and policy makers move towards an understanding of how to develop and implement TEL CPD programmes that address lecturers' needs, in relation to theory, practice and further research.

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Abbreviations

CPD	Continuing Professional Development
TEL	Technology Enhanced Learning
TPACK	Technological Pedagogical and Content Knowledge
ICT	Information and Communication Technology
LMS	Learning Management System
VLE	Virtual Learning Environment
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UK	United Kingdom

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Chapter One

Introduction

1.1 Introduction

This thesis provides an investigation into Technology Enhanced Learning (TEL) Continuing Professional Development (CPD) programmes aimed at supporting the successful integration and use of TEL in Saudi Higher Education. It aims to describe, understand and interpret the opportunities and challenges related to this kind of professional development, how it is viewed from a lecturer's perspective and how lecturers perceive and experience these programmes in relation to their roles. In order to meet the aims of the research, an interpretive case study approach was adopted, which is in line with social constructivism. Questionnaires and semi-structured interviews were adopted, and data was analysed in the context of the topic's theoretical background as well as in the context of a review of the literature on the successful adoption of TEL in teaching and learning through effective TEL CPD programmes.

This chapter presents an overview of the study, providing brief background information about the topic, as well as an overview of the research objectives, questions and design and the overall structure of the thesis.

1.2 Research Background

This study stemmed from my personal interest in understanding the nature of professional development and change, especially in terms of the social and cultural effect of development. Being a faculty member at a Saudi university, I have witnessed a number of significant investments in technologies made by the government and Higher Education policy makers, with much discussion centred on the importance of TEL

integration in learning environments. Furthermore, being a Saudi learner studying in the United Kingdom (UK) for my MSc in computer-based learning and training, I have come to identify a number of crucial differences in educational approaches regarding the use and development of TEL, as well as different expectations and ways of thinking relating to new learning environments. Of specific importance are the demands made by the Saudi government and Higher Education institutions for plans and strategies to address the needs of dynamic social and economic growth, as experienced in Saudi Arabia in recent decades. In this vein, there is a need for qualified lecturers and qualified graduates to provide effective and high-quality education systems that utilise new technologies in new learning environments whilst also increasing external and internal efficiency in order to meet the requirements of development and to ensure coordination and collaboration between domestic and international institutions (Ministry of Economy and Planning, 2014). However, in general, the findings of recent studies on Higher Education institutions in Saudi Arabia are considered unsatisfactory in this regard, since most Saudi lecturers are not at the level needed to meet effective knowledge and skills in TEL functionalities and how they should integrate technologies to facilitate the learning and teaching process (Alebaikan, 2010; Ageel, 2011; Algahtani, 2011; Alhbabi, 2013). Therefore, these experiences, Saudi visions and studies have led me to consider the following questions: What are the basic characteristics of adult professional development? As technology does not enhance learning but people do, how do cultural and social contexts impact a person's ability to learn and change in the professional development process? With the advent of dramatic developments in Information Technology which have profound impacts on learning with technologies, the present study posed these questions within the context of the growing need to use new technologies for learning. Thus, the study aims to contribute to the understanding of

technology use for learning and teaching in a TEL professional development programme by examining Saudi lecturers' experiences in the context of Saudi Higher Education.

The developments and progressions witnessed in a number of different fields have encouraged many countries across the globe to utilise approaches devised to improve overall professional competence amongst citizens with the objective of facilitating their ability to deal with fundamental, emerging issues in the world. One critical element of this is the educational sector; recognising this, the majority of countries have directed their efforts towards designing and implementing innovative and valuable educational programmes aimed at providing learners with the very best opportunities (Darus *et al.*, 2009). In this regard, a number of scholars have highlighted that, in the teaching process, CPD is fundamental to achieving success and progress in the educational sphere. For example, Guskey (2002) noted that high-quality CPD is a critical element in almost all modern-day suggestions for educational improvement. Although the link between teaching and subsequent academic attainment is difficult to determine (Goodall *et al.*, 2005), Alexandrou *et al.* (2005) held the view that educators who are involved in the provision of high-quality teaching through professional development programmes ultimately facilitate improvements in knowledge and pedagogical practices, and this subsequently affects students' efforts to succeed both in the process of learning and in their chosen professional fields.

Just as the need for CPD has been seen to increase overall, CPD within the TEL domain has been recognised as being a critical factor in educational development (Kirkwood & Price, 2011; Littlejohn, 2002), and innovative technologies have been adopted by higher education institutions, as reflected in the use of online discussions and wikis (Morris, 2010). These behaviours motivate stakeholders in education to utilise new strategies and methods, and to incorporate these within pedagogical practice. In the technological field, ongoing development and success means that a number of complicated changes are being

made to the more traditional methods of teaching; this, in turn, encourages sustained professional development for lecturers. Similar to other studies that have emphasised the value of incorporating TEL within education and CPD with the aim of encouraging both teaching and learning, researchers, such as Ming *et al.* (2010); Kanaya *et al.* (2005) and Dash *et al.* (2012), have provided support for pursuing this objective. These researchers have noted that the reluctance to implement change is one of the key barriers facing successful TEL integration; all too often, this is due to the lack of TEL knowledge and skills and the teaching staff's inexperience in TEL application. Such disinclination is also seen to be based on preconceived views pertaining to TEL tools, and the teaching and learning of those tools. Nonetheless, lecturers who have been involved in and attend effective TEL CPD programmes are more inclined to develop more in-depth insight into TEL and to make use of the relevant tools when teaching. In this regard, TEL CPD is recognised as a valuable and effective approach to achieving success in TEL application in pedagogy and the curriculum (Galanouli *et al.*, 2004; Daly *et al.*, 2009; Hramiak & Boulton, 2013). Therefore, unless the components of TEL CPD are sufficiently understood, meaning that educational technologies are integrated into the learning and teaching environment, the desired outcomes, in terms of the level of success, cannot be achieved, and the lack of TEL abilities will be ongoing.

In what is widely recognised as an era dominated by technology development and globalisation, and in consideration of the ever-mounting importance assigned to the requirement for TEL integration in the educational domain, institutions of Higher Education in Saudi Arabia face increasing pressure to develop and implement technological learning modes. In this vein, Alhamid *et al.* (2007) noted that technological developments will continue to push the need for different educational methods and skills, a situation that ultimately will mean CPD stakeholders and providers will come to feel the pressure to provide lecturers with programmes devised to facilitate high-level

performance in dynamic educational settings. However, although much of the literature on educational and schooling effectiveness has clearly identified a relationship between quality lecturers integrating TEL and effective CPD for lecturers (Butcher & Stoncel, 2012), it seems that TEL CPD programmes have not been fully embraced by Saudi Higher Education. Ageel and Woollard (2012), Al mulhem (2013) and Al Ghamdi (2015) conducted action research studies on Saudi Higher Education; they found that TEL CPD is viewed as providing a potentially critical solution to the need to satisfy and overcome complicated technological challenges. Consequently, it provides the Saudi educational system with numerous advantages, including positive results when integrating TEL in a learning environment. However, there is a lack of information about how lecturers are involved in learning TEL (participation), how they experience, in general, the designed and provided opportunities (implementation), and what benefits they gain from applying what they have learnt (the impact) from participating in TEL CPD programmes. This underscores the current emphasis on obtaining a comprehensive picture of TEL CPD practices from the lecturers' point of view because the lecturers themselves are important agents in the development and change process. Although the points identified in these previously mentioned studies were valid for specific purposes, they cannot support good decisions about practice since the lecturers' experiences have not been fully explained or understood for all stages of TEL CPD (participation, implementation and impact).

Because there is a dearth of TEL CPD research that can provide insight into Saudi lecturers' experiences, by examining these developments in a wider context, this study's investigation of TEL CPD programmes makes a significant contribution to the field through its examination of lecturers' perceptions and experiences. In this way, the research study should help provide a more in-depth understanding of crucial factors by recognising that all development and learning processes are positioned in a personal, cultural and social context. The objective is to foster the lecturers' ability to integrate

TEL into their practice and, in turn, improve the academic success of students. Moreover, this research study contributes to the field by providing insights into the professional development of lecturers in Saudi Arabia; such insights are based on the theoretical frameworks established in Western contexts. Accordingly, this study encompasses frameworks developed in different environments, thereby identifying the modifications needed to ensure applicability in the context of Saudi Arabia, especially in terms of social and cultural priorities.

1.3 Research Aims and Objectives

This study primarily aims to examine lecturers' perceptions and experiences of TEL CPD programmes at one Saudi university in an attempt to enhance the provision of appropriate and effective TEL learning through CPD initiatives. In doing so, it seeks to facilitate the lecturers' teaching practice and support the students' educational achievements. It explores current TEL CPD opportunities and challenges, and it seeks to add value by presenting implications for best practices. Thus, the specific objectives of the study are outlined as follows:

- To examine the current situation of lecturers' perceptions about TEL CPD opportunities and priorities.
- To identify the perceived factors driving and enabling, or otherwise limiting and restricting, the participation of lecturers in TEL CPD.
- To explore the fundamental characteristics affecting the effective provision of TEL CPD programmes in terms of design, content and delivery.
- To identify the benefits of TEL CPD to lecturers, and its impact on the lecturers' use and practice of new knowledge and skills.
- To recommend proposed solutions to the identified challenges and possible directions for further research.

A thorough understanding and achievement of these goals could be important for policy makers, TEL CPD coordinators and responsible providers in relation to maintaining and implementing the necessary factors.

1.4 Research Questions and Design

The overarching research question guiding this study is: What factors are recognised as important for the promotion of TEL CPD for lecturers at Saudi universities from their perspectives and in relation to their experiences?

This question is further segmented into the following sub-questions:

- 1- What factors influence or hinder the lecturers' perceptions of and aspirations for TEL CPD participation?
- 2- What characteristics affect the effective implementation of TEL CPD?
- 3- What is the perceived impact of participation in TEL CPD?

The principles governing the research design are brought together in a research plan, providing an introductory overview. These components are described in detail in Chapter Five. The critical factors in a research design are the topic, methodology, location and timeframe in which a study is conducted; additional factors include the subjects, data collection and analysis and a discussion of the findings. The research design also explains the steps taken to prevent eventual errors, distortion and bias (Sarantakos, 2013, p. 121). In achieving the aims of the current work and obtaining answers to the research questions, a mixed methodology approach is considered appropriate (see Chapter 5). Both quantitative and qualitative methods were used to strengthen the research design and enrich the findings (Creswell, 2013; Tashakkori & Teddlie, 2010).

Lecturers at the College of Education at one of the middle universities in Saudi Arabia, which will be referred to as Middle University (MU) to protect the anonymity of that

university, were recruited for the study. Data collection was conducted in two ways. First, questionnaires were administered to and obtained from 103 male and female lecturers in the larger MU environment to reflect the big picture of experiences of TEL CPD, and for use in qualitative data sampling and to enable a comparison with qualitative data obtained from a smaller sample. Interviews were also conducted with a smaller group of 12 lecturers in order to more thoroughly investigate the issues and to provide a substantive explanation of the initial findings derived from the quantitative method (the questionnaire).

1.5 Thesis Structure

This thesis is structured into nine chapters, and a brief introduction is presented in all the chapters to provide readers with an overview of what is discussed in each chapter.

Chapter 1 provides an overview of the study, including the background of the research and its aims and questions. It also presents the research design and research plan.

Chapter 2 contains a brief history of Saudi Arabia and its demographics, as well as the Higher Education sector in this country. It also analyses the TEL and CPD dimensions of this sector.

Chapter 3 justifies and explains the theoretical framework of this study by presenting the theories and model in order to reflect insights about the topic and to define the research approach.

Chapter 4 presents a review of related literature linked to the study based on its research objectives and questions on CPD and TEL in education.

Chapter 5 discusses the research design and methods, with a detailed explanation of the manner in which the investigation is conducted.

Chapter 6 and **Chapter 7** present the research results derived from the questionnaires and interviews; each chapter presents one method of data collection.

Chapters 8 provides a comprehensive discussion of the findings in relation to the reviewed literature.

Chapter 9 concludes the thesis and presents the study's contribution; it also acknowledges the limitations of the study and the implications for practice and further research.

1.6 Summary

This chapter has described the steps in the research process, including the background and rationale of the study and its objectives and research questions. It has also attempted to provide an overview of the current situation of TEL CPD and insights into the topic, whilst focusing on the value of understanding the recruited participants' experiences and perceptions. It is this knowledge that will lead to and support effective TEL CPD in the Saudi Higher Education context.

Chapter Two

An Overview of Higher Education in Saudi Arabia

2.1 Introduction

This chapter aims to provide information pertaining to Saudi Arabia, in general, and then a more specific focus directed towards Higher Education, in an effort to place this thesis in its rightful context. This is a crucial fact to understand since it provides the reader with insight into the national context in which the current study was conducted. In so doing, this chapter begins by providing brief background information about Saudi Arabia and the technology evolution witnessed in that country's educational system as well as the Saudi population's reaction to that evolution. Relevant to the current thesis, it presents highlights of the beginnings of Higher Education in Saudi Arabia and the various developments that have taken place in an effort to enhance the quality of learning and teaching in this country; then, it identifies some of the challenges facing this domain. Subsequently, it focuses on aspects of TEL and the role it plays in Saudi universities; it then explains the current CPD opportunities available to Saudi university lecturers. The following section presents the specific research context, MU, where the study was conducted.

2.2 A Brief Overview of Saudi Arabia

The Kingdom of Saudi Arabia is the largest country in the Middle East. The national language is Arabic, and the Islamic religion determines the culture and education system adopted and followed. Saudi Arabia is an independent monarchy. The land area of Saudi is over 2,150,000 square kilometres (roughly equating to 830,000 square miles), and it is divided into 13 provinces: Riyadh (the capital city of SA), Makkah and Medina (the holy

cities), Northern Province, Eastern Province, Al-Qassim, Hail, Al-Jouf, Jizan, Najran, Tabuk, Asir and Al-Baha. Geographically, it is a peninsula bordered by Jordan, Iraq, Kuwait, Oman, Qatar, Emirates, Bahrain, Yemen, the Red Sea and the Arabian Gulf. According to official statistics, the population was estimated in 2014 to be 29,897,000, with around 23% foreign nationals. Saudi Arabia has one of the highest population growth rates worldwide, with an annual growth rate of 2.4%. Moreover, it is estimated that, in a few decades, the population of Saudi Arabia will have doubled. The majority of Saudis (more than 66%) are under the age of 30 years, with 75% of the population under the age of 39 years (Ministry of Economy and Planning, 2014). This rapid growth reflects various social and economic challenges that need to be addressed by the Saudi government through various initiatives, as explained in the below sections.



Figure 2.1: Map of Saudi Arabia: Geographical Boundaries and Major Cities

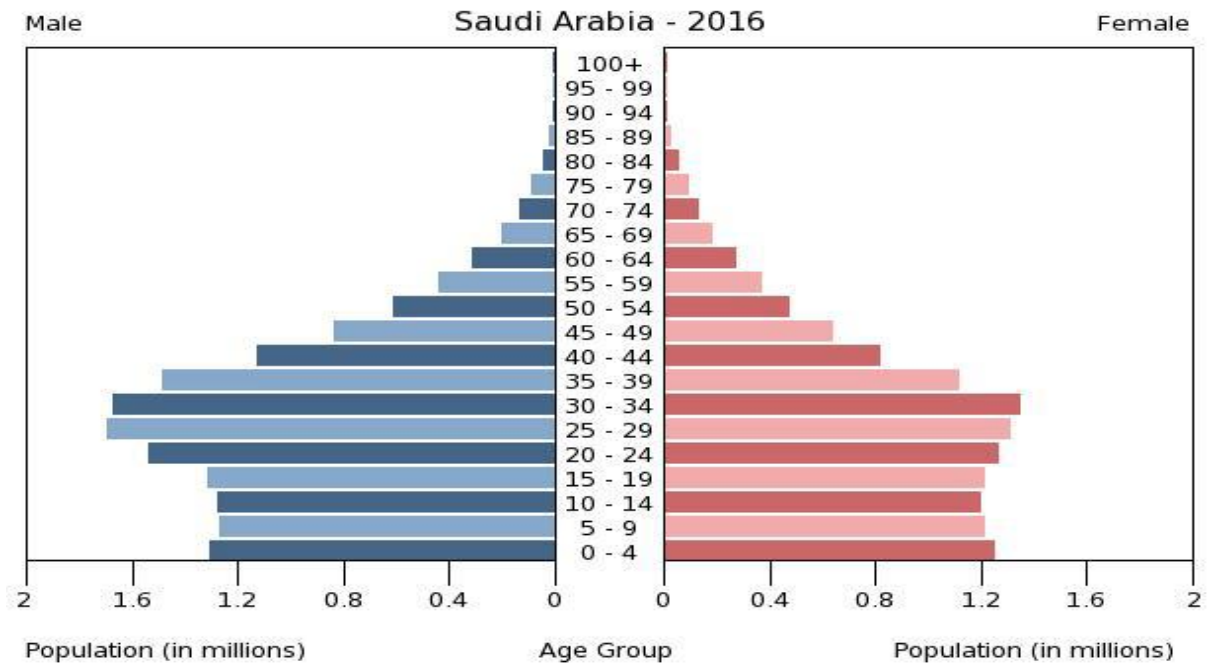


Figure 2.2: Saudi Population by Age Group

Source: CIA World Factbook, 2016

Social, health and educational services are provided by the government of Saudi Arabia. Oil and its products are the main income source; they play a significant role in terms of the development and growth of the country. Furthermore, it is recognised as the first country in terms of the export of oil reserves, the fifth in natural gas reserves, and the tenth in the production of natural gas (Ministry of PMR, 2012). As a result of the aforementioned wealth, Saudi Arabia occupies a crucial part in the global economy; more specifically, in the past decade, the country has joined the Group of Twenty and the World Trade Organisation (WTO), which therefore is seen to play an effective role for global economic and financial stability (Kharas & Lombardi, 2013).

The effect of religion on Saudis can be seen through various principles, such as conservatism, the extended family, and gender differentiation (Oyaid, 2009; Alebaikan, 2010). Therefore, all sides of Saudi Arabia, including education, in which males and females are educated separately after the age of seven, are influenced by the segregation

of the genders. Furthermore, a number of traditional cultural elements influence Saudis' communication styles. As an example, a number of different factors, such as age, relatives and hierarchy (the head of the family, rulers, teachers, etc.), are all seen to play an important role in facilitating positive communication and governing how social interaction should be carried out in a given situation. Although the Saudi population is characterised by fixed norms, it is a multinational country with a flexible system that strikes a balance between a traditional culture and a modern culture. Therefore, the reaction to new communication platforms through information technologies can be viewed differently.

Access to the internet, for the public, was permitted in 1997 (Sait *et al.*, 2007), with such use in Saudi Arabia relatively new. Internet use by Saudis has since increased dramatically year after year. For instance, in 2000, there were approximately 400,000 users, whilst in 2006, the number of users has reached 4,946,618. Furthermore, the number of internet users is demonstrating increasing growth, with 2016 showing the number as having reached 20,813, 695 (Ministry of Communications and Information Technology, 2016). According to a report by the Communication and Information Technology Commission (CITC) (2015), it has been seen that a number of factors led to the strong growth trend in Information Technology in Saudi Arabia, including constant investment in technology and infrastructure, increasing spending on smartphones and tablets, the employment of e-government projects, and an increasing interest in technology services. Moreover, the report highlighted that the consumption of internet traffic on mobile devices in Saudi Arabia was amongst the highest percentages around the world.

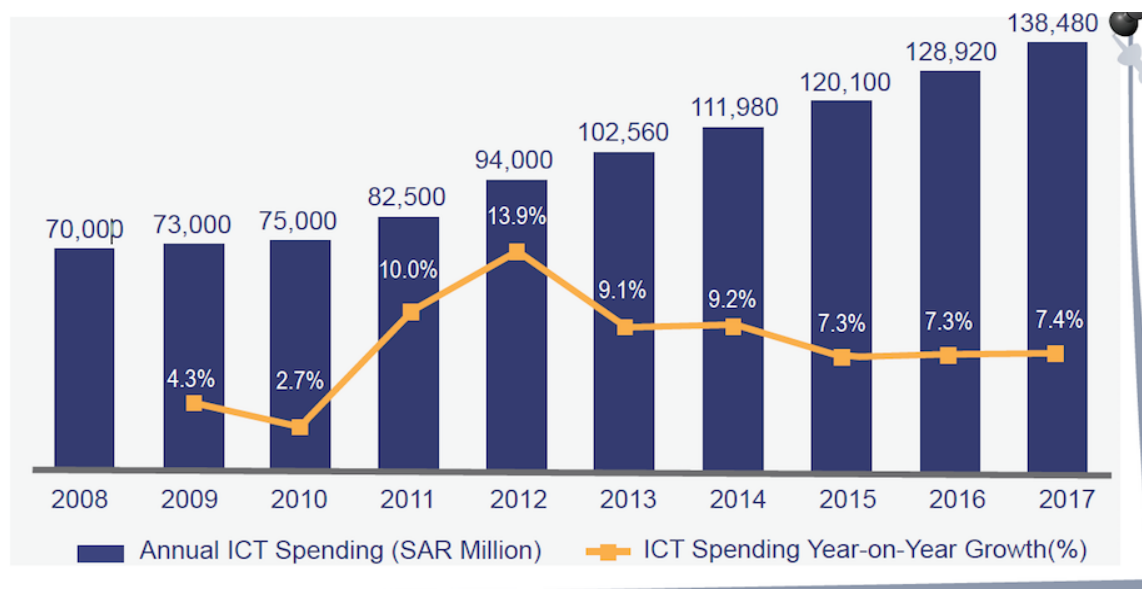


Figure 2.3: Annual Technology Spending In Saudi Arabia

Source: CITC, 2015

In addition, although writers are seeking to identify the reasons underpinning the prevalent use of the internet in Saudi Arabia, articles in magazines and newspapers have considered this phenomenon amongst Saudis, stating that this population are amongst the most online individuals in the world. Furthermore, titles of various web articles, such as *'Social Media in Saudi Arabia: A virtual revolution'* (Economist, 2014), and *'Twitter Usage is booming in Saudi Arabia'* (GlobalWeb Index, 2013) have increasingly come about. Currently, more than 6 million users of Twitter in Saudi Arabia tweet more than 220 million tweets on a monthly basis (CITC, 2015). More recently, the Arab Social Media Report (2015) made mention to the average daily use of social media through any device, specifically in Saudi Arabia, is around 3 hours, and use via a mobile phone is more the 4 hours. Thus, the above figures of today's generation reflect a significant embrace of social media, with the high use and demand of technology devices and the internet recognised as having shaken the silence of the culturally reserved Saudi population (Alamri, 2016). Based on such heavy use and investment in technology, an effective consideration of how such means are utilised for the important source in the

country- its people - is seen as unavoidable. In addition, and also in relation to a crucial sector in the country, a description of Higher Education in Saudi Arabia will be discussed.

2.3 The Higher Education System in Saudi Arabia

The Saudi Arabian educational system is the responsibility of three main agencies: general (the Ministry of Education), Higher Education (the Ministry of Higher Education) and vocational or technical (the General Organisation for Technical Education and Vocational Training). The Saudi Higher Education system consists of colleges and universities, all of which provide undergraduate, postgraduate and professional programmes. It also includes health institutions and colleges, and community colleges (Ministry of Higher Education, 2014). The main goal of education in general, as stated by national policy, is centred on fulfilling the country's population's needs and reflecting cultural living ways and norms. In addition, the Saudi Higher Education system was afforded special attention in the early 1970s when an era of rapid development and major growth occurred in the country. As a result, the Ministry of Higher Education was established in 1975 with the responsibility to launch, monitor and implement what was necessary for the Saudi Higher Education system. In the early phase, a sophisticated plan was founded as a target to promote the early stages of the educational system in the country and to provide the professional skills workforce to run the growing country's economy (Ministry of Economy and Planning, 2014).

In accordance with adopted policies, the Ministry of Higher Education is the central authority for directing university education, which works to develop all sectors into higher education. Furthermore, this ministry supports research and works to implement policies and rules that colleges and universities should follow. Smith and Abouammoh (2013) state that these universities, for instance, are expected to prepare and train citizens

so that they are properly qualified to contribute to the country's social development and continuous growth. They are also expected to encourage talented and gifted students, whilst providing them with appropriate opportunities to advance their studies in their preferred field of knowledge in Higher Education. Moreover, they are expected to make a leading contribution in the scientific research area to lead to the advancement of knowledge of relevance to the nation in all areas. They should, also, actively participate in finding effective ways of solving problems that may emerge in the modern era. Based on the Islamic view of what takes place within developed countries, institutions of Higher Education are measured by their efforts to provide the necessary tools and to encourage researchers to participate towards developing a body of scientific knowledge. Importantly, efforts to provide sufficient further education and training for staff and graduate students are directed with the fundamental recognition of their need to help them achieve their own goals and the country's development; this forms one of the measurement objectives for Higher Education institutions in Saudi Arabia.

The Saudi government is the main body responsible for providing places, establishing colleges and universities, funding students, maintaining the development and training of faculty staff, and dealing with any and all related issues associated with the improvement of the whole system of Higher Education. Typically, students in social science and humanities follow a four-year plan of study, and in the field of pharmacy, engineering and medicine, five or six years are required in order to gain an undergraduate certificate. Furthermore, graduate programmes in various fields are available in universities that grant Masters and Doctoral degrees. The Saudi Higher Education has progressed to provide students with various choices in areas of specialisation. On the other hand, in consonance with the social consideration, Article 155 of the education policy document in Saudi Arabia declares that a strict separation of male and women is required at most

statues in Saudi education system, with some exceptions, such as some medical colleges and some privately run elementary schools (Smith & Abouammoh, 2013).

It is noteworthy to highlight that the system of Higher Education in Saudi Arabia has recently made significant progress towards success in its educational achievements. Largely on account of the government's initiatives and supportive policies, the educational system and its infrastructure have developed for all within the country. One evidence of this success is the Ministry's budget increase in recent years, which has resulted, for instance, in a number of new institutions and universities. The total number of Saudi universities in 1996 was 8; now, however, according to the Ministry of Higher Education (2014), the number has grown to include the following:

- 25 government universities,
- 33 private colleges and universities,
- 17 technical colleges, and
- 37 institutes and colleges for health.

Although the financial and funding aspect is globally a crucial challenge in the higher education domain, the Saudi government is generously supporting and spending on the Higher Education system. As an example, whilst the development and growth of education across the country has been limited by various constraints, the Ministry has worked to encourage student enrolment across all economic and social sectors of the population. Article 233 of the Saudi educational policy states that all educational stages are free, students are not made to pay tuition fees for education, and living accommodation for students in the Higher Education sector is also free (Ministry of Education, 1970). Furthermore, the growth of national income has radically influenced Higher Education development: in just five years, the approved appropriation for Higher Education has more than doubled; more specifically, in 2007, the allocated budget was 15 billion riyals (2.4 billion pounds), but this has since increased to 38 billion riyals (6.2

billion pounds) in 2012 (Ministry of Higher Education, 2014). This increased annual appropriation for Higher Education reflects the deep attention in education by the Saudi government, as well as within the overall development process.

In response to such an increase, plans and strategies in Saudi Higher Education have begun to be developed and revised. Shaping the framework for realising and implementing policy goals in Higher Education in Saudi Arabia is the responsibility of the Higher Education National Development Plans (HENDPs). HENDPs identify the existing strengths and weaknesses in the country's Higher Education system for each planned period. Higher Education institutions are guided by HENDPs in an effort to meet the objectives for the whole system. As a consequence of the dynamic social and economic growth experienced over recent decades, a five-year national development plan has been produced and approved by the Saudi Ministry of Higher Education, which widens the future vision to work with the general Saudi national plans. These plans consider political, educational, health, economic and social aspects in dealing with any challenges that may occur in the Higher Education sector regarding national development. The ninth plan (2010–2014) was seen to be ambitious and modern. This plan stressed several important objectives, such as the dramatic development of Higher Education infrastructure to deal with the social and economic demands of Higher Education, and satisfying the demands for qualified professional staff. Maximising the workforce's educational level, and therefore ensuring effectiveness in utilising new technologies, is emphasised in the ninth plan's goals. Moreover, activating the effective use of technologies, raising external and internal efficiency in order to meet the requirements of development, and ensuring coordination and collaboration between domestic and international institutions, as well as the effect of this partnership on the home community, are a number of other considerations made by the plan. Learning environments are expected to use (Ministry of Economy and Planning, 2014). In this

regard, one of the objectives is to provide educators with the necessary training to achieve advanced TEL knowledge and skills as a means of producing professional users for the nation's economic and social prosperity (Al-Madani & Allafaijiy, 2014).

Programmes facilitating international study are a part of the plan to meet Saudi Higher Education's future needs. Thousands of university graduates and high school students are sponsored overseas by the Ministry to continue their studies in a range of subjects to fill Saudi market demands. In 2012, according to the statistical department of the Ministry, the number of Saudi students sponsored to study abroad exceeded 160,000 in more than 45 countries- notably up from 25,000 in 2007. Students are only permitted to study in accredited and reputable universities, as a criterion of sponsorship. Scientific fields, and technology in particular, are encouraged by the Ministry of Higher Education to be studied abroad (Ministry of Higher Education, 2014). Such an initiative reflects the interest of technology adoption and development, and has brought about many advantages for the Saudi Higher Education system, such as the adoption of high-quality systems from developed countries and various solutions centred on solving local issues, including launching specialise technology commissions to direct and monitor needed initiatives in education.

Furthermore, three projects have been established that aim to enhance the development of the Higher Education sector in Saudi Arabia. One of these is the 'Future Plan for Universities Education in Saudi Arabia (AAFAQ)', which was initiated in 2006 and is considered the most important long-term development plan (twenty-five years). The intended purpose of this plan is to cope effectively with any challenges that might arise facing Saudi life. These challenges include the impact of globalisation on education and the need to achieve academic excellence with the huge growth of the population, the needs of the labour market and demands for qualified faculty and graduates. 'Implementing the development of innovation and excellence of academic staff at

universities' is another project concerned with enhancing the development of academic staff. This is a project that seeks to promote the quality of Saudi institutions of Higher Education. The other project is the establishment of the 'National Centre for E-learning and Distance Learning' (NCeL), a centre specialised in e-learning and distance learning. This project specialises in all TEL and online learning (Ministry of Higher Education, 2014). For the purpose of the current study, the relevant issues under these projects, as related to educational technologies and professional development, will be described in detail in the various subsections to follow.

While some of the challenges that are faced seem to be shared by other higher education institutions around the world, other challenges are more specific to the economic and social priorities of individual countries. The challenges facing the Higher Education system in Saudi Arabia, including technology developments, have been addressed by various researchers, as in the works of Fergany (2000) Al-Jarf (2007) and Alamri (2011). Moreover, in the book '*Higher Education in Saudi Arabia: Achievements, Challenges and Opportunities*' by Smith and Abouammoh (2013), three main challenges were identified: the capability to meet the high demand for Higher Education, the capability to meet the needs of the labour market, and the ability to assure more resources. Although there have been development attainments achieved by Saudi Higher Education in several fields, these attainments remain at a low level, measured in line with some developing countries or developed countries that expend on their educational system less so than Saudi Arabia expends on its own. Alamri (2011) made mention to the fact that the goal thus has been to deal with and embrace scientific, genetic engineering and information, and technical technology in various fields. The awareness of such achievements would occur in line with adopting technical and initiatives, applying and absorbing the latest scientific data, and implementing an operative system to transfer.

In responding to increasing demands, the challenge facing the Higher Education system in Saudi Arabia, as in the rest of the Arab world, is the quest to achieve a wide coverage and range, whilst also attempting to raise the quality of education and adjusting to the globalisation age and the massive expansion of knowledge (Fergany, 2000; World Bank, 2000). Saudi Arabia is recognised as having one of the highest growth rates of population. In 1992, statistics reveal that the population was 16 million; however, as mentioned earlier, it reached approximately 30 million in 2014, and is estimated to reach 43 million by 2025 (Ministry of Economy and Planning, 2014). As a result, this dramatic increase of population indicates the need to increase university numbers affected by an increase in the number of students of Higher Education. If the Saudi government does not adopt initiatives to deal with these challenges, and if it does not do so in a suitable manner, it will find itself in an embarrassing position. Consequently, and in an effort to achieve such concerns, the Ministry of Higher Education has established a number of universities, and has made plans for developments. One plan is to increase infrastructure, such as through presenting efficient management systems, building new effective utilities, buying new modern equipment, developing staff levels, improving teaching skills and integrating technology in all Higher Education aspects, for instance (Alamri, 2011; Ministry of Higher Education, 2014).

On the other hand, the nature of teaching in Saudi Higher Education is based on one-way communication or a large group teaching, as used from generation to generation, with a dramatic increase in enrolment. Saudi students are mainly required to memorise information to rote correct answers and also to utilise textbook styles, where strategies of independent problem-solving and group work are rarely employed. Moreover, students' grades, which are more likely based on memorisation, are the value for assessing students for their academic progress than their cognitive development (Allamnakhrah, 2013). Whilst teaching in universities has been criticised due to the curriculum content

and pedagogy that does not fit high standards of teaching (Elyas & Picard, 2010), Alnassar and Dow (2013) claim that Saudi academics continue to follow traditional approaches, such as teacher-centred, and thus do not provide providing critical thinking. Alamri (2016), furthermore, highlights that academics in some scientifically advanced and more specialised programmes, with a small group, have the chance to practise effective strategies in teaching. However, the lack of abilities and skills amongst teaching staff may make effective adoption a difficult task. The author indicated that some overseas experience and newly acquired ideas are applied as non-traditional methods by some enthusiastic academic teaching staff; however, Alnassar and Dow (2013) and Alamri (2016) confirm that such informal individual initiatives are not adequate in transferring rooted teaching methods. In this vein, authors argue that studies investigating the teaching practices of Saudi academic staff are rare, with additional examinations needed to reform the status quo. Therefore, it can be argued that in-depth investigation into how the application of high educational practices can be effectively adapted is viewed a demand for practical educational Saudi outcomes.

From the aforementioned initiatives and plans, utilising evolving technologies in learning environments, and the development of such, can be reflected as a crucial concern in the Higher Education system. The following sections explain the different ways of encouragements that the Saudi Higher Education has dedicated in embracing technologies in teaching and learning environments.

2.4 TEL in the Saudi Higher Education

The Saudi government has recognised the important role of information technologies; as a result, in 2001, it established the commission of Communications and Information Technology with the aim of directing focus to technology use. In 2007, in line with such inspiration in technology and the utilisation of such in education, the National

Communication and Information Technology Plan (NCITP) was founded. The plan's focus on the future development is aimed at deploying Information Communication Technologies in education and in providing support of training and e-learning; this will position Saudi Arabia as equivalent to advanced countries that utilise technology to progress the country's education and economy (NCITP, 2014). In the early stage of TEL implementation, the Ministry of Education was encouraged in 2003 to implement computer studies in the secondary school curriculum. At the start of this implementation, the subject of IT was compulsory, with two classes meeting two hours per week. While the utilisation of computers was the first stage in integrating technology into the educational system in Saudi Arabia, the second stage was characterised by the development of a TEL infrastructure and its application in learning. This was introduced by the educational supervisors in the Ministry of Education. Subsequently, the integration of computer use within the learning and teaching of different subjects in the curriculum was implemented. Moreover, computer laboratories have been established to offer students direct experience with hands-on activities and technological experimentation (Alshmrany & Wilkinson, 2014; Oyaid, 2009).

As TEL is believed to be an efficient way of reaching a large number of students and of providing teaching and learning experiences, the Ministry of Higher Education is directing its efforts to making it effectively available in the Saudi Higher Education system (Oyaid, 2009; Ministry of Higher Education, 2014). With a view to achieving this effective availability, the TEL goals in Higher Education, in association with UNESCO, are framed in line with learning objectives and principles. These include the following: boosting innovation, creativity and practical applications of TEL by capacity-building; encouraging the creation and dissemination of Arab digital content; facilitating the gathering of resources and technical knowledge; and the involvement of the private sector in applying TEL (UNESCO - Arab report, 2009).

When reviewing the plans of Higher Education, a shift in objectives over recent years has been suggested. The seventh plan focused on providing adequate infrastructure and resources, whilst the eighth plan was concerned with the running and provision of quality resources; now, however, the current plan has transferred the interest of Higher Education to the integration of TEL in education and on the use of instructional technologies (Oyaid, 2009). As a result, the plan contained various programmes based on the extensive application of technologies. More educational opportunities were the focus in the Ministry's vision of utilising technologies, specifically e-learning and distance learning courses in innovative learning to deal with the explosion of population. Moreover, in a highly segregated country, as explained earlier, where separation is required between male and female staff and students, a greater load and a considerable strain, amounting to double in terms of available accommodation and resources, has been witnessed. Importantly, however, VLEs and e-learning tools can have great potential in realising more opportunities in education and in accommodating more students of both sexes in a good quality of education (Asiri *et al.*, 2012).

In the ninth plan (2010-2014), the aim was predominantly centred on expanding the capacity of institutions and universities to accommodate the flow of students years after year, activating the effective use of TEL, raising external and internal efficiency in order to meet the requirements of development, and in facilitating coordination and collaboration between domestic and international institutions (Al-Madani & Allafaijiy, 2014). By the end of the announced plan for 2015–2020, the goal has been to achieve various aspects for Higher Education, such as 'updating educational curricula to stimulate research and innovation' and 'enhancing the research role of universities in line with the future needs of the society' (Ministry of Economy and Planning, 2016). All of the above reflect the significant appreciation of technologies by Saudi Higher Education to be a crucial part in achieving the intended success of education for the country.

However, various authors, such as AAFAQ (2014), Al mulhem (2013) and Alebaikan (2010) have made mention to these development plans, providing general explanations of terms but without making reference to their outcomes.

With regards to such TEL objectives, the National Centre of E-learning and Distance Learning (NCeL)'s initiative project was established by Saudi Higher Education in 2006 as a creative move towards the accomplishment of the Saudi mission, notably to lead the necessary innovations and also to prepare and implement technological learning materials. The NCeL's main objectives include the following:

- a) To disseminate quality standards of e-learning and distance learning across universities.
- b) To increase and assist with the service capacity of electronic applications.
- c) To raise technological awareness and develop the e-learning culture vision in academic societies.
- d) To frame quality standards for designing multimedia for educational purposes.
- e) To involve the evaluation of technological projects and programmes.
- f) To promote research and special projects in universities, and accordingly prepare conferences and seminars in the field of educational technologies (NCeL, 2014).

Accordingly, the centre works in cooperation with institutions and universities by providing digital content, training, and consultancy and technical services. The centre has offered several projects under its umbrella in an effort to achieve the aforementioned objectives. One of these projects, JUSUR, is based on LMS functions with some added and modified tools and features to meet the needs of Saudi universities. Students are able to access their courses, assignments and grads through JUSUR, as well as instructors and administrators. MAKNAZ, another project, is a national repository for teaching materials. It was offered to enrich, improve, retrieve, archive, share and reuse the

curricula content of digital courses for all universities. Another service offered by NCeL is the Saudi Digital Library (SDL). SDL promotes education in Saudi Arabia by focusing on digital content and materials. It enables the construction of a knowledge-centred society through the provision of online courses and the requirements for scientific research, and an electronic library seen to offer many works of reference, articles and e-books from well-known international publishers (more than 310,000 across all academic fields) (NCeL, 2014).

The International Conference for Educational Technologies is another significant initiative delivered by NCeL. The conference is held each year in the capital of Saudi Arabia (Riyadh). During this event, many experts, researchers and academics discuss issues that are recognised as having the potential to enhance the field of TEL and e-learning. Moreover, seminars in different areas of TEL are held for Saudi educational staff, from any institution or subject speciality, with the objective to improve their skills and accordingly extend their experience of instructional technologies (NCeL, 2014). As a response to such projects, Saudi higher education institutions and universities have been motivated to establish and develop their own TEL policies, and have founded a deanship for information technology. The majority of Saudi universities are using JUSUR as VLE, whilst some are using other VLEs, such as Blackboard or WebCT, as NCeL has not provided them with the required technical support of using JUSUR (Asiri *et al.*, 2012). Within this strategy, also, a number of TEL equipment, resources, facilities and TEL rooms were distributed by universities on their educational institutions to meet the needs and thus promote the implementation of TEL (CITC, 2014). In 2006, King Abdul-Aziz University was the first Saudi university to activate an e-learning system for distance learning students, as well as for those who attend face-to-face classes. Furthermore, King Fahad University for Petroleum and Minerals (KFUPM) established an e-learning centre with an infrastructure for electronic course design through the Blackboard system, which

assists staff and students. The number of online courses in KFUPM jumped from just 75 in 2001 to 811 in 2011 (Deanship of Academic Development in KFUPM, 2015).

While such efforts have been introduced, as mentioned above, it seems that the extent of technology and the effective application of TEL in the teaching context is in early stages by Saudi lecturers. In her study, Alebaikan (2010) highlighted that a limited use of educational technology services by lecturers in Saudi universities was observed, with TEL tools used in lecturers as supplementary resources. Moreover, 338 lecturers were surveyed across seven Saudi universities, with Colbran and Al-Ghreimil (2013) indicating that email (78%) and LMSs (47%) were more widely used than other TEL tools, such as smartboards, mobile learning, social media and others. In addition, more than 42% of them confirmed that they had not used LMS in their teaching setting, with only 14% having used social networking in an educational context. An indication of the fact that traditional use of TEL can be noted is not really adopted by lecturers and, more surprisingly, more than 70 surveyed instructors reported that they were not aware of the LMS system being adopted in their faculties. Despite Higher Education's efforts in employing the integration of TEL, Alebaikan (2010) and Alamri (2016) nonetheless found that the traditional culture of universities, instructors' beliefs and the pedagogy transition as student-centred were amongst the barriers of such implementation.

Research suggests that, in regards the extent of engagement with new technologies in an educational practice, such as in the case of social media, the level of integration in Saudi institutions is limited and scarce, and ultimately is based on individual endeavours (Alqahtani, 2016). In spite of the country's intensive immersion in social media, the implementation of such tools is at a surface level, with sending updates and announcements to members recognised as the active usage of such applications in Saudi universities (Al-Khalifa & Garcia, 2013). However, AL-Hojailan (2013) claims that there is a key lack of integration in educational purposes, as well as a lack of knowledge in

terms of how these technologies are employed, and a dearth of effective research projects in Saudi Higher Education, examining the potential integration of educational technologies. In addition, in 2008, the CITC report found that 58% of Saudi universities and institutions had not provided appropriate development programmes in TEL for their staff (CITC, 2008), and Almulhem (2013) argues that the majority of Saudi universities focus on the more technical aspects of TEL, without taking into account the pedagogical aspects, in which the reflection of technologies in learning cannot be absorbed.

2.5 Professional Development in Saudi Higher Education

Alongside the increasing tendency of enhancing transformation in Saudi society into societal knowledge and a valuable education system, especially in the last ten years, as explained earlier, Saudi Higher Education has directed various efforts and investments into boosting the level of excellence and into achieving its requirements in its universities and institutions. For instance, in 2006, the project ‘Future Plan for Universities Education in Saudi Arabia’, known as AAFAQ, was offered as a contribution towards developing Saudi Higher Education. AAFAQ is an Arabic term that means *Horizons*. The intended purpose of this plan was to cope effectively with any challenges that might arise facing Saudi life. These challenges include the impact of globalisation on education, and the need to achieve academic excellence with the huge growth of population, the needs of the labour market and demands for qualified faculty and graduates. In order to achieve these objectives, the AAFAQ team put forward active contribution targets for all Higher Education institutions, as AAFAQ’s role is to promote and coordinate research projects within the plan’s scope. These include technical studies, professional sector studies, and specialist studies initiated under the aegis of the AAFAQ project. The specialist studies focus on four areas: faculty (academic staff), students, educational technologies, and information technology systems.

In respect to faculty (academic staff), this project stresses the importance of providing the necessary professional development in the belief that they have a significant impact on constructing a high-quality system of higher education. This staff development should provide the best and latest learning practices, and should equip academics with the necessary professional and technical skills to enable them to make the best use of teaching methods and technological tools. The intended recipients of this training and development should include all levels of academic staff, namely professors, associate and assistant professors, research assistants and instructors, as well as technical staff, and any others who could contribute to students' learning (AAFAQ, 2014).

Moreover, 'implementing the development of innovation and excellence of academic staff at universities' is a project that aims at promoting the quality of Saudi institutions of Higher Education. This project includes a number of training programmes geared towards enhancing academic staff's skills via expert institutions and collaboration between Saudi universities. These programmes comprise various topics relevant to teaching, such as the use of technologies in education, electronic publishing, scientific research skills, effective teaching skills, training, the analysis of statistics, academic leadership skills, and test design and skills evaluation (Ministry of Higher Education, 2014). In addition, the Ministry of Higher Education carries out a competition amongst Saudi universities each year, seeking to identify the best staff development plans. The winning programmes are funded by the Ministry. For example, in 2011, the Ministry of Higher Education granted the winners more than 50 million to complete 439 training courses in Saudi universities. The winning programmes could be implemented and adopted for use in other Saudi universities. The winner was King Fahd University of Petroleum and Minerals (KFUPM) for providing three programmes, namely 'e-Learning Program: Teaching Skills and Education Networking', 'Planning and Management of e-

Learning Programs in Higher Education’ and ‘Training Peer Counsellors’ (Ministry of Education, 2014; Almulhem, 2013).

The deanships for academic development across all Saudi universities are offered to provide different learning and teaching support, as well as opportunities such as training programmes, workshops and conferences in order to enhance the quality of academic staff. These opportunities are provided and decided by each deanship when recognised as suiting its vision and requirements (Almulhem, 2013). Moreover, with such drastic reforms in Saudi Higher Education, the National Commission for Accreditation and Assessment (NCAAA) is adopted with the aim of developing the Higher Education quality. Within eleven standards of NCAAA set for quality, four deal with professional development programmes. Based on these standards, aspects of teaching and learning outcome domains need to be addressed in such developments, which include knowledge, cognitive skills, interpersonal skills and responsibility, communication, Information Technology and numerical skills, and psychomotor skills (Al-Hattami *et al.*, 2013).

While the realisation and generous support by Saudi Higher Education to meet high-quality standards in education through professional developments, there is a dearth of research, to the best of the researcher’s knowledge, specifically in investigating and evaluating development opportunities in consideration to the provision of quality. However, in their study, Al hattami *et al.* (2013) suggest that Saudi lecturers lack sufficient teaching skills, and, after investigation of their needs and competencies, lecturers asked for training programmes that enhance professional abilities in teaching, as they perceived provided programmes as not addressing such demands.

2.6 Middle University (MU)

MU was established in 2004 by merging two regional branches of different universities. Faculty members and staff reached over 4,000, with the number of registered students, both male and female, approaching 50,000. Currently, MU encompasses 38 colleges for both male and female students. The region the university is based covers an area of 7.8 million square meters, and MU is located at the centre of the region. Importantly, the vision of MU is to become within higher education a nationally distinguished organisation and to assist in advancing a knowledge-based society. Moreover, its mission is to provide accredited education in such a way so as to produce competent graduates who meet the needs of the labour market, contributing to the building of a knowledge-based economy, achieving all goals through the use of the most advanced technology and Information Technology and information-processing, by fostering national and international partnerships, and also by boosting university resources. For quality assurance, various accreditations have been awarded or involved for different MU colleges, such as *Accreditation Board for Engineering and Technology (ABET)* for Engineering College, The Council on Occupational Education (COE) for Community college, and university undergoing to be accredited by National Commission for Academic Accreditation and Assessment (NCAAA).

As the context of this study focuses on the College of Education in MU, some TEL initiatives and lecturers' developments will be highlighted. Across fourteen deanships in MU, e-learning and distance learning Deanship and Academic Development Deanship are founded under MU administrations to promote strategies and achieve its goals. In 2013, e-learning and distance learning Deanship was published in an effort to improve the culture of educational technologies by adopting and distributing modern educational TEL resources and to develop an integrated learning environment through the design of digital content. The devoted mission is focused on promoting academics' capabilities by

deploying the latest technologies. Several electronic services are offered, including a blackboard learning management system, reporter-mail and academic system. The deanship encourages MU lecturers to deal with and use these e-services with their students and also to help them in designing and developing course content. In addition, e-learning and the Distance Education Deanship provides video clips for academics, explaining how the blackboard features can be utilised in the learning and teaching setting, as well as offering guidance in regards other TEL applications provided to them. Academic Development Deanship, furthermore, is responsible for providing professional development opportunities for academic members in MU by enhancing their research and teaching domains, and also by facilitating high-development techniques and experts to take advantage of all high standards of educational practices and settle them for MU objectives. At the beginning of each semester, the deanship distributes various training programmes that hold throughout the course of the term, as well as a large number of online opportunities in different fields and skills for academics, which are made available on the MU website. The deanship endeavours to prepare lecturers to use TEL in their teaching practices by offering various learning and teaching skills, such as course design, the use of computers and the internet in university-teaching, and skills in the use of interactive teaching aids. However, the realisation of academics' engagement and the evaluation of their professional developments offered in MU were recognised as absent in university reports or studies.

Moreover, the provision of such TEL opportunities, the encouragement for participation and usage, and the distribution of available courses are wide-ranging tasks for these deanships, in addition to responding to MU policies that do not require lecturers to participate and use such efforts and tools. Accordingly, this stimulates and reflects the importance linked to this topic and what should be recruited for successful TEL CPD opportunities in the future; this leads to the successful integration of TEL.

2.7 Summary

Saudi Arabia is focusing on the development and improvement of various vital fields, in line with the rapid growth in different domains in the country and the world. The education sector in general is the most prominent of these sectors, and has therefore become a priority in the development plans in Saudi Arabia. Accordingly, major spending has been allocated by the government for this sector in an effort to improve outcomes.

Technological and Scientific developments have encouraged Saudi Higher Education to invest in and deploy technological resources and infrastructure to accomplish a higher quality of educational standards and experience professional growth. Saudi Arabia has opened the way for universities to work to meet the huge demand for higher education. In responding to Saudi's Higher Education plans and investments, universities have begun their educational technology and professional development expansion with the aim of meeting growing learning demands and spreading the culture of technological developments.

However, while Saudi universities have come to experience radical changes and development regarding the securing of technological capacity, and resources and supporting facilities for their members, the effective integration of TEL in educational practices are not as easily adopted as reflected in the teaching practices. Therefore, sufficient CPD can be seen as the mechanism for altering traditional practices to an educational environment, and enhance and support innovation. If there is a delay in nurturing effective TEL professional development, TEL plans and the application of university programmes cannot occur. Despite the clarity of goals and the presence of large TEL and professional development bodies, a number of challenges remain. Identifying factors that can hinder access to the desired level of quality can be seen as a functional process. TEL CPD would be an important aspect of achieving such quality in

Saudi Higher Education to promote lectures' professionalism. Thus, this implies the need to examine a range of factors that can impact the current provision for effective TEL professional programmes in the future.

Chapter Three

Theoretical Framework for the Research

3.1 Introduction

This chapter presents a review of the theories and the model that are relevant to the objectives of this research study to provide a full understanding of the theoretical context that underpins it. It is divided into three parts: the first part discusses the theories of adult learning to better understand the basis for constructing an effective adult learning environment; the second part describes constructivist theory as it relates to the assessment of technology learning and development; and the third section explores the Technological Pedagogical Content Knowledge (TPACK) model and the interaction between its three components. These principles provide a theoretical basis for the provision of adult learning experiences, professional development and improvement in the integration of technology at all levels of adult learning (Jamani & Figg, 2015; Shaikh & Khoja, 2012; Whipp *et al.*, 2006).

3.2 Adult Learning

Adult learning was first discussed in theoretical terms in the 1830s by Alexander Kapp, a German educator who coined the term, andragogy. Malcolm Knowles popularised the term and further developed a theory of adult learning (as cited in Merriam & Caffarella, 2007). According to Knowles, andragogy is the art and science of supporting adult learners in their learning, and it is founded on specific critical assumptions about the differences between children and adults as learners (Knowles, 1984; Merriam & Caffarella, 2007). Over the past 30 years, Knowles has conducted an intensive study of andragogy, which he refers to as a system of concepts that are associated with teaching adults.

The Theory of Adult Learning rests on a set of specific tenets regarding how adult learners approach the task of learning (Knowles *et al.*, 2015). These include:

- The learners' self-concept: as mature learners, adults will move from a dependent state to one where they can be more self-directed, and they will need to become aware of this process in order to take conscious control of it;
- The learners' experience: because adult learners have accumulated a set of life experiences that increase the learning resources available to them, active learning experiences are the most effective learning methods;
- Readiness to learn: mature learners are more aware of social roles and the need to increase their education, and this gives rise to their readiness to learn. Adult learners tend to be more interested in pursuing subjects that have immediate relevance to their personal lives or careers;
- Orientation towards learning: a problem-centred approach rather than a subject-centred approach is an essential feature of adult learning. In adults, the predisposition towards problem-solving in real-life learning situations changes their outlook from the ability to apply knowledge at a later date to a more immediate performance-centred assessment of whether the knowledge is useful to them;
- Motivation to learn; adult learners are internally motivated rather than externally motivated.

Moreover, Knowles *et al.* (2015) offered several guidelines or principles on how to approach the teaching of adult learners who are self-directed and independent. These principles include providing a comfortable and safe learning environment in which adults learners can express themselves freely, and ensuring that the planning of content, curriculum and methods is based on the learners' involvement. Other important principles include establishing opportunities for learners to identify their own needs,

enabling adults to formulate their own learning objectives, supporting learners in identifying strategies and approaches for utilising the resources available to them to accomplish their objectives, encouraging them to achieve their planned outcomes and involving adults in the evaluation of their own learning to allow them to develop critical thinking skills. In the hands of dedicated and skilled facilitators, these principles can have a positive impact on adult learners (Hernandez *et al.*, 2009).

Although Wheeler (2011) has argued that these principles are not just for adults because learners of all ages, including children, would engage in these processes. However, Alkalai (2004) found that, in digital training, adults demonstrate a higher degree of cognitive skills and information acquisition than younger people, which affect the development of the required tasks in this context. In spite of the apparent lack of consensus in the literature between adults and children learning approaches, it highlights the importance of taking into account participants' profile when planning the provision of these courses. For the focus of current study, application and incorporation of adult learning principles for lecturers can enable understanding of effective TEL CPD opportunities, which, in turn, facilitate lecturers' TEL progress.

Adult learners have many responsibilities, and they are engaged in many activities so their learning must be balanced. In general, they understand that they must take responsibility for creating their own learning pathway. Therefore, it is important to ensure that their voices are heard within the learning environment, and to challenge the policy, structures and practices within institutions in order to support the specific learning experience of mature learners (Merrill, 2004). Furthermore, McQuiggan (2007) stressed the significance of the field of adult learning theory within a faculty member's development, and the application of its functional principles, practices, experience, implementation and strategies to TEL professional development activities. The basis of adult learning should build on a faculty member's past experiences, and it should use

these as a guideline for designing professional development activities. McQuiggan (2007) also emphasised that each stage of designing a TEL professional development programme should ensure that the principles of adult learning and the learning objectives and corresponding activities are compatible.

Theories and principles of adult learning can be applied when developing and implementing TEL CPD programmes in order to create the most encouraging atmosphere for learning. Moreover, these principles could minimise the gap between theory and practice regarding TEL professional development and its influence on application in the classroom. In doing so, it could produce lecturers that are able to draw on their own experience of learning to create more supportive learning environments and experiences for students. Thus, adult learning is a central element of lecturers' TEL CPD because it promotes their role in using their own learning as a guide.

This theory is specifically applicable to TEL CPD because one of its key features emphasises that lecturers must take responsibility for their own learning, including decisions of when, what and how to learn, and what is most relevant to their needs and teaching experience. More specifically, lecturers would know how to participate in TEL professional development and be motivated to do so; they would also know how their participation would be beneficial. Therefore, the current study uses the theory of adult learning to identify questions regarding lecturers' abilities to learn and benefit from TEL CPD opportunities.

3.3 Constructivism Theory

Constructivism is another theory that assesses the process of adult learning through the lens of TEL CPD opportunities. The concept of constructivism theory emerged from work done by Bruner (1966), Piaget (1973) and Vygotsky (1978). The idea that learning is something that is generated by the learner, and which does not exist in a material

sense, is central to this theory. Constructivism is defined as the active process of learning, which is based on a person's prior experiences, in order to construct new knowledge (Bruner, 1966; Piaget, 1973; Vygotsky, 1978). Constructivism can be cognitive (Bruner, 1966) or social (Vygotsky, 1978), and the core of this model is that interaction with the surrounding environment has an impact on the cognitive growth of learners in a way that can assist them in adapting their behaviour. In this regard, Groves (2008) indicated that adult learning theory and constructivism theory intersect; rather than being passive learners, adult learners are involved in a dynamic process in which knowledge is not a product to be transmitted, but is based on a contextualised learning environment that can be adopted and altered.

Constructivism is concerned with the nature of knowledge that is attained through the interactions between the learners' existing and previously-acquired knowledge, ideas and beliefs, as well as the activities and events they have experienced, rather than being attained through repetition and imitation. Reagan (2005) asserted that, in this manner, knowledge construction occurs in a cultural context formed by economic and social class, geographical location, religion, language and ethnicity. Within a constructivist approach, learners are not passive; instead, they are respected as whole human beings and not solely as learners (Kroll & LaBosky, 1996; Richardson, 1997). Constructivist theory offers learners a highly customisable framework with which to understand their environment and experiences, which are seen as forming part of an on-going construction of the participant's mental processes (Gupta, 2006). However, more inconsistent learning experiences may be more challenging to integrate, since they require time for a learner to cope with confusion and to understand that learning can be satisfactory and make sense (Perkins, 1991; Rovai, 2004).

Individual Constructivism

Individual or cognitive constructivism is concerned with inner psychology; constructivists are interested in an individual's concept, identity, beliefs and knowledge. Piaget (1973), who is a key theorist in individual constructivism, stated that information is constructed in a learners' mind, and that learners rearranges their cognitive structures and experiences. Piaget (1973) identified two primary intellectual activities as forming part of the learning process: assimilation and accommodation. Assimilation refers to new information that is fitted into what is already known, that is, an 'existing mental structure'. Accommodation refers to the modification of pre-existing concepts in response to a new piece of knowledge or new experience. Piaget also described the concept of 'cognitive equilibrium', meaning a set of intellectual symbols or schema that describe known entities or experiences in the physical world; this includes actions and experiences related to a concept, as well as verbal knowledge (Piaget, 1973; Kalpana, 2014).

Reagan (2005) confirmed that, based on individual constructivism, cultural variation among learners is to be expected. Therefore, how a learner constructs knowledge as knowledge is meaningful in the context of a learner's life. Contextual constructivism suggests the investigation of learners' views within the context of culture that demonstrate the meaning of those views. Thus, it can be argued that individual constructivism plays a vital role for TEL CPD providers in Saudi Arabia in order to understand the central, culturally-based perceptions about learning TEL that lecturers bring to their professional development, and how these perceptions are promoted by the lecturers' cultures. In this way, TEL CPD is effective to the extent that TEL and CPD can find a place in the cognitive and socio-cultural context of lecturers.

Social Constructivism

The theory of social constructivism is described in Vygotsky's (1978) work as knowledge that is mutually constructed and built through social interaction. In social constructivism, learners gain the opportunity to share their visions and experiences by interacting with others in a way that generates a shared meaning and understanding of a concept. Learners are significantly affected by their surrounding environment, including society, friends, teachers and peers. According to Vygotsky's (1978) model, content is influenced by culture, including the beliefs that are essential to that culture, and also by the skills considered important in that culture, such as technology skills, the capacity for collaboration and communicative capabilities (Kalpana, 2014). Vygotsky (1978) also postulated that the social and cultural framework in which learning takes place is interwoven with an individual's conceptual development. He claimed that a learner begins by doing something within a social interaction (inter-mental); the action becomes become part of a learner's own personal experience only after it has been internalised (intra-mental) (Can, 2009).

Over the past several decades, the social constructivism approach has become a popular theoretical framework for TEL (Can, 2009; Kalpana, 2014). More diverse forms of collaboration and interactions between learner groups are believed to enhance deeper learning and development. From this approach, purposeful collaboration between learners, increased opportunities for reflection and the application of tasks are fundamental to any educational experience (Swan, 2005). With respect to TEL and CPD, and by adopting the social constructivist approach, adult learners use their previous learning experience to actively participate and collaborate with others regarding technology; in this way, meaningful learning can occur (Kalpana, 2014).

Constructivist theory forms an important part of the framework of the present research study because it offers a method for reflecting on the learning that lecturers have

experienced through TEL CPD activities, and for assessing possible additional requirements in the future (Boud *et al.*, 2013). In the present study, reflection is perceived as mediating a learning process. As such, it requires lecturers to make assessments about what has occurred and why it has occurred, and what has been accomplished in order to further progress. Boud *et al.* (2013) argued that the importance of reflective activity is to recognise what types of learning environments address the participants' needs and to identify the crucial factors that should be considered when creating development practices by drawing on the participants' experience based on their future learning opportunities as provided by the courses they are taking and their prior experience. Using guidelines drawn from constructivist principles, research questions can be framed that address the effectiveness of TEL CPD for lecturers.

3.4 TPACK Model

In addition to exploring the influence that learning theories have on TEL CPD experiences, it is also worth considering the technology-related approach of learning to evaluate TEL CPD interventions. The TPACK model aims to define the knowledge necessary to integrate educational technologies into the process of teaching and learning (Mishra & Koehler, 2006). This model is built on Shulman's (1986) work on new systems of thinking regarding essential knowledge for teachers. Shulman (1986) noted that these two factors are presented to teachers as separate entities; however, this simplistic approach fails to recognise possibilities for more integrated and resourceful teaching. Pedagogical Content Knowledge (PCK) is a new way of thinking that addresses the consolidation of pedagogical knowledge with content knowledge.

Mishra and Koehler (2006) presented and developed a framework that uses the principles of Shulman's (1986) work and focuses on technological pedagogical content knowledge (TPACK). Their TPACK framework 'attempts to capture some of the essential qualities

of teacher knowledge required for technology integration in teaching, while addressing the complex, multifaceted, and situated nature of this knowledge' (Mishra & Koehler, 2006, p. 1019). Within the TPACK framework, a primary consideration is the interaction between three main components of a lecturer's knowledge: technology, content and pedagogy. Thus, the interactions among these three important bodies of knowledge provide a method for planning for the implementation of essential technologies that are important to learning delivery and acquisition.

Mishra and Koehler (2006) showed that, in TPACK, integration arises from the interplay between content, pedagogy and technological knowledge. An understanding of these ideas through the TPACK framework enhances the understanding of the separate components of this concept, and allows for richer teaching methods using new forms of technology. To be effective, these methods should include an understanding of how to model abstract ideas using technology, along with teaching models that involve novel ways of presenting content with technology. Educators should also be aware of the type of ideas that students are more likely or less likely to grasp immediately, and how the use of technology can facilitate some of their understanding. It is also important for teachers to know the extent of the learners' previous knowledge and the most appropriate ways to use technology to extend, deepen and develop both that knowledge and the students' systems of thought (Koehler & Mishra, 2009) .

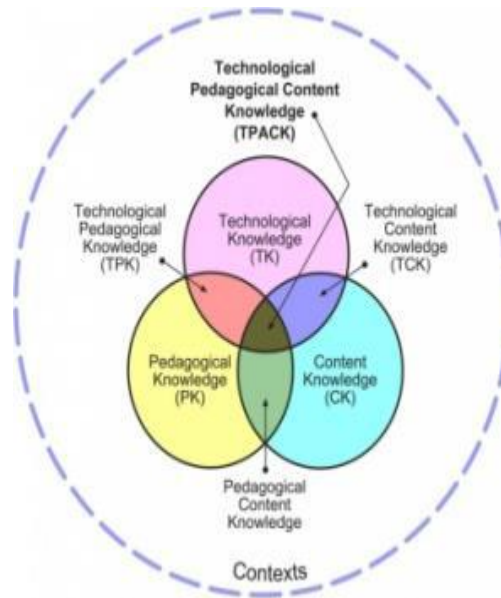


Figure 3.1: Technological Pedagogical Content Knowledge (TPACK) Model.

Source: <http://tpack.org/>

Koehler and Mishra (2009) also demonstrated how a high level of technological understanding can improve the lecturers' selection of suitable teaching modalities when their understanding is combined with a similar understanding of content and pedagogy. Through the use of the TPACK framework, technological knowledge can be integrated without neglecting the other two aspects of knowledge, and each teaching session can be customised to suit the lecturer's requirements. Thus, the three separate areas of knowledge are emphasised, and so is an understanding of how they can be combined to produce new learning experiences.

Mishra and Koehler (2006) stated that TPACK constitutes an effective and adaptable model that can provide a relatively profound understanding of learning within a professional technological environment. Banister and Reinhart (2011) found that the TPACK model facilitates the integration of technology into education and improves learning outcomes.

Although TPACK shows the dynamic interplay of various knowledge domains needed in specific contexts, it has been criticised, and further improvements have been suggested. For instance, Angeli and Valanides (2009) claimed that it is unclear as to how TPACK deals with separate growth for each of its domains or how to use it as a distinct form of knowledge. Their concern, in accordance with Graham (2011), is that the implementation of what is claimed to be a theoretically imprecise framework could result in misinterpretation regarding the adoption of educational technologies. Angeli and Valanides (2009) suggested referring to technology as a ‘cognitive partner’ and more closely considering the knowledge and experience of teachers before improving their TPACK. Olsen (2012) also criticised TPACK by assuming that separating pedagogical knowledge from technological pedagogical knowledge is not needed or helpful; rather, it makes it more confusing and contrived. Olsen (2012) asserted that such a division adds nothing to the debate; for example, knowing pedagogical knowledge and strategies allows teachers to teach well, regardless of whether they use traditional or technology-based methods.

However, and for the purpose of the present study, the TPACK model paradigm can be seen as a leading construct for understanding TEL CPD programmes that provides knowledge about technology, content and pedagogy, and their interrelationships, which impacts the efficient adoption of TEL in a teaching and learning environment. This understanding is crucial because it could reflect the way in which lecturers develop their technology skills. Thus, the essential aim of CPD intervention is to provide lecturers with the necessary information to apply TEL effectively in their teaching. The TPACK model identifies the areas of knowledge that lecturers need so they can implement technologies successfully within the teaching and learning process. The TPACK model is one of the underpinning theoretical elements in the present study, which aims to investigate lecturers’ perceptions of their operational knowledge through the lens of TPACK and of

possible changes suggested by their TEL CPD experiences.

3.5 Summary

This chapter highlighted the interactions between lecturers' TEL professional development and the theories and the model related to this study. It discussed the main assumptions for the approaches that are used and their impact when TEL CPD opportunities are provided in a learning context. The concepts and explanations of adult learning and constructivism theories and the TPACK model reflect that, for lecturers, the technology development process relies on a variety of different, combined variables that affect the successful provision of TEL CPD activities, and then the effective integration of TEL in learning and teaching contexts. Implicit in this is the view that the development of lecturers' technology knowledge and skills cannot be seen as a separate aspect of their life situation or an area that can be investigated in isolation because many complex interactions take place in learning and teaching environments that must be understood, such as culture and the social setting.

In conclusion, this chapter noted that these three main approaches, adult learning, constructivism and TPACK, and the various concepts related to them, provide useful insights into the theoretical framework used in the current study in order to formulate and frame the research to achieve its objectives. Taken together, these models provide a way of thinking about technology learning that allows for the identification of new topics within TEL professional development research, and it has the potential to provide new insights into how the TEL process can be both understood and improved within learning environments.

Chapter Four

Literature Review

4.1 Introduction

This chapter reviews the key concepts and factors related to this work, focusing on the relationship between CPD and TEL, and the role of CPD in the integration of TEL in teaching and learning practices. The considered parameters in the literature review search were based on the provision of a theoretical background for the topic. More specifically, the scope of the topic was considered against the specific research objectives and the intended audience; the data sources were selected from the international context of research in higher education but within a more recent time period regarding the technology focus and relevant disciplines of education. Research from a wider educational context was also selected to clarify key points regarding CPD provision and research.

First, the term ‘Continuing Professional Development’ (CPD) is defined, after which the rationale for the professional development, models and evaluation of CPD are discussed. The meaning of ‘Technology-Enhanced Learning’ (TEL), in the context of this particular research, is also given. The chapter then elaborates on the key elements recognised as having emerged from the literature on TEL CPD programmes in different contexts for the purpose of discussing the need to foster the successful use of TEL in teaching. Finally, the review identifies key characteristics of effective TEL-based CPD.

4.2 The Concept of CPD

CPD has recently received much research interest across various disciplines, with a body of work increasingly focusing on the different aspects of professional development in relation to teaching, in which a phrase is commonly used to reference continuing

education that is constructed and based on pre-service or the initial training of professionals (Kennedy, 2005; Avalos, 2011). However, with scholars showing variation in terms of focal issues concerning the role of CPD, no consensus has been achieved with regards the definition of CPD, and, within the field of education, there are a number of different CPD definitions that have been posed across the years. As such, the term CPD in higher education is surrounded by definitional differences owing to the acknowledgement that a series of influences affects this terminology, such as delivery method, individual and government agenda, and educational reforms, all of which underpin development models. Moreover, some higher education institutions are well-established providers of CPD opportunities for other professionals (Clegg, 2003). Accordingly, CPD, amongst academic staff, is seen as a product (an outcome) rather than a process (Roscoe, 2002). The meaning of the term ‘professional’ has also caused difficulty, with Alexandrou *et al.* (2005) arguing that the meaning of the term ‘profession’ is difficult to be found as the features of this word are diverse amongst scholars.

However, in the literature for learning and teaching purpose, Guskey (2000) defines CPD as comprising “...those processes and activities designed to enhance the professional knowledge, skills and attitudes of educators, so that they might, in turn, improve the learning of students” (p. 20). Monroe (2008) similarly viewed CPD and defines it in the context of higher education as “any activities designed to improve the faculty member’s ability to teach and/or facilitate the teaching and learning process” (p. 22). From these definitions, CPD is recognised as an on-going, intended and systematic process of activities that are aimed at positive change and improvement; however, such definitions could be argued to limit all the objectives of CPD. A definition by The Higher Education Academy (HEA) (2005), for example, refers to a broad approach to be taken in which CPD may follow both formal and informal pathways, including learning platforms, such

as professional training (workshops, short courses), professional support (mentoring) and professional education (long courses), through which lecturers can critically acquire and develop knowledge, skills and practices for individuals, groups and organisations. HEA (2005, p. 1) states that:

Continuing professional development is defined as any process or activity, planned or otherwise, that contributes to an increase in or the maintenance of knowledge, skills and personal qualities related to learning and teaching and broader academic practice. This includes appropriate research and scholarly activity and the leadership, management and administration of academic provision and support.

Although formulating a clear-cut definition of CPD is difficult, an appropriate interpretation can be deduced on the basis of the diverse descriptions put forward in the literature. As a result, in the context of this study, CPD will be used to describe the development of a lecturer's knowledge, skills and working practices, which, in turn, can lead to positive change in their professional behaviour and thinking. This is seen to be a continuing process for this development, which helps lecturers to acquire new knowledge and skills through formal and informal activities and experiences, and to reflect on their practices. Thus, CPD is viewed as a comprehensive context of lecturer growth within the institutional development in accordance with on-going opportunities and processes to impact students' learning.

In different contexts, however, ambiguity can arise from various terminologies that are used to describe CPD interchangeably. Examples include 'professional development', 'staff development', 'life-long learning', 'educational development' and 'in-service training' (INSET). Dean (1991) argues that these terms are used interchangeably for the development of both individuals and institutional process; however, some scholars, such as Craft (2002), and Chan and Lee (2009), assert the differences between such concepts,

specifically between ‘CPD’ and ‘INSET’. Boyd (2005), for example, claims that the term INSET, which is widely used in the United Kingdom, has been recognised for more than a century, is merely an initial step of professional development. In other words, these terms (INSET and professional development) share common principles (e.g., life-long learning), although INSET espouses a narrow definition, especially in regards individual development in that it serves more formal institutional improvements (Craft, 2002), whereas CPD encompasses all types of formal and informal learning that allows for professional growth in a balance between national needs, schools and individual group, and enhances a commitment to personal and professional development (Bubb & Earley, 2007). It can therefore be argued that CPD involves both organisational and personal activities, thereby endowing the term with a holistic vision of development, with INSET seen as a source of CPD. Furthermore, the differences between CPD and INSET have been discussed by Chan and Lee (2009). The dissimilarities in nature, modes and aims between the two terms are summarised in Table 4.1. Nevertheless, previous research in the educational field provides sufficient descriptions of the characteristics encompassed within the realm of CPD.

Table 4.1: Summary of differences between CPD and INSET (adapted from chan & lee, 2009)

	CPD	INSET
Aim	<ul style="list-style-type: none"> - Encompasses more components (formal-informal activities) than does INSET. - Extended concept to contain individual and institutional development, wide, flexible. 	<ul style="list-style-type: none"> - Usually synonymous with ‘training’. - Narrow concept. - Job-related and systematic.

Mode	<ul style="list-style-type: none"> - Systematic or non-systematic activities that enhance personal professional development. - Any activities involving place during a career life that can promote job efficiency. - Any development activities that can directly or indirectly improve the effectiveness of teaching. 	<ul style="list-style-type: none"> - A well-planned mode of adaptation and a systematic learning environment that tackles specific job requirements.
Purposes	<ul style="list-style-type: none"> - To improve the knowledge and skills to accomplish responsibilities in an ever-changing environment. - To promote the efficiency and effectiveness of teaching. - To enable individuals to attain the problem-solving and innovative skills necessary to addressing new skills as they arise. 	<ul style="list-style-type: none"> - To develop professional knowledge, skills and attitudes. - To improve the performance of teaching staff.

As can be seen in Table 4.1, the relationship between CPD and INSET is clear, with CPD recognised as a wider avenue in which INSET is considered to be a part, although CPD cannot be seen merely as INSET. In other words, INSET is one example of what is involved in CPD programmes, which contain a range of features and go beyond INSET limitations to job-related development.

4.3 The Importance of CPD

Universities and educational institutions in the 21st Century are experiencing new challenges as the impact of internationality and external surrounding demands affect the role of higher education. In line with this complex demand, higher education institutions feel the pressure in balancing and solving their several duties with regards to teaching, service and research (Sorcinelli *et al.*, 2006). Thus, education should be continually updated and should be able to respond to developmental change in societies worldwide because its primary purpose is to prepare learners for life (Fullan, 2016). Although pre-service training is essential and ought to be provided, the dramatic growth and changes in society have dominated ongoing efforts to implement further development opportunities for lecturers so as to maintain the provision of educational values for students.

Radical changes in the nature of knowledge-building and the remarkable ease with which such knowledge is now accessible can rapidly render information out-of-date. Recognising such current cognitive revolution and its impacts on the creation of new means and styles in learning, and how it leads to improvements to professional development programmes, should therefore be more strongly emphasised compared with how these initiatives were treated a few decades ago (Ming *et al.*, 2010). In such improvements, CPD offers various benefits to lecturers, including in terms of updating them in new materials, knowledge, procedures and technology, and preparing them for new roles that are being demanded in their job. Researchers, such as Bennett *et al.* (2010) and Butcher and Stoncel (2012), have shown evidence that CPD programmes are crucial to the development of lecturers in higher education to cope effectively with such constant growth and changes.

In his discussion of a CPD programme implemented in the United Kingdom for educational reform, King (2004) highlighted the essentiality of such endeavours in elevating the quality of the skills of higher education professionals. He continues that,

without such programmes, realisation of the importance of sharpening professional abilities and skills development cannot be achieved. In addition, when striving to explore such importance, Lessing and Witt (2007) assert that CPD is advantageous in terms of personal and skills development, the provision of information and the enhancement of teaching confidence and teaching habits. Consequently, the provision of effective CPD allows practitioners to discover new ideas of teaching as a profession through guidance, coaching and assistance.

Another purpose of CPD extends to facilitating successful learner achievement. Alexandrou *et al.* (2005) underscore the fact that educators who participate in high-quality professional development programmes positively influence students in their efforts to become successful learners and future practitioners as a result of improving, sharing and understanding educational practice for learners' development. Furthermore, Craft (2002) and Guskey (2000) identify that, in line with the different objectives of CPD, the ultimate primary goal is to expand the outcomes of learners. However, this could be the definitive destination, with lecturers' effective development the cornerstone in this process to play a more significant role as in any educational success and reform. Moreover, without their constant involvement and contribution, intended goals in educational developments cannot be achieved (Roscoe, 2002; Marshall, 2009). In order to achieve such effective outcomes in education, therefore, CPD should effectively address all strategies and means that comprise teaching as they promote the essential goal of academic success.

Demands to review existing professional development courses have been raised owing to the fact that such initiatives are essential measures for enabling academics to adapt to changes in the educational system (Butcher & Stoncel, 2012). In Scotland (SEED, 2001), for instance, many modifications to the contents and skills in professional development programmes have been implemented as a consequence of the rapid and radical alterations

in many subjects; changes in teaching methods and curriculum design, technological development, especially TEL, and continually evolving organisational roles. Such occurrences point to the need for a frequent reassessment and updating of teachers' knowledge and competence (SEED, 2001). Thus, constant evaluation is needed, particularly for innovative technologies that have influenced educational systems.

Just as the need for CPD has increased in general, CPD in the TEL sector is no different, and is recognised as an essential factor to support educational growth (Kirkwood & Price, 2011; Littlejohn, 2002) with modern technologies that institutions are experiencing, such as through wikis and online discussion forums that are present in today's learning environment (Morris, 2010), which encourage educational stakeholders to integrate innovations into pedagogical practice. The continual progress in the technology industry makes complex changes to traditional ways of teaching, and correspondingly requires on-going development for lecturers. Similar to other studies that have the value of integrating TEL into education and CPD to promote both teaching and student learning, Ming *et al.* (2010) advocate the significance of such means and development programmes in education. The authors also revealed that one of the obstacles to integration is educators' reluctance, which stems from their deficiency in TEL skills and application. This reluctance is also underpinned by preconceived beliefs relating to the teaching and learning of TEL tools. However, authors have highlighted that practitioners who attend CPD in TEL are motivated to establish a thorough understanding of TEL and use related tools in their teaching. Therefore, unless TEL CPD opportunities for lecturers are provided, this reluctance cannot be minimised and the successful practice of educational technologies in teaching and learning cannot be integrated.

Furthermore, the integration of TEL into professional development programmes is viewed as an effective pathway through which educators can successfully apply TEL in

pedagogy and the curriculum. The importance of CPD for the successful uptake and implementation of TEL is strongly acknowledged in the literature (for example: Galanouli *et al.*, 2004; Daly *et al.*, 2009; Hramiak & Boulton, 2013), as they found that CPD is an important key in influencing how effectively technologies are embraced in the learning settings, with CPD strongly demanded to cope with changes in curriculum to enhance lecturers' expertise and skills to deliver such new curriculum demands. Moreover, Rienties and Townsend (2011) have declared that both technical knowledge and the ability to integrate TEL within the curriculum are important in terms of dealing sufficiently with new demands in teaching practices. This ability is particularly encouraged by the fact that CPD programmes endow participants with technical competence. However, emphasis is placed on the view that these successful achievements are based on well-planned and provided TEL CPD features, such as suitable design and delivery; otherwise, such developmental initiatives risk failure (Hsu, 2010).

In the context of Saudi Arabia, the majority of lecturers begin their job without intensive pedagogical preparation for practice, and often, as a result, perceive the need of effective teaching strategies to be activated. Whilst they may be considered knowledgeable in their discipline and also have the ability to conduct research, they mostly need developments in essential skills to successfully communicate their knowledge to learners, as they frequently tend to use the way in which they have been taught (Qureshi, 2006). Accordingly, the development in Saudi education and specifically in universities is needed in various ways, including the content update of curricula and the integration of technology in teaching and learning. Improving academic members quality in all areas, such as teaching skills and discipline knowledge is a significant element in emphasising the quality of Higher Education in Saudi Arabia (Al-Ghamdi & Tight, 2013). Ongoing professional development, to embrace such demands, is viewed as a vital step for

organisational and professional development to achieve meaningful reforms for the quality of education.

In this era of advanced technology and globalisation, and with an increasing emphasis on the need for TEL integration in learning environments, technologies in Saudi Higher Education institutions are under pressure to introduce and implement the use of support learning modes. Alhamid *et al.* (2007) argue that technological developments drive the need for different educational skills and methods, a situation that will, in turn, exert pressure on CPD providers and stakeholders to provide and prepare lecturers with programmes that are designed to enable excellent performance in dynamic educational environments. The authors added that international reports discuss Saudi educators' failure to satisfy new teaching requirements. As a solution to this problem, Alhamid *et al.* (2007) recommended that the financial and educational conditions of lecturers be enriched by involving them in effective CPD opportunities that are intended to promote the understanding and appreciation relating to the purposes of modern education.

Furthermore, the central role of higher education is now the development of scientific and technological bases in the promotion of cultural and intellectual activity, and the provision of quality in all areas of economic activity and social, cultural and political areas; this is a continuing and growing challenge (Ministry of Economy & Planning, 2014). Therefore, CPD opportunities in Saudi can influence achievements and can effectively raise educational quality (Al-Asmar, 2009; Ageel & Woollard, 2012), and should be seen as the vehicle for enhancing lecturers' knowledge, performance and skills, with valuable innovations and contributions to be implemented in their practice. Alnassar and Dow (2013) state, however, that the selection of staff for such initiatives and centres that are able to provide CPD activities are critical to Saudi Higher Education; they should be highly knowledgeable in the latest educational developments and their successful features around the world, and know how to effectively help academic staff to embrace

these developments; should this not be the case, the impact would be limited. Effective CPD in TEL would build an understanding of new learning and teaching within modern technologies that support high-quality educational outcomes.

The call to implement TEL CPD in the educational field is driven by the following requirements:

- The roles of lecturers in the age of technology have changed and become more varied. For instance, the design and delivery of curriculum-based technology require a range of innovative functions and new learning strategies.
- The professional excellence (knowledge, skills and beliefs) expected to be held by lecturers has increased.
- The need to adapt to rapid changes in the educational system, which has been designed to facilitate student achievement, has become a critical issue in pedagogy. For instance, educators are now required to be adept in the use of the internet, computers and other technologies.

4.4 CPD Models

There are different proposed frameworks and models of CPD offered in the literature that serve different underpinning theories in response to understanding lecturers' development and learning. The concern of such models can be distinguished regarding various interests, such as the needs of learners and provided autonomy, as well as providers and policy makers of CPD. Therefore, any examination of CPD models and programmes requires consideration and the need to take into account the various complex issues influencing CPD (Kennedy, 2005).

Bell and Gilbert (1996) assume that the composing of personal, social and occupational aspects that are inter-related is a vital aspect of teachers' professional learning. They stress that the personal side is a key component within professional learning for change,

and the ability of participants to change is affected by beliefs, attitudes and values. Therefore, personal development can be enhanced or inhibited by several factors. Prior experiences of professional opportunities, and the determination and engagement in professional opportunities, are recognised as significant in this aspect.

Regarding the social aspect, a problematic issue is viewed in terms of the isolation of participants' learning. Communities of practice and collaboration with others are well-attested ways of helping participants to enhance their learning of new strategies and techniques. Working in a community of practice supports shared beliefs, meaning the reconstruction of personal and professional identities can be promoted. Socially mediated learning can be facilitated in interacting with perceived knowledgeable people, such as more experienced peers or facilitators. The occupational development aspect of teacher learning emphasises the importance of strong interaction between theory and practice. Vital to such process gives an acceptance of theory, which ensures the theory is constructed on empirical evidence into application. A rich environment in school and classroom provides for them to act on new emerging learning concepts in their own contexts. This experimentation with new concepts leads to practical experiences that result in undertaking theory and conceptual change, especially for those who have positive learning outcomes.

In contrast to Bell and Gilbert's perspective, Kennedy (2005) suggests a spectrum of professional learning opportunities to be characterised as '*transmissive*', '*translational*' or '*transformative*', based on their underlying purposes and effects. *Transmissive* CPD models are those where the purpose relies on external delivery (as given by experts) for teachers' development. These type of models concentrate on the technical aspects of a job rather than taking into account the values, attitudes and beliefs. Moreover, within this type, compliance and replication are supported whereas professional autonomy is neglected (less learner-centred). The *Translational* category of CPD models has the

ability to support both a transmissive and a transformative agenda, relying on its form and philosophy. At the other end of this continuum, *transformative* CPD opportunities propose a strong link between theory and practice, internalisation of concepts, new knowledge constructions, and the realisation of the political and professional context. *Transformative* CPD models have the ability to promote significant professional autonomy either at individual or professional levels. Kennedy proposed this continuum of professional development types to be helpful when deciding which CPD model could be beneficial for developers' goals. Additionally, nine CPD models, based on this spectrum, have been classified by Kennedy (2005), with each one (see Appendix 1 for further details on these models) able to be adopted to explore the knowledge form(s) that can be considered when planning for CPD interventions. These models include the training, the award-bearing, the deficit, the cascade, the standards-based model, the coaching/mentoring, the community of practice, the action research, and the transformative model.

In classifying CPD, a quadrant of professional learning opportunities, known as Reid's quadrants, which compare dichotomies in CPD, namely formal versus informal, and planned versus incidental CPD, is proposed by McKinney *et al.* (2005). Formal learning would be professional opportunities that are demanded and organised by policy makers, such as taught courses, whilst informal learning opportunities are created by the teacher or arise from circumstances such as networking. Regarding planned versus incidental CPD, planned opportunities normally refer to what we would consider to be prearranged, such as in the case of collaborative planning, whereas incidental learning opportunities refer to unpredictable and spontaneous events, such as exchanging ideas over coffee.

In a sophisticated and nuanced way, in order to theorise CPD, Fraser *et al.* (2007) suggest a composite structure termed 'the triple lens framework' for viewing and analysing professional development, which sets the three different CPD models of Bell and Gilbert,

Kennedy, and Reid (see Table 4.2). The importance of using these combined frameworks when viewing different examples of CPD is that it allows one to gain a much more comprehensive picture, and significant effective CPD model based on relevance and collaboration rather than the use of just one lens of model. Accordingly, the three lenses of CPD model by Fraser *et al.* (2007) integrates the determined effects on learning (personal, social or occupational), as proposed by Bell and Gilbert (1996), the steps of learning (transmissive, transitional and transformative) discussed by Kennedy (2005), and the learning forms (formal-informal and planned-incidental) indicated by Reid.

Table 4.2: Summary of CPD models in three-lens approach (source: Fraser *et al.*, 2007: p. 13).

Framework	Terms of categorisation	What is being categorised?
1. Bell and Gilbert's three aspects of professional learning (amended)	Personal/social/occupational	Domain of influence of professional learning
2. Kennedy's framework for analysing CPD	Transmission/transitional/transformation	Capacity for professional autonomy and transformative practice supported by the professional learning
3. Reid's quadrants of teacher learning	Formal/informal Planned/incidental	Sphere of action in which the professional learning takes place

The key advantage of using the proposed hybrid model above to view professional learning models through different lenses, as described by Fraser *et al.* (2007, p. 14), is that the influence of CPD, both positive and negative, cannot be seen or felt in a vacuum. Discovering the phase of learning and the individual and profession wide impact offers

us the ability to view individual examples in a much more complex and comprehensive manner. It illuminates the qualitative and temporal differences regarding learning and professional development.

Furthermore, Fraser *et al.* (2007) argue that this approach promotes the examination of the impact of various CPD activities on participants, and whether provided CPD activities facilitate the process of professional development. For instance, when investigating a deficit model through the application of this triple lens, the first one, namely that of Bell and Gilbert, would examine the personal, social and occupational aspects, as well as whether or not each aspect was addressed; the second lens, that of Kennedy's continuum, enables the classification of the deficit model as transmissive learning in which learners are in a passive role. Furthermore, Reid's quadrants in the third lens would place this model as a formally planned one. Using this triple lens approach, therefore, could facilitate more understanding of the present study in TEL CPD opportunities and effectiveness as it may reflect and explain the potential conflicts between individual aspirations and the organisation. Fraser *et al.* (2007) argue that these presented arguments set the context for empirical study to review existing opportunities for lecturers' development and learning, and allow them to voice their perceptions regarding professional growth and change.

4.5 Evaluating CPD Opportunities

Evaluating CPD opportunities is a vital component in the development process. The importance can be seen through using the evidence and making decisions from gathered data to measure how processes and practices are effectively employed. The evaluation process helps to acquire information and evidence that reflects on the overall effectiveness of provided TEL programmes more practically, to advance courses by maximising their effectiveness for participants, and to achieve a better understanding of

the professional needs of members in regards to educational technologies (Heaney, 2004; Gaytan & McEwen, 2010). More recently, the importance of CPD evaluation has been highlighted in several studies; however, there has been disagreement in regards to how the effectiveness of programmes in CPD should be measured (Goodall *et al.*, 2005; Guskey, 2006; Guskey, 2002).

Goodall *et al.* (2005) claim that there are two main types of CPD programme evaluation: formative evaluation, the purpose of which is to improve programme performance and quality, whilst the other is summative evaluation, which is used to determine overall programme effectiveness. Formative evaluation occurs to adjust and improve CPD opportunities by providing those responsible for the course with updated information in an effort to assist, ensuring that each CPD opportunity is delivered to meet participants' expectations and needs. In this process, participants' comments and feedback are acquired in order to facilitate CPD providers in improving programme quality. Summative evaluation is employed upon the completion of an activity or programme so as to judge the overall quality of the programme. In this phase, learners' test scores, for instance, can be used to evaluate the effectiveness of CPD; however, some researchers argue that this is ineffective as learner achievement cannot show teaching changes as a result of CPD, and that it may be worthwhile considering teacher participants' views (Boyle *et al.*, 2005).

Efficient evaluation offers information that is significant, sound and reliable to promote in formulating reflective decisions regarding professional development. It is a process that considers the effect and provides a vision that can produce valuable outcomes. In order to achieve such effective evaluation, it is important to realise the proposed outcomes from CPD programmes. Although deciding on the accurate developments that are needed and related to professional development is difficult, feedback in evaluations nonetheless assist in terms of improving planning and improvements in future CPD

(Goodall *et al.*, 2005; Brown *et al.*, 2001). Furthermore, Bredeson (2002) states that the methods used in CPD evaluation vary in terms of gathering, analysing and reporting. Participants' reactions and satisfaction are usually the focus of professional development evaluation. Thus, it is suggested that valuing learning materials, perceptions of learning achievements, and instruction satisfaction are a typical form of evaluation to be asked for CPD participants (Williams, 2007).

Despite the importance of acquiring answers to these evaluation questions, Williams (2007) argues that their assessment of participants' learning is limited, as well as how participants are able to use new learning in their professional settings, as there are several barriers to CPD evaluation. Thus, he proposes a mixed method evaluation centred on evaluating the programme outcomes. Williams (2007) identifies various levels for attaining evaluation, including perceptions for the learning experience satisfaction and the perceived development of the learner, competency to demonstrate new attitudes and knowledge, performance to demonstrate new skills, and outcomes to show the impacts on participant outcomes and service delivery.

According to Williams (2007), a single method of data collection cannot evaluate all these areas unless a combination of quantitative and qualitative methods is applied. Each method has its respective strengths and limits, which could be balanced when using both quantitative and qualitative methods to design CPD evaluations. This combination of methods generates rich information that can give answers regarding questions for both the learning experience process and the outcome of the CPD opportunity on the professional practice. However, Kreider and Bouffard (2006) and Gaytan and McEwen (2010) assert that gathering information from CPD evaluation needs to be delayed as time is needed to allow changes arising from CPD opportunities to promote the evaluation to gather truly meaningful data. Guskey (2000) also recommends the idea that various individuals, involved in effective CPD evaluation related to the use of

instructional technologies in teaching practice, provides diverse perspectives and becomes involved in the evaluation and assessing of CPD opportunities.

There are different models of evaluation levels that attempt to address CPD programmes. For instance, some focus on the activity aim and the significance of a clear picture of the CPD outcomes as a primary phase of CPD evaluation (Goodall *et al.*, 2005), whereas others focus on the delivery and design aspects (Nicolaidou & Petridou, 2011). Therefore, the adoption of these different evaluation models indicates that CPD is multi-functional and is challenging and complex in establishing a specific model regarding the effectiveness of professional development. However, the evaluation model of CPD as presented by Guskey (2000) is widely adopted in the evaluative studies for professional development, and covers various CPD dimensions that studies would address.

Guskey (2000) recommends five critical levels for professional development programmes to be evaluated. Guskey's work was influenced from Kirkpatrick (1959), who proposed a model to evaluate training programmes in the industrial and business sectors. There are four levels of evaluation in Kirkpatrick's model that focus on the value of programmes. The five levels of Guskey's model include:

1. *Participants' reactions*: this level focuses on participants' satisfaction regarding their experience in order to develop the design and delivery of training programmes. Questions relating to the context and process are addressed at this level to inform the usefulness of provided activities.
2. *Participants' learning*: this second level examines participants' learning and improves their knowledge and/or skills in order to develop the programme format, content and organisation.
3. *Organisational support and change*: this level of evaluation emphasises the organisational role rather than the individual learner. The evaluation of support

and management, resources and strategies would play an important role in promoting sustainability, motivation and managing change.

4. *Learners' use of new knowledge and skills*: the assumption of this level is to determine the effective application and the quality of implementation that participants are really using, following their professional development participation, of newly obtained knowledge and skills. A comparison of data between what participants did before their participation and after is required to measure actual changes. The evaluation of this level is time-consuming and complex, as the application of new skills and knowledge takes time.
5. *Student learning outcomes*: this evaluation level investigates the CPD impact on the outcomes of student learning. These learning outcomes include cognitive outcomes (achievements and performance, such as test scores and portfolio), affective outcomes (beliefs and attitudes) and psychomotor outcomes (behaviour, practice and skills).

The five evaluation levels can provide different kinds of data that can be used either for formative evaluation (to examine what has been provided and if further development is needed) or summative evaluation (to decide on the programme value and effectiveness). Data for each of these levels can be gathered through various methods, such as questionnaires, interviews, observations and portfolios. Goodall *et al.* (2005) claim that questionnaires and evaluation forms are methods more commonly used than others, and require more time, personnel and expertise to gather such information and accordingly complete the assessment.

Regarding TEL professional development, Pierson and Borthwick (2010) state that comprehensive evaluative data of effective TEL CPD is lacking, with the scholars further advising that TEL professional development must take into account current accepted teaching and learning practices, such as the model of Technological Pedagogical Content

Knowledge (TPACK). Moreover, Smolin and Lawless (2011) mentioned that the ability to critically investigate TEL CPD, including how they are analysed, along with their evaluation methods, regardless of the model, would produce effective and skilled teaching staff that are able to integrate technologies, properly and in a meaningful way, into the curriculum. Therefore, the value of TEL CPD evaluation that results in giving an account of associated elements would provide a great impact to improve such developmental programmes and successfully integrate educational technology goals within practice.

An efficient evaluation process, then, plays a crucial role in assessing the experience, process, delivery, and end product and impact of professional development. This comprehensive evaluative aspect of professional development could change the focus of the emphasis from examining only the outcome of professional development to being more effective, viable and productive, working with all TEL CPD parties involved, such as lecturer participants, in mind of obtaining the fundamental aim of an improved learning and teaching experience. Whilst the current study attempts at evaluating TEL CPD opportunities, an emphasis on the reaction of the TEL CPD experiences was adopted in order to understand the overall effectiveness factors of the provided TEL CPD opportunities.

4.6 The Concept of TEL

This section seeks to introduce a brief review of developments that have occurred within the field of technology-led education-enhanced learning systems. In the era of technological evolution, as a partner tool of education, Conole and Oliver (2007) mention various terms that might be used and understood synonymously within educational technology. Computer-assisted learning (CAL), technology-based learning (TBL), information and communication technology (ICT), educational multimedia (EM), e-

learning, Mobile Assisted Learning (MAL) and other terms place emphasis on the use of technology in facilitating the process of teaching and learning. Each one of the terms used has had its own adherents and moments; however, 'Learning technology' across UK university support units was a dominant term at the end of the 20th Century, becoming 'e-learning', with its variants in the middle of the first decade of the 21st Century. However, in recent years, Technology Enhanced Learning (TEL) as a new terminology, has risen and become an accepted term, specifically in the UK, as well as in some European contexts, and has been used to describe the connection between digital technology and teaching in higher education (Bayne, 2015).

Bonk *et al.* (2012) argue that the efficacy of Mobile Assisted Learning (MAL) resources contribute towards improving peer-to-peer communications, which, for them, was a central benefit in delivering TEL-led educational programmes. However, this perspective is seen, for Sharpe *et al.* (2006), as a tool that promotes curricular activities and its availability, and the employment of technology, with the assistance it offers helping learners to reach their educational goals. The increased applicability of MAL and CAL, as part of a blended learning process, has helped to advance TEL systems owing to the fact that increased technical capabilities have led to a range of new developments. Furthermore, Kirkwood and Price (2014) recognise that the educational sphere has often accepted as routine the fact that technology offers an increased level of learning provision. Consequentially, they argue that it is here where the overarching term, 'Technology Enhanced Learning' (TEL) is utilised in both the UK and elsewhere to describe and define the application of information and communication technologies (ICT) to the teaching and learning environment in higher education. However, it is noted that what is considered as TEL helps to absorb earlier iterations of the e-learning system as the focus that is addressed as 'enhancing learning' (Guri-Rosenblit & Gros, 2011).

Although Kirkwood and Price (2014) believe that explicit statements concerning what comprises TEL systems are uncommon in the literature, thereby suggesting that a level of fluidity and subjectivity exists in this area, they nonetheless do mention that the most common usage of the TEL system equates directly to equipment and infrastructure. This is an issue that, for Walker *et al.* (2012), as an example of UK universities, sees a circle being squared via the adoption of a technical definition in which TEL is seen as “any online facility or system that directly supports learning and teaching” (p. 2).

Although different higher education reports and authors, such as Universities and Colleges Information Systems Association (UCISA) and the Higher Education Funding Council for England (HEFCE), reflect on their changing selections of terminology from ‘virtual learning environments’ (VLEs) to e-learning and TEL, it remains that no genuinely strong rationale is clarified in any report for the reason behind this shift to TEL as the currently preferred term (Bayne, 2015). Conversely, Kirkwood and Price (2014) claim that the term ‘enhanced’ is usually used in an unconsidered and unreflective way, and attempts to describe its implied conceptions in existing research have been introduced. Their analysis of the term places emphasis on the following (Kirkwood & Price 2014, p. 12):

1. Operational improvement (for instance, providing greater flexibility for learners and making resources more accessible).
2. Quantitative change in learning (for instance, measuring increased time-on-task or engagement, opportunities for computerised assessment, and students achieving improved test scores).
3. Qualitative change in learning (for instance, supporting reflection on learning and practice; deeper engagement; richer understanding).

The concept of TEL, for Bayne (2015), seems to illustrate a problematic presumption as learning is (certainly) enhanced when mediated over the use of technology. Furthermore, there has been very little critique of the rhetoric and fundamental assumptions within TEL in the literature. However, Hayes (2015), who presents a discourse and material practice of technology-enhanced learning study, states that, within higher education contexts as social practice, TEL coordinates a connection between technology and learning through a value-enhanced judgment. She argues that TEL is a complex term, with the unconsidered TEL terminology used within higher education documents having recently guided a tacit acceptance of such discourse. While there is a lack of definitions pertaining to the term, it can also be noted from the above discussion that agreement as to what the term TEL definitively represents is absent amongst scholars. This could be attributed to the fact that it is a new addition to the educational technology terminology list, with such views by authors with dissimilar examinations from a variety of disciplines.

Moving to the characteristics or benefits when using the term TEL, a project called Technology Enhanced Learning (TEL) was established by The Engineering and Physical Sciences Research Council (EPSRC). The purpose of this programme research was to build a solid conceptual foundation in the UK future of education technologies. TEL investigates the power that technology affects in enhancing learning by offering an increased learning capability, and, by consequence, leading to benefits to the educational establishment and learning quality and outcomes (EPSRC, 2012). Furthermore, the Higher Education Academy (2015) defines TEL as the use of technology in enhancing students' learning experiences with emphasis on stakeholders who engage with opportunities of learning, not technology. In addition, research that explores and uses TEL in higher education seeks, in the main, to view new forms of technology and its

impacts, or technology-supported methods in helping staff to implement them (Hayes, 2015).

As mentioned in the above discussion, it appears that one reason behind this variety of description is that TEL is a relatively new term; thus, definitions refer to an emerging field. However, for the purposes of this study, the term 'educational TEL' is taken to be concerned with, and be the study of, technologies facilitating the use of a wide range of tools (either hardware, software or online) by lecturers or learners in a higher education context in order to contribute to developing the teaching and learning environment, and motivate real-life learning. The aim of the integration of TEL in the educational field is to provide individuals who experience frequent innovations, the opportunity to utilise its features in their learning environments. Moreover, this definition encompasses all educational terms identified in this section, as TEL includes a number of subsections that incorporate the aforementioned terms, such as ICT, CAL and MAL, as part of an online and technology-based teaching and learning environment.

4.7 TEL and Educational Change

The introduction of technology into education has influenced the continuing change of the curriculum, with its increasing implementation in education continuing to impact teaching, learning and leadership. The use of educational technology would not be perceived just as the promoter for change, but changes also required besides that in terms of teaching methods, learning approaches, and strategies of retrieving information (Watson, 2001). Ertmer and Leftwich (2010) state that technologies, such as wiki tool, are the main player of radical change within the educational sphere, compared with other educational change advocates, as technology in education presents more opportunities to change the settings of the nature of learning by requiring a new relationship between knowledge and learning.

Fullan (2016) claims that there are various levels of change in practice, with innovations in teaching practice recognised as multidimensional, and mentions that three factors are needed when applying any new policy or programme: the use of new approaches to teaching where applicable, the probable practice of new or developed resources, and the potential shift of beliefs. It can be noted that, once TEL is integrated into education, all of these three components could be identified as essentially needed together for such a change. Furthermore, Laurillard (2008) emphasises the importance of integrating TEL into the higher education system and the great perceived usefulness regarding educational change. She also asserts that learning quality experience would be enhanced when creating and adopting such innovation within a system. Such a system can be capable of being concerned with the interactive and radical growth of technologies that facilitate various types of learning capability, as for each one there is a possibility to be exploited in higher education, as well as their influences on the social environment. Educational change within universities is a vital phase that needs to be directed carefully to meet the learning needs in order to obtain adaptive and progressive change, rather than mechanistic one (Laurillard, 2008).

However, to change the pedagogical practices of well-established lecturers has been identified as difficult as such practices are built over time, which allows them to perform their teaching; thus, the effective exploitation of technology in teaching can be difficult to shift. Implementing technology use is also a complex process that will need to be embedded within the working and social context of lecturers (Loveless & Ellis, 2001). In the same vein, Fullan (2016) mentions that a tension and dilemma exists in the educational change literature between two perspectives: the fidelity perspective and the mutual adaptation perspective. The fidelity approach claims that an already developed innovation occurred, with its faithful implementation in practice based on individuals. The opposing view stresses that change is an outcome of decisions and adaptations taken

by users as they work with specific programmes or policies, and the situation of the users determines the result. Hence, it can be noted that change in education is not easy as the complexity of providing change has not been fully understood, and could depend on the dimension or the objective of change with respect to teaching methods, beliefs and materials.

It is emphasised that it is vital now, more than at any stage in the past, to formulate innovative techniques of educational change in order to dominate the new emerging issues, such as technology integration, as encountered in the teaching and learning setting (Hargreaves *et al.*, 2010). The authors also stress that such innovative techniques should be constructed on the basis of what has been learnt from past experiences, whilst taking into account an overall perspective on effectively providing a comprehensive reform that includes pedagogical, social and technical properties. More specifically, the willingness of teachers, besides the organisation practices and policies, and the culture in the environment in question, is considered the cornerstone in leading the change process within the educational system, with the pedagogical practices also recognised as depending on their profound role (Fullan, 2016). The literature declares that, when introducing TEL changes in education, understanding the factors that could potentially affect teaching staff's response to such innovations is important in order to overcome their resistance to change and successfully integrate TEL. In some higher educational institutions around the world, such innovations may be seen to be more dramatic than others (Laurillard, 2008).

Within Saudi Arabia, the adoption of TEL was introduced into various higher education environments a few years ago (Saudi National Centre for e-learning [NCel], 2014). The effect of adopting technologies within an educational system where there is little experience in the field is recognised as possibly producing feelings of discomfort and is similar to attempting new concepts within educational change as a whole (Kirkwood &

Price, 2006), particularly when this change is oriented and imposed externally or planned by the higher policy makers or the organisation. Moreover, referring to the recent National Development Plan of Saudi Arabia that was mentioned in the Saudi context chapter (Section 2.4), an emphasis has been directed by the government towards enhancing and integrating technology in higher and school-based education. The pedagogical practices of teachers and learners will be influenced, with new methods of teaching and learning developed as a result, as stated by Fullan (2016). Thus, examining academics' voices, perceptions and experiences may be an effective way of enhancing the sufficient integration of TEL, which results in successful educational change.

4.8 Factors affecting towards TEL CPD

Much like any other phenomena, academics' learning and integration of TEL comes with a range of concerning factors. In order for faculty members to be involved in the process of technology learning and, in an effort to ensure their knowledge is up-to-date, the identification around what influences lecturers' decision as to whether or not to develop and take part in TEL CPD will be discussed in the following section. Several internal and external factors have been identified in the literature as influential on academics' TEL adoption and professional development. Pedagogical considerations and challenges, such as time and workload, access to resources and institutional support, can shape lecturers' approaches to TEL and CPD, and will be discussed in the following sections.

4.8.1 Internal Factors

The knowledge or beliefs of teaching staff is an important factor towards any professional development (Borg, 2003). Lecturers' perceptions pertaining to the advantages of technology and compatibility in terms of current practices and methods, as well as overall usefulness, will essentially direct the adoption and practice of TEL in the classroom. Moreover, a conviction of the lack of benefits and unwillingness to change

and take a risk have deterred some lecturers from integrating such innovation in education (Birch & Burnett, 2009). In other words, the change to integrate new pedagogy and strategies into teaching is related to the feelings of academics in regards to how they perceive this change and themselves, and, if such orientation or feeling is positive, they would be more willing to learn about and integrate technology into their teaching practices. It is vital, therefore, to take lecturers' perceptions and beliefs concerning TEL into consideration in order to bring about successful TEL professional development and desired technological change.

Different scholars claimed that one of the limitations of effective integration and development of educational technologies into higher education is caused by faculty members' beliefs and attitudes towards TEL usage. A study by Georgina and Hosford (2009), for instance, in their investigation of faculty members' perceptions of technology training and integration at the University of North Dakota, through the use of an analytical approach, concludes that academics' perceptions of the benefits and value of adopted technologies plays a central role in the decision as to whether or not TEL should be integrated within and adopted within their practice. The authors also emphasised that it is the perception of the usefulness of technology, more so than the usefulness of the technology itself, which affects the integration of educational technology. Tabata and Johnsrud (2008), similarly, in their study regarding the impact of faculty attitudes towards participation in education technology and innovations, found that participants who view themselves as appreciating TEL and being competent were more likely to shape favourable attitudes on TEL and encourage its application.

Academics' views towards different teaching styles and practices are another crucial issue alongside beliefs as an internal motivation for the involvement with TEL developments. Pedagogical positive attitudes increase the awareness of TEL practice for faculty members, which is based on student success, and which motivates them to cater

to the needs and styles of learning for different student groups, improve learning outcomes, challenge learners to be independent and self-directed, and provide a richer learning environment (Birch & Burnett, 2009). Moreover, Osika *et al.* (2009) mentioned that these pedagogical beliefs of academics about technology are usually formed early on in their careers, and the more time academics spend in the classroom as teachers or learners, the more likely they are to believe in technology. Hence, attempts should be made for academics to experiment with a rich learning development environment so as to create the opportunity of interaction with the potential of TEL.

Despite the stated teaching advantages of technology, some lecturers have doubts in regards to this influence of educational technology for learners, and accordingly argue that there may be negative effects on their learning. These academics indicate that technology can result in students dividing their attention between the instruction and use of technology, and the various multiple content representations provided through technology, which could potentially cause cognitive overload and affect student concentration and learning (McAlpine & Gandell, 2003). However, learning with technology can be managed and provided in a way that prioritises content, with emphasis of providing an accessible pathway for lecturers to instructional design and pedagogical advice for the successful practical integration of TEL whilst avoiding such technological drawbacks (McLoughlin, 2002; Birch & Burnett, 2009).

The prestige that comes with understanding the use of, and coping with, new technology, and the need to be up-to-date is another internal factor that could lead to the development of TEL. Lecturers can be enhanced by viewing themselves in a critical learning environment, which results in the feeling that they are qualified in many tasks related to their academic roles, technology being one of these demands (Fry *et al.*, 2009). Nachmias *et al.* (2004), in their study '*Factors Involved in the Implementation of Pedagogical Innovations Using Technology*', present results from Israeli teaching

contexts, and report that interests, prestige and the need to be up-to-date is behind adoption of TEL innovation, and is known to motivate involvement in technological integration. Therefore, these internal issues were identified as playing a vital role when implementing educational innovations, and it is important to consider lecturers' beliefs, interests, knowledge and experiences, with such factors impacting what they understand, what they choose to adopt, and whether they consider altering traditional practices. In this context, Waycott *et al.* (2010) also confirmed these results when examining lecturers' perceptions on the use and development of technology both in teaching and learning contexts and their daily lives in higher education. The authors adopted a qualitative approach, using the method of in-depth semi-structured interviews across 31 lecturers from three Australian universities. In this study, academics' views appeared to encompass a wide range of motivations towards technology, including student learning enhancement, with the goal of ensuring that the students are knowledgeable and highly skilled in the use of educational technologies. The researchers argue that a better understanding of lecturers' perspectives will facilitate more-informed decisions regarding the development and integration of TEL in today's higher education institutions. Research on the effects of factors towards active TEL adoption and development in the educational system has indicated that the real decisions regarding such innovation are mostly controlled by teachers' views and motivation to facilitate or obstruct changes (Pelgrum, 2001). Thus, it implies that valuing and assessing lecturers' perceptions about technology in their practice are critical to influencing the decision-making over their professional development participation.

4.8.2 External Factors

Faculty members' perceptions, beliefs and all internal factors affect how they adopt technological developments in their practice; however, its effective development and

integration can still be problematic if external factors are not yet successfully ensured. For a sufficient integration of TEL in higher education, scholars stress various issues around this topic, such as the time and workload, access to resources and infrastructure, and institutional support.

A common concern to participation in faculty development amongst lecturers is the lack of time and the workload. The required time for academics is expressed as a particular deterrent to the development of technology skills, integration and maintaining it within the courseware (Georgina & Hosford 2009; Tabata & Johnsrud 2008). Becta (2008) found that respondent teacher-trainees required more time to attend development training programmes related to TEL, to be able to investigate technology and to share their experiences with their colleagues. Furthermore, learning new professional skills demands time, but academics have no such opportunity left after a teaching working day and after other professional commitments, such as attending staff meetings, student tutorials, assignment marking, which results in a heavier workload for them and could inhibit them from engaging with CPD activities; more specifically keeping in mind that developing TEL effectively takes time, which negatively impacts lecturers' workload (Birch & Burnett, 2009). Thus, when academics are bound with many tasks in addition to their lectures, this could prevent their willingness to be involved in such TEL development opportunities.

Furthermore, Austin (2010) argues that the faculty member's time can be used in different ways in three different stages. The time of early career members is consumed by a barrage of new experiences; the mid-career stage, defined as being the post-tenure to the stage of senior, brings other stresses such as expectation and continual reviews to move into more service and administrative duties, and possibly holding down a second job; and the academics in the late stage of their career, who are within 10 years of retirement, experience the same constraints of time as the mid-stage but with the pressure

of keeping vitality. While the faculty members are affected by such time constraints, providing them with appropriate TEL professional developments may not be enough, and allocating or releasing time to take part in TEL CPD is an important aspect. In the University of Leicester, for instance, it was found that academic members could not use Blackboard properly and lack of time was stated as the reason behind academics' ability to learn the new features of this application (Badge *et al.*, 2005). Additionally, in their qualitative study, Birch and Burnett (2009) found that the lack of time was marked as the main issue that prevents academics from engaging in TEL opportunities. Respondents in the study stated that:

'this issue of lack of time was unpacked to reveal that time is required from conceptualisation through to revision including time for thinking, researching, strategising, planning, learning about and coming to terms with the required technology, training, developing, editing, updating and maintenance' (Birch & Burnett, 2009, p. 128).

Another important external component of the involvement in TEL CPD is the quality and experience of TEL programmes. The instructional design of technology initiatives would influence, in either positive or negative ways, the perceptions of TEL course participants. Afshari *et al.* (2009) emphasise that the quality of TEL programmes plays an important role in a paradigm shift of learning and teaching, and adopting what is learnt. They also stress that participants, who are intensively motivated to engage with TEL activities, have a strong involvement towards their professional development, which is based on appropriate experience of technology development and leads to better goal understanding. Without such a suitable course that allows participants to possess sufficient knowledge and skills, the appreciation of innovation would cease. Tabata and Johnsrud (2008) found that academics opposed to TEL development base such views on their previous experience of TEL initiatives as being equivalent to traditional methods.

The lack of specialised and tailored activity in order to develop TEL aspects, specifically for faculty members who experience some difficulty with new technology and who are slow learners, was found as a crucial factor for continuing development (Birch & Burnett, 2009). When lecturers experience a matching level of technology development, continuing development would be fostered towards the creation and improvement in such TEL tasks. This point was emphasised by Sorcinelli *et al.* (2006), who conducted surveys with faculty members who were experienced with such developments in both the United States and Canada. On the basis of the surveys, there was a perceived disconnect between what was being offered, and the need for quality for faculty development. The authors recommend efforts and practical actions so as to avoid this conflict, whilst also enhancing a better gaining of perceptions of academics towards their involvement in TEL development. Hence, the failure to make TEL CPD a specialised course in promoting both TEL practice and the knowledge of how TEL should be appropriately implemented within the curriculum can influence negatively the successful continuing development and integration of TEL (Gulbahar, 2007; Mishra & Koehler, 2006).

Access and availability of up-to-date, appropriate, and adequate resources of software and hardware to academics is considered a key facilitator in the value of TEL. When the adoption of technology in teaching and learning is needed, institutions must also provide the required supportive quality TEL resources and make them accessible in learning and teaching (Tabata & Johnsrud, 2008; Cheawjindakarn *et al.*, 2012). Chitanana *et al.* (2008) conducted a study to investigate the educational technology opportunities and challenges in Zimbabwean universities, which promote or deter academics from the successful integration and development of TEL. A total of 86 lecturers participated in their study, with the results revealing that lecturers had difficulties integrating and developing TEL in their teaching and learning as they were unable to access technology devices and laboratories with students while Internet availability was insufficient.

Researchers argue that if such TEL infrastructure was to be properly provided, the integration and development in TEL would be facilitated. In a further example, in Scottish Higher Education, the lack of software and technology infrastructure was indicated as one of the main barriers towards the developments in TEL area (Haywood *et al.* 2000). It is argued that the milieu and atmosphere in the academic institution emphasises to lecturers the TEL value, which requires technological development to be both immersed and encouraged.

Institutional support for academics' integration and developments of TEL, including awareness and access to various opportunities, funding, and promotion is also identified as an important aspect of academic involvement. Osika *et al.* (2009) remark that the support of the entire institution is needed to a successful TEL CPD, and the most engaged and successful organisations are those who included TEL support in their priority and long-term strategies. Faculty management needs to support its staff in the access to TEL programmes and encourage the notion of CPD and to be aware of offered initiatives, providing dedicated slots of time to plan CPD by redistributing workloads, and the lack of such support affects the participation in TEL CPD. The collaboration between academics and faculty administration is emphasised as a crucial part in involving academics in such a process (Mitchell, 2013; Kennedy & McKay, 2011). Through the use of a qualitative approach, Keengwe *et al.*, in their (2009) study '*Faculty and Technology: Implications for Faculty Training and Technology Leadership*', point out that organisational support is the main aspect of promoting lecturers towards their TEL participation and adoption, and, without clear frameworks and guidelines, academics cannot follow what exactly is needed regarding their teaching development. Respondents in this study indicated that they were more likely to integrate TEL if they had administrative support, and if there were rewards in place to motivate and attract them.

Hustler *et al.* (2003) also indicate that access to CPD and a detailed awareness of activities that meets individuals' needs can lead to a 'turning point' and a decision in professional development. In this study, which adopted a questionnaire tool, half of the respondents reported that senior management and organisational policy are most likely to affect their CPD participation; however, their management failed to provide the support to facilitate such activities. According to Hustler *et al.* (2003), the respondents believe that if management took an active role in providing support, this quality would allow them to exert more effort over their personal, professional and organisational improvement, which would, in turn, lead to successful change. Moreover, when any organisation proposes development in support of accommodating specific groups of stakeholders, Guesky (2002) emphasises that the context and concepts of teachers' culture first need to be identified and taken into account. Hence, without appreciating cultural principles and making practical attempts to ensure any proposed initiatives are congruent, full achievement of the goals and involvement of participants will be untenable.

While institutional support regarding funding and providing resources, releasing time and other aspects of support is proposed as a means of improving the value and quality of TEL integration, pushing academics to attain formal certification of TEL CPD that leads to a higher degree or further promotion in higher education could provide an incentive for faculty members to upgrade their technological knowledge and skills (Brammer, 2014; Afshari *et al.*, 2009). However, Cook *et al.* (2009) claim that both intrinsic and extrinsic factors are needed, and when academics feel they are valued for both motivators, there may be greater probability of voluntary involvement and satisfaction by academics in technology programmes. They emphasise that in order for lecturers to be more competent in TEL developments, each factor whether internally or externally needs to be properly considered and satisfied.

Turning to studies carried out in the eastern countries, Panda and Mishra (2007) present a study of faculty attitudes, motivators and barriers to technology development and adoption in India. Using an analytical descriptive approach employing a questionnaire, the results of eighty academic respondents suggested that there was a strong correlation between positive perceptions towards technology and its use. However, barriers found included the lack of resources, institutional support, and effective training. In Jordan also Abu Qudais *et al.* (2010) study and seek to identify the faculty members' perceptions towards TEL professional development and integration in teaching. A total of 226 surveyed academics were involved in providing data through giving responses. The researchers conclude that the majority of respondents had positive perceptions towards TEL, but some personal and institutional barriers were found which affect their technology practice and development. These barriers include the lack of time and workload, and incentives. The researchers claim that awareness of available resources and pedagogical benefits is a crucial factor as there were no differences in respondents' variations regarding gender, experience, college, and the country of Ph.D.

In Saudi Arabia, Al-Ghadyan (2004) adopted a mixed-methods approach in mind of examining academic staff attitudes and opinions towards e-learning in-service training. The results of the study indicated that Saudi academic staff hold positive attitudes in terms of using the internet in teaching, as well as in providing distance courses. Furthermore, the participants concerning the development of innovative curricula in higher education using TEL would not be limited by their attitudes, technology or resources. However, traditional policies for higher education, socio-cultural factors and the infrastructure were mainly identified as affecting such positive development. This study concluded that the development of internet-based distance training for CPD depends on changes in higher education policies, academic staff development, and policies for in-service training. In addition, a new model of the universities and training

are required in order to reap the benefits of new technology.

Hussein (2011) ,also, presents a descriptive analysis with 90 lecturers in six Saudi universities to identify their attitudes towards the adoption of Learning Management System (JUSUR). The results reveal a high positive attitude amongst academics to use technology in their teaching as they were aware of its importance with their students. In spite of these positive attitudes in this study, a weakness of integrating the system was found and academics attributed this to physical barriers (the lack of good technical support and infrastructure), personal barriers (some students considered it as a luxury or fun item rather than a learning tool, and a lack of awareness of how to use it effectively as a result of poor training), and administrative barriers (a lack of adequate support provided by management). The researcher recommends that a continuity of intensive effective TEL CPD needs to be provided whilst building a culture of TEL practice with providing incentives for academics. Rafeeq, in her study of 2016, concurs with Hussein (2011) regarding factors that affect faculty members of the effective integration of educational technology. By distributing a questionnaire on faculty members in Najran University, Rafeeq notes that both academic loads and leadership tasks must be reduced, and female staff need more support regarding technology issues, and more rewards and motivation should be given as a result of integrating and developing TEL in teaching. Additionally, Albalawi (2007) and Gamlo (2014), both of whom studied the critical factors affecting the integration of educational technology in Saudi Higher Education, argue that higher educational institutions need to have strong administrative support in order to provide the necessary requirements for TEL development such as technical support, resources, rewards, and to solve challenges such as releasing time for academics, and ensuring effective training to tackle such organisational objectives. Albahiri (2010) identified positive attitudes amongst teachers towards online CPD; however, the lack of

good internet service, incentives and technical support were reported by teachers to inhabit their positive attitudes.

Thus, in order to understand the factors motivating or inhibiting lecturers at the university in this study, a combination of internal and external priorities have been reviewed in this section.

4.9 The Features of Successful TEL CPD

Successful TEL CPD is essential, and the evaluation of training schemes enables stakeholders to provide updates on progress, to determine whether or not CPD programmes are on track in satisfying objectives, or to ascertain whether or not a new approach is needed. Awareness of the effectiveness of TEL CPD is valuable in helping to develop lecturers into independent technology users for educational purposes and establishing the excellent ways in which co-ordinators and stakeholders can be encouraged and assisted in implementing programme schemes. In the literature, there are a great number of effective TEL CPD case studies that reflect participants' experiences and describe the factors of such effectiveness. Across a number of various examples of studies, the following specific characteristics have been analysed and shown to be important contributions for successful TEL CPD.

4.9.1 Needs Analysis

Identifying the gap between the existing performance abilities and potential requirements of the workplace is the functional purpose of needs analysis (McConnell, 2003) and is necessary because this gap contains a series of processes over issues in the workplace that need to be defined and targeted in training. Personal, organisational and task analysis are important steps that must be undertaken to identify activity needs (Noe, 2012). Personal analysis ensures CPD is really needed, and whether participants have the necessary skills to achieve the programme objectives. Organisational analysis is done to recognise the

extent to which the activity is in line with the plans, strategies and resources of the organisation. Task analysis includes the abilities and skills identification, knowledge and tasks that will be released to the participants during the programme. Therefore, it can be argued that needs analysis is a crucial strategy since both individual and organisational needs are recognised.

The core feature of efficient CPD in technologies is its prioritisation and addressing of individual needs, which vary considerably and are shaped by different factors such as the history of TEL use, as well as specialisation in subject area and context-specific issues associated with learners in their organisations (Zhiwen, 2009; Daly *et al.*, 2009). According to Hoekstra *et al.* (2009), staff members vary in terms of the techniques and ways through which they learn and the skills/knowledge that they need to acquire; pedagogical competence can be achieved in settings where facilitation of, and support for, learning is differentiated in accordance with individual characteristics. However, the authors cautioned against participants ‘learning alone’ to achieve such individual needs (p. 10). Opportunities for informal learning and group discussions are central to the satisfaction of their needs. These opportunities enable participants to co-operate and interact with their peers, to access learning resources and to reflect on and discuss their learning progress.

Agreement with the aforementioned views come from Yardy and Huxtable (2011), Mclean (2005) and Birch and Burnett (2009), all of whom argue that effective TEL professional development needs to have strong assessment, and such developments hinge on the extent to which staff learning needs are effectively addressed. They also suggest that contextual aspects, such as policies and support structures in the organisation, are the other strategies besides individual skills and knowledge needs that must be applied in order to attain successful technological development within higher education contexts. Moreover, TEL initiatives must be relevant and appropriate to match the interests and

needs of the academics. Thus, institutions should tailor technological programme initiatives and support accordingly, and realise the different needs of different receiver groups.

Birch and Burnett's study (2009) regarded concerns that can affect the successful integration of technologies by academics and the transformation of higher education establishments into entrepreneurial institutions, where they can access interactive resources for learning. In a qualitative study, they conducted interviews with fourteen academics from various disciplines in their exploratory case study in Australia. They concluded that an effective TEL staff development can be highly enhanced by the extent to which all contextual needs are addressed properly for TEL programmes. McLean (2005) explains that recognising this factor and making a comprehensive vision that accounts for the needs of all engaged parties is crucial to provide vital educational technology development, and the successful integration of TEL lies in efficient activities and support that are based on the various parties within a faculty. To illustrate, TEL CPD needs to place emphasis on the academic staff needs and their teaching and learning level, but also needs to ensure that organisational structure and culture needs to support the effort of CPD in educational technologies.

Furthermore, the lack of appreciating of lecturers' needs in providing TEL professional developments could prevent such courses from being effective in promoting lecturers' learning in technologies. Banks *et al.* (2004), for example, completed a project involving three European universities to examine the implementation of staff development in TEL. They reported a problem with the programme participants in their differences of experiences and confidence levels, ranging from novices to experts with specific TEL responsibilities. The authors mentioned that finding the current needs and skills would detect the existing use, as participants would not ask for a development of skills that they had not mastered.

However, according to Daly *et al.* (2009), decision makers in TEL CPD often miss the actual needs of their teaching staff, and end up bringing in external expertise as a remedy, which in fact exacerbates the issues regarding the lack of effective technological integration. Also, little real consideration is frequently given in order to examine whether support for staff members needs to be placed to proceed to something new, or an improved build of their already existing TEL capacity. A confusion of priorities often exists amongst senior leaders who do not know what exactly to prioritise (competing priorities and tensions between individual needs and the organisation for CPD) and how to distinguish between distinct needs. Foa (1993) and later on McLean (2005) indicated that the conflict between the personal needs and institutional vision, structure and support must be balanced. Also, if the integration of TEL is truly one of the institutional goals, responsible management must acknowledge that to drive positive change, the precise investment in their members is an important strategic principle to achieve it. Such a strategy, thus, would lead to the building of a strong development and a set of values which shape the effectiveness of provided activities (Blanchard & Thacker, 2013).

In the case study of Pachler *et al.* (2009) on a TEL course for CPD, the participants attended TEL skills sessions based on individual development projects that satisfy their need to improve their subject-area and TEL competence, as well as that of their students. The programmes were differentiated in respect of individual needs, developed on the basis of negotiations with senior management and TEL specialists and discussed with peers. Teacher trainees achieved numerous outcomes and a high degree of autonomy in deciding on which TEL area of development to focus on. The idea behind this approach is that teachers become thinking TEL users whilst also actively take part in developing TEL use in their organisations. They are not only TEL experts but also expert learners. Thus, the gap between a lecturer's knowledge, skills and attitudes and the requirements of teaching job can be reduced when sufficient training is provided and when job

requirements are fully understood. Asking lecturers about what they need in terms of the tasks, knowledge and attitudes required to achieve job satisfaction can be particularly useful in achieving the targets of TEL-based professional development.

4.9.2 The Design

Once the needs analysis, which plays an important role in successful activity designing, is effectively identified and properly accomplished, the decision of how TEL CPD will be attained and delivered is the next crucial step of the professional development process (Kirkpatrick & Kirkpatrick, 2009). The functionality of TEL development implementation depends on good design. CPD providers must take into account that TEL staff development is not a one-size-fits-all approach. The programme design is affected by several internal and external factors: for instance, the course design should be tailored to the specific environment and the nature of the programme whilst also being participant centred and allowing for ‘stretch’ beyond content (Bhatti *et al.*, 2013; Martin, 2010; Bowe & Pierson, 2008). The emphasis is on designing a learning environment that is characterised as the realisation of the learners’ interaction through content-driven.

Poor CPD design is a problem that may arise from insufficient prior needs assessment. McCarney (2004) found that a problem emerges when many education authorities have reacted to the need for professional development without fully taking into account the actual needs of their staff and the purposes of professional development offered. As a result, participants who experienced poor quality programmes displayed resistance to positive change in adopting TEL and were extremely demotivated. Galanouli *et al.* (2004), for example, explored participants’ perspectives of their experience of CPD in a programme for using computers in teaching. A total of 464 questionnaires were completed, with the majority of those who responded expressing negative feelings towards the training. Some reported no benefit because they felt they were ‘on their own’

unless they had previous knowledge of TEL. Others, who had advanced skills in TEL, found this programme “a waste of time” (p. 71).

The plan, which includes detailed schedules of the activity, and structure of the TEL programme, are procedures included in the design stage. Several components need to be taken into consideration, namely: the policy of organisation regarding technologies, participants’ characteristics including their differences in qualifications and skills; programme objectives; available resources; finance, time and the current levels of participants’ knowledge to maintain focus on course success. These considerations foster the design of an effective programme environment where intended goals can be developed and carried out (Yiu & Saner, 2005; Lingham *et al.*, 2006; Kauffeld & Willenbrock 2010). All the procedures associated with the adaptation of the activity content into a programme are included in the programme design. Thus, Adey (2004) suggests that during the design stage, staff development should be taken on the basis of theories that encourage effective contribution, with appropriate approaches for participants’ teaching, whilst taking into account their contexts and preferences. Kim (2013), therefore, claims that to judge the effectiveness of any CPD activity, it is essential to realise the nature design of the CPD itself and the extent of the conditions that support participants’ growth.

When the focus on practical and related matters for the participants integrates their previous experiences, from a learner-centred perspective, and also links theory to practice, the effectiveness of CPD activity may be maximised. Similarly, when the content of a staff development programme is applicable to the participants and their targets and their respective needs, an efficient TEL CPD that develops further expertise in teaching strategies, subject content, the use of technology, and other related essential components of teaching in an extensive criteria manner, will be met (Fraser *et al.*, 2007). This suggests that by taking into account these incorporated factors, the new knowledge,

skills and beliefs are more likely to be efficiently delivered. Additionally, flexibility in the content and format provided should be considered when designing TEL programmes, especially of content, so that the requirements and interests of participants are covered, and to be specific when it is based online, so that participants can decide their own appropriate level for any given activity, from novice to expert (Schraeder, 2009; Taylor 2003).

Numerous scholars stress the need to combine technical and pedagogical components in TEL programmes (Rienties *et al.*, 2013; Rienties & Townsend, 2011; Alvarez *et al.*, 2009). Although technology skills are vital in the integration of technology (Mishra *et al.*, 2007), they are not on their own sufficient facilitators for effective TEL use in the classroom (Sandholtz & Reilly, 2004). As lecturers use TEL for some practical purpose, the authors state that TEL CPD designers and providers should recognise the effects interaction has on the successful implementation and transformation of teaching practice. Interestingly, Passey (2008) developed a questionnaire for measuring educators' skills in TEL and found that they require development to focus more strongly on pedagogical TEL rather than operational TEL skills, as they state such improvement would add value and meaning in regards their educational practice. The focus of training should therefore extend beyond the surface, with attention paid particularly to the effective employment of TEL. Furthermore, the incorporation of problem-solving, independent thinking and presentation of ideas are examples of methods that could focus TEL CPD on pedagogy, with a critical vision of how technologies can enhance such processes. The design of TEL programmes should promote the incorporation of these activities by using TEL, in which active learning can be experienced by participants as part of their development (Daly *et al.*, 2009). Therefore, pedagogical intervention employed in the TEL development design should be the focus, leading to the recognition of the value of such development and the actual role adopted by technology in learning.

Some evidence points out that a collaborative approach to the learning tasks is an effective technique to be considered while designing TEL CPD. Pair and group work activities should be included, and participants should be given sufficient time and space to critically reflect, talk, and manage these collaborative considerations at their own pace. According to Kelly (2013), learning in a community is the most beneficial and effective way to the professional development of teaching staff. Good and Weaver (2003) emphasise appreciation amongst participants to learn from others, especially those who faced instructional and management challenges on a daily basis as sharing similar experiences and seeking practical solutions. Furthermore, building communities of learners can usefully enrich participants' professional development experiences, especially when participants are organised by a similarity of subject-specialisation, years of experience, background and development needs. In a case study of a community of learning in CPD with eleven participants, Kelly (2013) believes that the more participants are able to respond and share with each other, the more gain they can obtain from collaborative opportunities. She stressed that when participants learn and rely on each other, they certainly feel ready to learn. Moreover, designing the learning environment on pedagogies of collaboration and the potential of technology development networks to facilitate building of collaborative knowledge and reflection is widely discussed and a recommended feature in the design process (Zhen, 2009).

Notably, there is a growing awareness of the need for TEL-related professional development to be offered in collaborative formats. Despite the collaborative approach advocated in some research, other studies identify that collaboration can make it hard for participants to learn in such a mode of learning. In Younger and George's study (2013), for instance, it is mentioned that when the majority of participants are new or not qualified enough in the teaching profession, such collaboration is seen to result in a lack of sufficient support, with some participants showing a lack of motivation, which then

affects others. Some also find it difficult to collaborate when their managers are also participants, meaning that they find it hard to share their concerns. Thus, solutions should be proposed to avoid such challenges by ensuring participants are similar in associated levels, attitudes, and job position.

4.9.3 The Application

There are several factors that need to be considered when delivering TEL CPD. Ensuring such issues are addressed should encourage a meaningful development for lecturers and demonstrate why TEL CPD is worthwhile. Technical support and resources relating to the technological developments in education play an important role in maximising the effective practice of technology (Bowe & Pierson, 2008). Without a proper provision of these elements, TEL CPD might be problematic and less successful. Professional initiatives that propose a real in-depth positive change must be accompanied by the necessary TEL resources and support in order to enact new progress and content.

One of the aims of Osika *et al.* (2009) was centred on exploring lecturers' perceptions at Chicago State University regarding TEL development and instruction. The authors used and distributed a survey to 75 participants and adopted descriptive statistics. When analysing the data, immediate technical support and access to quality software and resources were found to be crucial to the technological development and integration of TEL in the curriculum. They indicated that if a faculty delays or ignores technological matters in real time during the development, the TEL course would be less attractive and more difficult to have an impact on the faculty. In addition, participants would not want development programmes on technologies if they could not access them in their teaching and learning environment. Therefore, when computers and resources, and support for learners are provided, they are expected to contribute to the power of training and learning environment (Osika *et al.*, 2009; Karagiorgi & Symeou, 2007).

The duration of TEL programmes is a factor that should be carefully implemented in a way to properly cover the technology developmental objectives. For instance, six weeks of e-moderating training for lecturers at the university of Glamorgan was not enough to fully implement technology development into the pedagogy (Fitzgibbon & Jones, 2004). Banks *et al.* (2004), who reviewed and evaluated technology courses for academic members in the UK, also proposed that more time dedicated towards learning TEL would be needed by participants than may be anticipated by the designer of the activity. A significant amount of time may be needed for lecturers to engage with newly introduced technologies, and to make the need for greater up-to-date evidence. To clarify, research on the effects of a suitable timescale on participants' learning has indicated that academic staff do need that in order to experiment with the technology, reflect, and share experiences with colleagues. At the same time, guidance on what is reasonable for the duration of TEL training or giving details of principles concerning appropriate duration are rarely discussed and documented in the literature. The fundamental criteria thus seem to be the satisfaction of the activity components to be reflected by learners. It is argued that enough time needs to be allocated to allow trainees to reflect and link new knowledge with prior experience, thereby enhancing both teaching and learning processes (Bell & Gilbert, 1996).

For practical applications of TEL in a real-world context, hands-on training is an equally important factor to TEL competence for participants (Hramiak & Boulton, 2013; Hsu, 2010; Mouza, 2006; Skidmore *et al.*, 2014; Wachira & Keengwe, 2011; Whitehead *et al.*, 2003). The participants evaluated attending TEL programmes as worthless when they are denied individual access to and practice with technological opportunities. Learning about how TEL operates and putting such knowledge into practice during CPD will afford them familiarity with the appropriate operation and application of TEL in the learning environment. Constructivist views in TEL-oriented professional development require

participants to use previously obtained knowledge as a foundation for the application of new knowledge (White, 2014). Such a requirement highlights the fact that hands-on training besides theory and permitting sufficient time to allow such development is a crucial component of CPD that is designed in an effort to ensure the effective acquisition of TEL proficiency. In their research study, *'Pedagogic Approaches to Using Technology for Learning'*, Attwell and Hughes (2010) identified that a master component and key enabler of using TEL effectively for learning and teaching is incorporating theory (discussion) and actions (hands-on) to work collaboratively, which help ensure that participants will come away with a sound understanding. The authors argue that for ensuring the success of TEL integration in further education, theory and practice need to be equally considered and provided to address expectations for successful TEL interventions.

Yet another crucial feature that successful TEL CPD needs to address is centred on the activity trainer or presenter. The attributes and selection of the technology development trainer viewed as necessary play an essential role to the success of the CPD programme. Trainers' competence must contain knowledge of the TEL CPD participants' subjects so as to understand how effectively knowledge can be shared with participants, have the appropriate experience, communication skills, and the ability to motivate participants to participate. They should also be 'learner oriented', and prepared to meet participants' needs (Farrant *et al.*, 2008). Lawson (2009) as well as Bennett and Leduchowicz (2007) explain that the overall presence of a trainer (knowledge, problem-solving skills, technical issues, etc.) intensively influences participants' perceptions of the programme's perceived effectiveness, and also inspires them to adopt new developments of knowledge and skills. They indicate that, besides the various functions contributing to the CPD process, the result of activity planning and setting objectives are mainly based on the

trainers' role to be obtained as they play a key and critical role in presenting the ultimate aims.

In a quantitative study, Georgina and Olson (2008) conducted surveys to investigate perceptions of faculty members who work at The College of Education and Human Development at the University of North Dakota. The respondents were seen to be generally similar in terms of distributed percentage in regards their career positions (Full Professors (20.7%), Associate Professors (21.6%), Assistant Professors (33%), or other instructors (24.7%). Georgina and Olson (2008) found that a significant factor that concerned faculty members within the TEL CPD process was the quality of the technology trainer. Respondents reflected on the initial struggle that academics experience as they learn to implement new educational-based technologies in a way that is consistent with their professional values and actions, but how they subsequently come to appreciate it. However, it is vital to tackle some issues when it comes to the appreciation of the trainer who delivers TEL CPD. First, the respondents reflected on their levels of participation and their desire to pursue technology development within small groups and with a trainer who is present with them at all times. Secondly, academics shared the significance with which they perceive the quality of technology trainers who enhance their participation in their professional areas of expertise. On the other hand, Attwell and Hughes (2010) argue that the clarity of definition and criteria regarding TEL trainers' competence is rare due to the diversity of their function and role. However, for delivering TEL programmes, it is necessary for TEL experts and specialist trainers to be familiar with the subject-specialists of participants and to be skilful in enhancing pedagogical relevance (Ofsted, 2008; Attwell & Hughes, 2010). The TEL trainer, thus, is viewed as immensely crucial in relation to lecturers' experience in TEL courses to be effective, and to create significant influences on the delivery stage.

Arabic studies in the literature also highlight the importance of various factors in TEL

programmes within educational contexts in ensuring their technological ability and their competitiveness to adapt to changing educational and global requirements. For instance, Akhorshaideh (2013) examined the CPD effectiveness in two public universities in Jordan, and sought to identify the factors that influence such developments in Higher Education. The researcher adopted a qualitative approach and a case study by using semi-structured interviews to gather data, and concludes that an absence of the design approach, evaluation systems, the trainers and participants' selection process, the involvement of design and evaluation, and the lack of support was found in the study. Moreover, Farid (2015) found a significant correlation between the difficulty of using TEL effectively in Egyptian education and the efficient development programmes that participants underwent to practise TEL in the classroom. The author attributes this to the ineffective experiences of designing technology programmes, and that the successful components were not included in the existing provision of such initiatives.

Elferjani (2015)'s study, *'Development of training programmes provided for academic staff of Libyan Universities'*, aims at identifying the required factors of higher-education institutions' successful development programmes in order to enhance the performance of academic staff in Libyan universities. The study claims that all effective elements, such as the needs analysis, evaluation and cooperation amongst providers and participants of development initiatives, were not considered. Moreover, the researcher mentioned that the lack of adequate awareness of instructive technology and modern educational methods were found as the main weakness in such programmes.

Within Saudi context, Al-Asmar (2009) conducted a quantitative approach by employing a questionnaire and aimed to understand the professional development needs and situation in order to encourage different future professional roles and promote professionalism and practices in Saudi Arabian universities. The research sample for this study included a total of 357 faculty members in Umm Al-Qura University. The study

indicated that the degree of CPD provided is poor, failed to seek to understand academic staff's needs, did not contain any practical phase, particularly in technologies, and did not consult academics in regards the content of their development. Furthermore, CPD is usually short, with an evaluation centred on understanding the impacts of the development on participants' practice missed.

Alhazzani (2013), Alhbabi (2013) and Almuqayteeb (2009) completed studies within the same context with the objective to identify the effectiveness and problems regarding TEL development and implementation in higher education. These studies confirm that ineffective TEL planning, delivery and evaluation cause problematic educational use of technologies in Saudi Higher Education. Such studies conclude that barriers in this regard include the following: available TEL CPD do not meet lecturers' and instructional needs; there is a lack of established pedagogy for technologies; and there is insufficient delivery in TEL developments. Accordingly, the scholars recommend the adoption of vital components such as the needs analysis and careful planning, design and delivery of technological developments, infrastructure and practices to encourage the adoption of technology, and the provision of better academic technology use in the learning settings.

When considering the proper attention of such effective factors that influence academic staff towards TEL integration, Al mulhem (2013) designed a specific technology training package in light of their specific needs and preferences regarding the content, time and duration, and he concluded that such an experiment had a positive influence on their knowledge and skills. Again in the same context, Al Ghamdi (2015) provides a specific TEL development programme for EFL lecturers and teachers that met their needs, and concluded that there was a strong influence between effective TEL CPD and positive practices of technologies as the participants were mostly satisfied with the design and implementation. However, both assert that some barriers were identified, which ultimately affect the complete, wide-ranging utilisation of technologies in learning and

pedagogy, such as facilities, support, and working hours.

Given these considerations from the reviewed literature, TEL professional development can be promoted through a number of critical aspects. Effective TEL programmes for lecturers should encompass the many aspects and concerns that are specific to educators. Analysis needs, sufficient time, up-to-date equipment and resources, hands-on training and solid technical support all must be ensured. Moreover, organisational management teams should promote the aims of professional development in general, and those of TEL in particular; they should involve lecturers in the planning phase and then design the course content to ensure its relevance to their teaching practice. In keeping with these issues, the present study examines lecturers' experiences and the manner in which they describe such educational technology developments on the basis of their perceived effectiveness.

4.10 Impact of TEL CPD

The outcome of experiencing CPD opportunities should result in significant achievements for academics, students, and institutions. Such outcomes of professional developments include the increase of subject knowledge, and attitudes and confidence of faculty members, updating skills, sharing and collaboration amongst colleagues, improvements in curricula, and greater student satisfaction (Sydow, 2000). TEL CPD programmes tend to be provided and developed for a common objective; that is, to keep the professional productivity and efficiency of academics as an agent of change, and for the fostering of student learning and outcomes. However, an examination of the impact of lecturers' participation in TEL development activities needs to be assessed in order to understand the real results of the opportunities provided. The changes, therefore, as a result of TEL CPD involvement, are taken as indicators that TEL activities meet the goals, and also to help the authorities responsible for this programme to keep in tune and

be responsive towards the changing needs of individual faculty members, academic departments and administrators.

4.10.1 Individual Level

Changes in lecturers' technological beliefs, practices and competencies are evidence of the positive impacts of their professional development. Deep-seated beliefs and perceptions relating to the way in which lecturers practise teaching are associated with convictions and values that have been settled over time from personal and professional experiences. In this context, attitudes and beliefs were reported as the most central component for the readiness to learn and adopt educational technology (Daly *et al.*, 2009). Targeting and affecting this fundamental aspect of lecturers make a significant positive change towards the practice of technologies as a result of undertaking effective TEL development opportunities.

By applying a qualitative case study design, such as in the case of Scott and Mouza (2007), for example, the impact of professional technological development on participants was examined; participants' perceptions and attitudes was one of the aspects investigated. The findings in this study revealed that participants had changed their attitudes towards technology to become more positive, and they stated the desire to learn more about technology in education as they began to perceive its advantages in learning and teaching after their professional development participation. As a crucial result of the effective experiences obtained through TEL CPD, participants challenged previous personal beliefs about the role of technology, and accordingly re-evaluated the importance linked with the adoption of TEL. On the other hand, Brinkerhoff (2006) studied the effects of academic technological professional development on participants' beliefs who were involved, and found that no changes regarding attitudes had been achieved. The author suggested more consideration in the design process of TEL

professional development in order to address this matter regarding technologies by providing such materials that could convince them into a change of thinking and professional practices. Aminudin (2012) argues that positive changes in understanding and beliefs in relation to the other important outcomes of development can imply that participants will link a high priority to practise future knowledge and skills in correspondence with their beliefs. Hence, tackling and examining perceptions towards technology is an important factor that may be effective in terms of sustaining changes in the learning and teaching setting.

Self-confidence towards technology integration following TEL CPD can be considered a positive outcome. Despite the necessity of technological knowledge, it is not adequate if lecturers do not also have the confidence in using obtained knowledge to adopt and facilitate student learning. When the confidence attained as a change, the successful adoption of TEL will be fostered (Ertmer & Leftwich, 2010). Fears and anxiety concerning the ability to practise TEL with technologically knowledgeable students negatively impacted lecturers' continued use and development in TEL. Acquiring confidence as a change is needed for academics' TEL adoption to reduce their levels of fears as students' skills in technology continue to advance, and this change plays an important role in the process of TEL integration into instruction (Keengwe *et al.*, 2009; Brinkerhoff, 2006). In a mixed-methods study in one of the UK universities, Greener and Wakefield (2015) illustrated the effects of the development of digital tools in teaching academic members. The results revealed that there was disconnect between expectations and academic capabilities. Although the attitudes of academic staff and learning new technology were positively high, the confidence of implementation was a complex issue, with respondents stating they were unwilling to make mistakes in front of their audience. According to the authors, academic staff interest is not enough by itself in order to integrate educational technology into learning and teaching: there must also be an

emphasis on their increase in confidence and personal identity as digital practitioners, and to focus on pedagogy and relevant support for them to be fully and successfully involved. In addition, the accomplishment of intended goals by promoting staff development is determined by teachers' perceived self-efficacy and confidence, which influence their behaviour and level of motivation towards new initiatives (Tschannen & Hoy, 2007).

Effective TEL CPD provides teaching staff with new information in a way to change their views and behaviours on current teaching and teaching practice to be more aware and reflective, and encourage them to seek additional information and developments in technology (Scott & Mouza, 2007; Daly *et al.*, 2009; Heaney, 2004). On the basis of CPD evaluation and theoretical models of efficient learning, Kanaya *et al.* (2005) confirm that the most crucial feature of a TEL programme is the emphasis on facilitating how students learn particular content and tasks, and how particular tools and instructional practices can support student learning outcomes. In the research of Kanaya *et al.* (2005), understanding and practising new knowledge and skills, and accordingly using them in teaching, emerged as a key outcome and result of TEL development. The authors recommend raising awareness amongst TEL CPD providers in helping a change of participants practice by including in the design process both new knowledge and new practices that begin from their own knowledge, which, in turn, would influence their teaching behaviours and learning in the classroom. Without implementing positive changes in behaviour and teaching practice, the rationale behind professional development will be inhibited to make it reflective and gain the ultimate outcome for such needed improvements (Aminudin, 2012).

Furthermore, building positive relationships and a community of practice, and formulating links across theory and practice, are amongst the desired gains following TEL CPD. Social networks and relationships are important in direct relation to the way

in which participants exchange ideas and information regarding teaching with technology developments, and such opportunities for informal talk are crucial for positive changes (Daly *et al.*, 2009; Smith, 2015). An emphasis on relationships, as a vital component that enables change and how TEL participants own changes in their practice, develop and change them via enthusiastic individuals' networks in blame-free conditions. Couros (2006) indicates that teaching staff to create their networks in a potential connection, such as the existing variety of contemporary resources and technologies, in mind of their own environment of learning and in association to the others' learning, is preferable. Furthermore, Ferrier-Kerr *et al.* (2009) adopted a qualitative methodology involving semi-structured interviews in order to explore successful actions of professional development. The result of this study confirms that positive relationships amongst participants promote the right environment for reflective learning to occur within a professional development context. By making strong relationships, they share their own experiences and accept criticism and assistance thereby establishing a culture of trust. These relationships, thus, assist in developing a community of learning as a result of successful CPD activities. This also supports the argument by Guskey (2002) that collaborative networks amongst participants allow opportunities amongst them to share knowledge and positive comments and feedback concerning their practical and teaching contexts.

In a qualitative study, in addition, Alrubian (2014) examined the potential of Online Communities of Practice in functioning as an approach to CPD, and how such an approach could influence the development and performances of teachers. The trial of online communities of practice was designed through (Moodle), with 14 ICT secondary school teachers making up the sample that interacted and discussed their chosen subjects with one another. The study findings indicated the positive outcomes of adopting online communities of practice in CPD programmes. In addition, such an approach reflected

significant differences between the levels of impact made by teachers compared with their engagement in other general online communities, as well as in training courses. The study argued that, especially in regards of the psychological aspects, teachers need more autonomy in determining their professional needs, and the requirement for trust to be built among teachers since the presence of such autonomy and trust promotes greater engagement in the CPD process.

4.10.2 Organisational Level

Several scholars note that TEL academic developments largely focus on the teaching development from a single aspect through individuals' competency (Kirkwood & Price, 2006; Beckton, 2009). However, leadership support and its role in leading on the issue are identified as one of the most important facilitators in ensuring positive change within educational technology in an institution (Fox-Turnbull, 2006). For many TEL programme participants, acquiring the required knowledge, beliefs, confidence is not adequate to enable them to use technology in effective ways in their curriculum. Despite the fact there are some teaching staff who changed and accomplished some TEL practices despite facing several inhibitors such as organisational support, for the majority, the adoption of TEL for learning and teaching depends heavily on the overlapping social, cultural and institutional contexts in which they work (Millwood *et al.*, 2013; Ertmer & Leftwich, 2010).

Thus, should institutions of higher education aspire to integrate strong effective presence of TEL and competently practise such innovation, as well as respond to educational needs and demands, they must possess active leadership that understands, implements, and advances all goals required for technology success. Leadership has become a crucial aspect that determines educational technology for successful change in the face of technological expectations and demands; this significance came from the leadership

ability to direct TEL integration towards either an effective or insufficient path (Kirkwood & Price, 2006). Sydow (2000) emphasised that, through solid leadership in vision and policies, with considerable investment at the system level, efficient support at the institution level and professional commitment at academics' level, numerous and manifold positive outcomes are received for faculty member initiatives. Moreover, management teams and administrative support foster professional growth in technology and enhance transformation, as sound leadership focuses and contributes to change and action by valuing and promoting cultures of reflective practice and collaboration with teaching staff regarding their implementation process (Ferrier-Kerr *et al.*, 2009).

It can be noted here the underlying message show that perceived changes from the personal perspective, such as in regard knowledge and behaviour, seem to interact with the existing institutional and leadership culture to create the technological transformation. A quantitative study was conducted by Arokiasamy *et al.* (2014) to investigate the different aspects of transformational leadership that are seen to affect the integration of TEL by teaching staff, with the results revealing that transformational leadership, with the ability to articulate and recognise a vision, facilitate individualised support, offer an appropriate model, expect high performance, and strengthen the technological culture of institutions would effectively influence TEL transformation as they would be more accepted regarding preparedness for change. Similarly, Buabeng-Andoh (2012) stated that a relationship between the successful change and adoption of TEL by academics and the leadership practices, and transformational leadership would encourage such effective TEL integration into the teaching and learning process.

Follow-up support by leadership within the implementation stage of change and following enhancements for acquired TEL development are identified as a crucial component of vital technology transformation. Lawless and Pellegrino (2007) proposed that while awareness of new ideas and skills may be achieved through experiencing one

TEL professional development, that achievement alone is unlikely to ensure proper integration, and to lead the proposed change in teaching practice, unless proper follow-up support is provided. Also, to allow participants to understand the true impact of the intended goals of TEL CPD, which deepens their technological content knowledge and how these technologies promote student learning, an extended follow-up course throughout the organisational support is more likely to attain the desired effect. By presenting an experimental study, Efaw (2005) who investigated efficient strategies amongst the United States military academy regarding their TEL development programmes, the author indicated that follow-up and continued learning are needed to ensure participants keep abreast with current practices of technology in learning.

On the other hand, students' readiness to cope with current educational technologies is considered a crucial factor that facilitates TEL CPD transformation. Academic staff can perceive students' ability to use required technology tools in learning and classroom as empowering them to change and use TEL within their pedagogical practice, as well as an opportunity to more closely feel the impact of their personal and professional developments (Afshari *et al.*, 2009). Hruskocy *et al.* (2000) indicate that training students to use technology as experts would help the adoption of TEL within the learning setting. In their study, Hruskocy *et al.* (2000) identify that students play an important factor in facilitating the achievement of TEL outcomes by teachers. The teacher respondents of the study believe that a positive change in technology had been experienced and become more frequent TEL users, with their students competent in dealing with the applied technologies in their learning tasks. The research results also reveal that students become more curious regarding students' technology skills enthusiasm and that, whilst students' TEL abilities were used in the learning, teachers were more motivated to integrate TEL in teaching and to learn to use TEL. The authors conclude that not only are instructors' commitment and expertise needed for TEL adoption but also that students' readiness to

use it facilitates the process.

In another study, Cheawjindakarn *et al.* (2012) analysed 19 research papers from 2000–2012 by adopting qualitative techniques with content analysis in an effort to understand fully the critical success factors for such academic technology development and practice in higher education. They asserted that technology courses will not work efficiently in achieving their goals when they do not have adequate access to lecturers. In addition, support, technical advice, and the institution's resources are crucial issues that must be developed and provided if the potential for TEL practice is to be realised.

Therefore, the aspect of policy and leadership indicates that why in some cases pedagogy with TEL is hard to shift, and regardless of the intensive degree of TEL 'uptake'. The arguments reflect that TEL CPD in fact is not adequate on its own to impact teaching practices, it is the entire educational context that has to change in a comprehensive system of components, with each complementing the other. In respect of this, Daly *et al.* (2009) state that it is not only the lack of staff CPD or confidence; they do not practise TEL in their teaching in productive ways because their work culture and the way in which it is prepared and evaluated limits and even prevents TEL from having any impact. Without a commitment of policy makers to the desired outcomes beyond preparing TEL CPD participants, TEL is underused in educational institutions as they play a key role on how that currently happens. Thus, each aspect of changes should be carefully enhanced and evaluated, to achieve the target goals of integrating technology in education.

Turning to studies carried out in Eastern societies, Cavas *et al.* (2009) found that Turkish tutors embraced positive attitudes towards ICT courses after engaging in effective technology professional development opportunities. The results revealed that, with consideration for participants' experiences with technology as a factor, a significant difference was found in the attitudes of respondents; 84% of the sample exhibited a willingness to adopt technology and to take an initial course should such training be

organised. No significant difference was identified in the attitudes of males and females; however, age was found to be a significant factor in the difference in attitudes. Within the same context, Celik (2011) conducted a study to examine the academic's technology integration as a result of their development experiences. The researcher distributed a survey to 124 lecturers at six different Turkish universities. The result showed that the integration of TEL was limited as respondents acknowledged that factors in their teaching environments, such as the lack of leadership support, did not encourage them to apply technologies. Additionally, Abuhmaid (2011) studies technology developments in Jordan, and seeks to identify the effectiveness and impact of these initiatives on participants. The researcher concludes that there were impacts and improvements on their knowledge and skills. However, certain levels of the school culture and follow-up support were found to be problematic.

Despite the lack of studies in Saudi Arabia investigating the impacts of technology on professional developments, Al Ghamdi (2015) conducted and evaluated the impact of a study entitled '*Can an ICT CPD programme have an impact on EFL teachers in Saudi Arabia: A case study*'. He found a link between the quality of provided technology professional development that was designed based on participants' needs and preferences, with positive change towards technology regarding attitudes, confidence, skills and knowledge. However, the researcher was seen to have doubts about this positive change and therefore expects it to last for a short time, and unless essential conditions of technology integration, culture and support are introduced, the long-term adoption would not be obtained.

A close analysis of TEL CPD in Saudi Arabia revealed that scientific development and technological and educational changes have encouraged educators to acquire excellent skills and obtain the required knowledge that will enable them to achieve a better quality of practice and experience professional growth. This has been the case for higher

education in general, thus prompting Saudi Arabia to pave the way for universities to satisfy the considerable demands of excellent practice in higher education. In other words, policy makers and officials need to help these technology initiatives strengthen their performance to satisfy current global educational expectations. Alhbab (2013) emphasises that reforming the educational system and similarly elevating the standards of Saudi Arabian universities remain the most complicated challenges encountered by the region today.

The current study examines and discusses the opportunities and challenges that TEL CPD offers, and that are experienced and faced by lecturers in Saudi Arabia. The issue raised here is whether or not the current problems regarding TEL professional developments hinder the adoption of educational technologies by academics and, as a result, disrupt their goals and institutions for quality and development. This study also complements the efforts that have been directed towards the successful adoption of TEL within the Saudi educational system. Necessary aspects and criteria for ensuring the success of these contemporary tools to a high standard have been attempted. Additionally, educational institutions in Saudi Arabia pay efforts to facilitate the achievement of university objectives; the most prominent effect is the contribution of technology development and integration to the education of students. To this end, the present study intends to serve as a reference, with the investigation conducted on the basis of the following research approach and tools.

4.11 Summary

This chapter has presented information from the literature review that is seen to relate to the focus of this study, including the concept of CPD, CPD models and evaluation, as well as factors seen to influence participation, implementation and impacts in TEL CPD

activities. The literature review also focuses on TEL and its implications in educational change.

As shown, TEL CPD is influenced by various factors imposed by the nature and reality of global developments in education. Technology in the education sector has been developed through adherence to modern methods of teaching and learning, a decision driven by educational reforms. The integration of technology in education presents a number of exciting teaching and learning opportunities for teaching staff but also presents the need for continuing development for educationalists to familiarise themselves with technology skills and pedagogies that underline digital technologies. Some studies have discussed such issues and have demonstrated the importance of expanding research on professional development around technology at university level and its effects on institutions' operation and student outcomes.

Existing research has examined the reality surrounding this approach to technological development in education, identified opportunities and challenges, and also delineated those aspects seen to be essential in terms of integration so as to tackle such matters in education. These factors were elucidated by exploring how lecturers learn and develop regarding technologies, and their understanding and perceptions towards the reality of their TEL CPD. This area of educational research has not been accorded adequate attention in developing countries.

Understanding the roles of technology development and how lecturers learn within such developments contributes to clarity in the necessary practices of TEL tasks. Particularly useful approaches are the implementation of factors and regulations in accordance with individuals' needs and preferences, and with organisational cultures and capacity in an educational institution, with consideration to a global development and its effects of such global knowledge on institution operations. These factors are advocated by researchers and organisations interested in higher education as of importance in the goal to achieve

excellent educational outcomes produced by effective teaching and learning approaches. By considering this reality, thus, there may be additional possibilities with the ability to gain successful outcomes for educational practices.

This research aims at providing a picture pertaining to the current situation of academic technological CPD developments in Saudi Arabia in order to support future planning for such CPD activities in the academic community.

Chapter Five

The Research Design

5.1 Introduction

All research is constructed based on underlying philosophical assumptions, as well as on what research method(s) is/are most suitable for the development of knowledge in a particular study. Therefore, it is important to know what these assumptions are to evaluate and conduct any research. As such, this chapter aims to describe the research methodology used to explore this study. The discussion concentrated here on the philosophical and theoretical assumptions, design, and methods applied in the study. To outline this chapter, the research approach, founded on the interpretive paradigm, and the research design, with the purpose of using mixed methods, are first introduced. Second, the methods of collecting data (questionnaires, interview) and the study participants are discussed. Third, the methods of data analysis are depicted. The outline of the research methodology is shown in Figure 5.1 below.

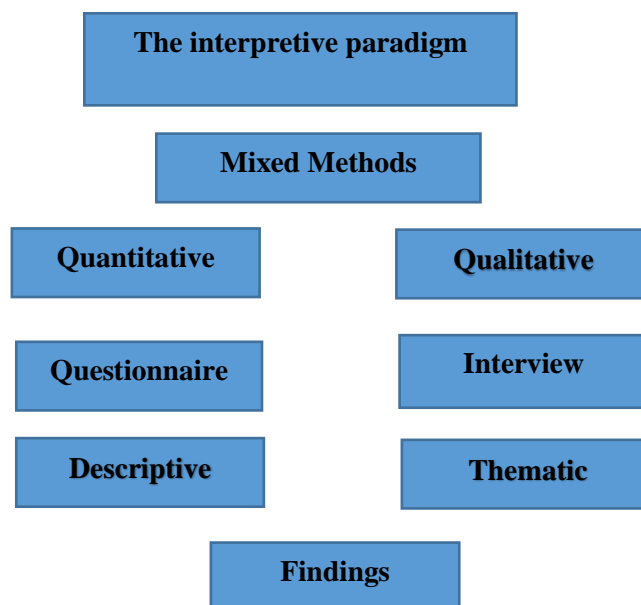


Figure 5.1: Outline of the research methodology

5.2 Research Paradigm

Initiating the concept of the paradigm, Kuhn (1970) highlights the idea behind knowledge (containing scientific knowledge) occurs within definite paradigms that provide an appropriate model for researchers to examine problems and find solutions. Bryman (2012, p.630) states the research paradigm is “a cluster of beliefs and dictates which, for scientists in a particular discipline influence what should be studied, how research should be done [and] how results should be interpreted”. It is a pathway, guiding the researchers throughout the study journey.

Although it is acknowledged that a range of different paradigms are used in educational research (Guba & Lincoln, 2004), philosophical approaches generally fall within two main but opposite paradigms, and each has different underpinning ontological and epistemological assumptions. Pring (2014, p.56) states, “Educational research seems to fall into two philosophical and competing camps. One of them is (positivist) which embraces a scientific model for understanding educational practice, and the other is (interpretive) which emphasises that human beings cannot be the objects of science and that research must focus upon the ‘subjective meaning’ of the learners”. When selecting a paradigm, therefore, the research methodology relies on epistemological perspectives regarding meaning and knowledge (Gray, 2014).

While different paradigms are asserted broadly in the education of social science, there is a frequent debate among scholars and researchers regarding philosophical positions, which led to an intellectual war (Kettley, 2010; Pring, 2014). Consequently, a variety of label paradigms as epistemological considerations have emerged, such as realism, critical realism, positivism, phenomenology, interpretivism and hermeneutics (Bryman, 2012). However, the consideration of the philosophical assumptions (paradigm) would lead to the selection of the correct methodology, as well as indeed the correct data methods and analysis of the research (Cohen *et al*, 2011).

The interpretive paradigm that has emerged in the research of social phenomena as a response to the problems related to following a positivist approach had been firmly rooted in several fields, including the education field (Denzin & Lincoln, 2008; Ridenour, & Newman, 2008). The significance of the positivism approach criticism is that which the interpretivism theoretical approach is constructed on, which reflects a growing acknowledgment and awareness that scientific data have limitations and restrictions. For example, natural science and its approach in research, as has been claimed, does not answer all questions of social concerns, as the subjects do not have self-awareness or the ability to react to being studied, and they are unable to explore and examine concepts in human behaviours as feelings and intentions (Denscombe, 2010). Therefore, the positivism paradigm is best considered to study 'inanimate' or 'non-human' components in the field of natural sciences (Singleton & Straits, 2005). Objective reality could be seen as the target for researchers that conduct their research based on the positivist position to see the world in its true nature. Researchers in this notion perform a deductive approach based on the following phases: theory/hypothesis; collection of data; findings, rejection or confirmation of the hypothesis and theory revision (Bryman, 2012; Cohen *et al*, 2011).

In contrast to the positivism trend, the interpretivist concept is positioned as an appropriate response to studies that deal with people in order to provide the reasons for and purpose of their actions. This approach allows researchers to understand and explore social actions because reality is thought to be subjective and perspectives differ from one person to another. This paradigm is extensively used in the field of social science research for its objective method of exploring, as well as to provide explanations for current situational causes (Bryman, 2012). Phenomenology and hermeneutics are considered the philosophical foundations of interpretative research. Researchers following the qualitative (interpretivist) approach stated the necessity of exploring

answers to questions related to how social and cultural experiences occur and are given more meaning, unlike positivist researchers, who stressed the analysis of casual variable relationships, not processes (Denzin & Lincoln, 2008). Independent and dependent variables are not pre-determined in the interpretive research, but it focuses on the entire human behaviour complexity as the cause of the situation (Kaplan & Maxwell, 2005).

Understanding and acquiring the reason for people's actions should be the purpose of interpretive research. This understanding is derived in the concept of constructivist ontology, where researchers launch their research from "social phenomena and their meanings are continually...being accomplished by social actors" (Bryman, 2012, p.33). Researchers applying interpretive concepts suppose reality is accessed through social constructions as consciousness, language and shared meaning, as well as aim to "search out culturally derived and historically situated interpretations of the social life-world" (Crotty, 2003, p.67). In addition, as there are interactions between the researchers and individuals, different interpretations could be related to one inquiry. In the interpretive paradigm, researchers begin by initiating ideas, and they analyse findings in the generation of a theory/hypothesis (David & Sutton, 2011).

The current study mainly utilised an interpretive paradigm in an attempt to explore and understand how TEL professional developments are experienced by Saudi lecturers, as well as to recognise the influence of these reflections on their views. Thus, it can be stated the primary interest in this study is focused on knowing and understanding lecturers' feelings, perceptions and views. The study examined the construction of meaning via interactions amongst participants in the exploration of the adoption of CPD in TEL, as well as the factors considered pivotal when the participants make the choice as to whether or not they will make use of these courses; this is established through the interpretations of participant responses in the surveys and interviews.

Each interpretation requires an understanding of how people construct meaning from situations, and these meanings are conveyed naturally through an interaction or discussion. Therefore, the interpretive paradigm and approach have been chosen in this study and are thought to be the most appropriate choice, as qualitative traditions make it suitable to understand the complex nature of lecturers' experiences, emotions and feelings (Strauss & Corbin, 2008). Alternatively, it would be difficult in the quantitative tradition to measure these factors, as social aspects do not have tangible, material qualities that allow for the attainment of social construction angles (Babbie, 2015; Silverman, 2010). Thus, it is important to examine the ontological and epistemological assumptions related to the interpretive paradigm through which they help justify the use of this paradigm. The following sections will demonstrate the basis of this study regarding underlying philosophies. Such a demonstration is vital, as it will not only clarify the position of the study, but it will also be based on a philosophical foundation to ensure rigour in the study (Pring, 2014).

5.3 Ontology and Epistemology

Each paradigm contains differing ontological and epistemological visions; thus, every paradigm has a differing reality and knowledge assumptions that underpin the research approach. Ontology is related to the study of being and "is concerned with 'what is', with the nature of existence, with the structure of reality as such" (Crotty, 2003:p.10). As Bryman claims, existence in the ontology concept is not the final purpose; it is the meaning beyond existence and being. Objectivism and constructionism are the two main ontological orientations (Bryman, 2012).

Objectivism supposes social reality exists in the physical space and contains objects outside the mind. That is, constructions in social actions are objective entities unaffected by social or human intervention. This is linked closely to natural science and positivism

disciplines that attempt to link related situations. In contrast, constructionism is considered a second concept among the main ontological assumptions, which proposes social reality exists in the mental constructions and as a product of the social actors' consciousness, cognition and perceptions (Cohen *et al.*, 2011). It can be seen how this differs from objectivism, as the social actors are perceived as passive and they have no control over social realities. While two possible systems can be discerned, it is rare that elements of both approaches are combined in research (Silverman, 2010).

On the other hand, the notion of epistemology deals with the theory of knowledge; adequate knowledge considered in a specific discipline is an epistemological question (Bryman, 2012): a philosophical base and “a way of understanding and explaining how we know what we know” (Crotty, 2003, p.3). Moreover, Grix (2002) states epistemology concentrates on the process of knowledge gathering and is related to developing theories or new models that are better than competing theories and models.

Crotty (2003) defines the objectivist epistemology (objectivism) in that the reality and its meaning exist as such, apart from any consciousness. Contrary to this is subjectivism, which declines the objectivist idea that the truth is waiting to be revealed and claims “meaning comes into existence in and out of our engagement with the realities in our world” (p.8). In this concept, people are different from each other and they may construct in different ways different meanings. The epistemology of interpretivism is based on subjectivism regarding the phenomena of the real world that exist dependent of our knowledge. Thus, social reality can be understood only via the views of individuals who are participating in it (Cohen *et al.*, 2011, p. 19).

This study adopts the interpretivism framework, considering the ontological and epistemological assumptions linked to this paradigm, as well as that human and social beings could affect the social world and concepts and categories in society could be considered as constructed by society. The notion of perceptions towards CPD in TEL is

created by people and the society, and this could change over time. Furthermore, it can be argued the concept of TEL CPD programmes has a meaning related to society and people, rather than a meaning related to an object that is not affected or influenced by changes or by people into the society. However, this study concentrates on lecturers' various interpretations of involvement in and experience of CPD in TEL, as well as on the aims of the research with its questions leading to the interpretive research design. As the main concern of this study is with various interpretations of the positions of lecturers', the most suitable approach could be the interpretivist concept.

As mentioned earlier, the aim of this study is to describe, interpret and understand lecturers' views of TEL professional development. It is important to understand and describe the social realities surrounding people's interpretations. In short, it is an attempt to explore the extent to which CPD in TEL can be improved to attract and understand the views of lecturers towards their experiences in TEL CPD courses. Therefore, both quantitative and qualitative approaches were employed to gather data. Using quantitative and qualitative methods was seen as the most effective in tackling and answering the research questions. Combining quantitative and qualitative methods into one study provide breadth to the study (Bryman, 2012), and further discussion about this combination will be presented in the next section.

5.4 The Methodology

The research method is an investigation strategy, which moves from underlying philosophical assumptions to the design of the research and the collection of data (Myers, 2013). The aim of the methodology is to illustrate, justify and evaluate using a particular method (Wellington, 2000). Crotty (2003, p.7) defines methodology as, "the research design that shapes our choice and use of particular methods and links them to the desired outcomes".

When attempting to conduct high-quality research, the choice of the methodology and methods must be done based on the rationale and judgment bases and that must be explicit in the study. Cohen *et al.* (2011) mention ‘fitness for purpose’ should be the principle guide to choosing an appropriate methodology or paradigm for the research. However, mixed methods in the research involve designing research with philosophical assumptions besides the inquiry methods. The current study is concerned with socially constructed perspectives of Saudi lecturers regarding factors related to their TEL CPD participation, implementation, and impact. Thus, the purpose of the present study is to understand, explore and, in turn, explain the actual patterns surrounding CPD in TEL programmes. To accomplish this goal, one suitable method for collecting data might be expected.

Nevertheless, there is a rejection of the mechanical connection between the research epistemology and methodology (Maxcy, 2003). In addition, some scholars propose, “It is perfectly logical for researchers to select and use differing methods, mixing them as they see the need” (Maxcy, 2003, p.59). According to Sale *et al.*, (2002), quantitative and qualitative methods are only tools and can be integrated together based on the research objectives rather than on the philosophical distinctions between them. Furthermore, research methods and data sources are indeed “much less wedded” to the epistemological assumptions than is generally assumed, and these methods are no more than a technique for gathering data (Bryman, 2004: p. 4). In this study, the combination of quantitative and qualitative data collections were applied to find meaningfulness and interpretability, understand the research problem in more detail, build and explain the findings by incorporating mixed methods and provide a wide picture of the present situation (Creswell, 2013). In addition, a stronger inference can be considered a good reason to use mixed methods in the study. ‘Inference quality’ is one of the most important advantages

of applying mixed methods in order to maximise the quality of the conclusion that can be drawn from a research study (Tashakkori & Teddlie, 2010).

The combination of quantitative and qualitative data collection and analyses is considered a mixed method design for the research (Creswell, 2013), and this was applied in the current research study. The employment of mixed methods in one study can be identified by several names, such as multi method, hybrid, combined, integrated or mixed methods research. Such a design, which comprises quantitative and qualitative data utilised in an appropriate way, has integral strength and avoids weakness, is promoted by the literature of the research (Thompson, 2005). To add information richness and validate the research findings, complementary quantitative and qualitative methods were used. The interpretation of the qualitative data complements the quantitative data by providing the responses of individuals of a small group regarding how they thought, experienced and felt.

Researchers can achieve different advantages by applying more than one method of analysis to address study questions in one phase or in different phases of a single study. Using different methods in the research provides more accurate perspectives and pictures than using a single approach. For instance, a quantitative data analysis can assist the researchers in recognising the subjects and individuals for their qualitative data, while qualitative interviews can go further to provide additional insight into processes that are identified and analysed via the quantitative analysis (Tashakkori & Teddlie, 2010). Moreover, mixed research methods can expand the results of the study and explore points that would be missed when solely using a quantitative or a qualitative method.

In this study, a combination of quantitative and qualitative methods was used to promote the validity and provide balances and checks when analysing both perceptions and facts. For the quantitative method, a survey was distributed to lecturers at one institution of Higher Education in Saudi Arabia; a quantitative survey is designed and provided to

illustrate and quantify facts and results related to CPD in TEL, as well as to complement the data that was collected through qualitative methods (interviews). Furthermore, the quantitative method had been chosen as a tool to access a large number of participants of the study, who provided the big picture of the situation of TEL CPD.

In addition, for part of this study, the qualitative method was used for various reasons. One of these is that qualitative methods provide more in-depth information for the study. The qualitative research gives a “wide-angle and deep-angle lens, examining the breadth and depth of phenomena to learn more about them” (Johnson & Christensen, 2004, p.31). Moreover, this study used descriptive and interpretive approaches. For the purpose of description and interpretation, qualitative methods are the most suitable (Lee *et al.*, 1999). Johnson and Christensen (2004) propose the interpretation of participants’ thoughts is mainly considered as an activity of qualitative research. Toward this end, the qualitative method used in this study included interviews with Saudi lecturers who provided clarification of the data gathered by the quantitative method (survey), as well as to determine whether the obtained responses are similar and related to the study questions or how the research findings can be corroborated (O’Donnell, 2002). Thus, as a qualitative method, interviews are used to provide rich explanations of and details about the issues associated with CPD in TEL courses.

Hence, the present study used quantitative and qualitative methods. The two methods are distinct, and critics have emphasised the strengths and drawbacks of each. However, one method is not superior to the other because each functions to address the proposed research questions. Therefore, the purpose of each study dictates the methods that are used, and success is based with how the researcher applies them. Combining methods could be seen as the appropriate approach for the research questions that are being asked.

5.5 Case Study

The case study approach could be best considered as a research strategy rather than a method. When the study investigates an event, a programme, an activity, individual(s) or a process in-depth in a study, this study can be called a case study. Berg (2009) mentions the case study as a study involving the collection of sufficient information about an individual, a group and a social setting in an organised manner that allows researchers to discover and interpret a specific subject, as well as how it operates. Consequently, this strategy can enhance a rich and deep understanding of the phenomenon which is under studied.

Bassey (2000) proposes the case study as a preferred strategy in the research to develop the educational theory, as it “illuminates educational policy and enhances educational policy” (p.3). Denscombe (2010) identifies the case study concentrates on a particular topic to explore in-depth a given case, which can help to reveal more findings that are difficult to conclude by concentrating on a wider context. Moreover, the case study investigates few cases often just one case in considerable depth. Such an approach has become particularly useful when researchers need to understand specific issues, problems or situations in-depth, and where they can identify rich and depth-in information. Furthermore, Hamilton (2011) argues that this approach can provide the researcher with an in-depth vision into participants’ lived experiences within a specific context, thus generating rich data. These different types of data could be opinions, perceptions, experiences and notions of several individuals within the case. Accordingly, a case study approach is often used in social research to paint a rich picture of any entity or issues that are under research and consideration.

The case study is a strategy to gather unique and in-depth data that other approaches in the research cannot, supporting the researcher to investigate in detail a specific case to identify the interactions of factors in settings (Berg, 2009). It is an appropriate choice

when questions of ‘how’ and ‘why’ are being presented. This will allow the researcher to determine why it happened rather than just what happened (Yin, 2013). The case study approach is recommended when the researcher has limited control over the events, and when there is the need to concentrate on a particular issue, characteristic or unity of analysis. It is not the intent to study the entire organisation (Noor, 2008). Moreover, Yin (2013) argues that the case study method can be used in line with descriptive, explanatory, exploratory, illustrative and meta-evaluation and multi-methods, representing a different kind of research that can be used to collect the data, such as interviews, questionnaires and observations. It has been argued that a case study approach in the higher education domain is usually qualitative; however, there are no barriers regarding the use of any type of data-gathering method (Yin, 1981). Nonetheless, researchers performing a case study often use multiple sources of evidence and adopt a multi-method research (Harland, 2014).

The current study examined the general experiences of TEL CPD by lecturers, rather than evaluating a specific designed programme. Crowe *et al.* (2011) emphasised that the case study approach appropriately captures the information needed to explore either phenomena or interventions in the everyday context in which they occur. By adopting the case study approach to evaluate general experiences, they proposed that it can offer additional insights into what gaps exist and why one process might be chosen over another. The case study allows for evaluation purposes, interventions and development programmes to be studied in a real-life context. Per Henn *et al.* (2010), case studies containing examples of either a single organisation, a particular community, a particular group, an individual, a decision or an event can help explain the status of either a particular strategy or an ongoing issue. In addition, Gustafsson (2017) claims that, in a case study, the focus is based on a specialty unit, and the strategy of the case study

method is not aimed at analysing cases; rather, it is a good way to define cases and explore a setting to acquire greater understanding of it.

The case study approach was valuable in helping to address the research questions of this research. It takes a wholistic and meaningful view of real-life events, such as regulatory processes that take place within the institution being investigated. Yin (2013) argues that the issue of case study research provides the opportunity to get a wholistic view of the research project more so than other methods available to the researcher. Another distinguishing character of the case study method is its ability to facilitate in-depth investigation because of the potential to integrate a wide range of research techniques, including interviews, observations and questionnaires, document review and text analysis, specifically in mind of collecting different types of information (Hamel *et al.*, 1993).

In mind of the above, the case study approach is seen as relevant in this research as it aims at exploring lecturers' TEL CPD of one college in MU in Saudi Arabia through the perceptions and views of these lectures. This study is concerned with exploring the opportunities of lecturers' developments in TEL in-depth as opposed to focusing on the breadth of knowledge. In addition, this type of method enables researchers to gain understanding into the complex reality and activities of life in which multiple sources of evidence are used, such as people's opinions about their reality. As this research focuses on subjective factors, such as opinions, experiences, thoughts, feelings and desires, it is appropriate to complete investigations through the application of a case study. Bromley (1986) argues that case study methods give the researcher proximity to the subject under examination, to the greatest possible degree, as the researcher can then gain access to subjective factors. Case studies tend to give access more in-depth evidence than experiments, where the focus is mainly centred on generalisation.

Although there are various advantages of the case study, there are some limitations as well. One of these criticisms is the research of a case study cannot be generalised to other contexts and it is difficult to provide a sufficient indication for generalisation (Bryman, 2012; Denscombe, 2010). There is the possibility that the researcher's attributes and background could impact the explanation of events. As a result, different explanations might be made by different researchers in regards the same data (Yin, 2013). In addition, Denscombe (2010) claims that case studies pay attention to the processes of the research rather than the ultimate findings. Consequently, different kinds of research require different research strategies, and no approach is considered more suitable than others. Cavaye (1996) argues that, when a researcher chooses a case research as a suitable research strategy for a study, the strengths of the case research are recognised as significant, with the weaknesses viewed as method-related limitations of the research. Building on this, one could conclude that, in order to achieve a successful study, the researcher must have or gain the following skills: being able to ask good questions and have the ability to interpret responses, possess good listening skills, be adaptive and flexible in the sense of interacting in various conditions, have a firm understanding of issues under study, and be mindful of preconceived notions (Yin, 2013).

Therefore, this research focuses on the developments in TEL of lecturers in order to effect change in the TEL CPD approach by closely identifying the opportunities and challenges they have and face. In this regard, a single case study was applied for various purposes. For instance, the research intends to study in-depth a certain MU college (the College of Education). Site selection in this study was based on the place of researcher's work, and the verity of backgrounds fields of lecturers. In addition, the research aimed to examine the provided CPD in TEL courses that lecturers had experienced with the goal of providing future development. This fits with the definition of the case study by Cohen

et al. (2011), as it requires the uniqueness, specificity and ability of the study to control the system.

5.6 Data Collection Methods

This section illustrates the data collection methods used to provide answers to the questions in this research, which were in the forms of questionnaires and interviews. The choice of data collection methods would certainly affect the themes and analysis of the data that emerge. Quantitative and qualitative research methods contain various kinds of data collection and analysis methods. There are various methods of data collection; however, each has strengths and weaknesses (Czaja & Blair, 2005). Yin (2013) states no one method of collecting data has a full advantage over another method, whereas the use of different sources can assist in the clarification of the actual meaning of the phenomena that have occurred. In addition, Silverman (2010) encourages researchers to apply and utilise more than one data collection methods to recognise the value of using different methods corroborate findings and maximise data validity. Using such an approach of multiple methods would help researchers to minimise the opportunity of bias related to any single method (Collis & Hussey, 2009). Consequently, this study combined questionnaires and interviews, aiming to utilise the benefits of each method's strengths to attain more data, as well as to gain an in-depth understanding of the study area.

5.6.1 The questionnaire

The most common data collection method in quantitative research is the questionnaire used to balance crucial factors in the process of data collection such as time and costs involved, response rate, printing, mailing processes and data analysis (Cohen *et al.*, 2011). Questionnaires are an economical instrument to administer. Considerable quantities of data can be collected in a short time, and more efficiently than through observations and interviews (Cohen *et al.*, 2011). The researcher is less likely to be

physically present when participants are completing questionnaires, which gives them more freedom to give answers, and a greater feeling of anonymity, especially when sensitive issues are raised. The questionnaire overcomes the difficulty of having to meet in person with respondents, and respondents can read the questionnaire and take their time before replying; this enables them to respond without restraint (Kumar, 2014). However, there are negative aspects of questionnaires, such as non-response or low rate of response. Asch *et al.* (1997) and Kelly *et al.* (2010) observed that several techniques promote higher response rate in questionnaires, such as offering monetary incentives, telephone reminders and the length of the survey. Response rates vary greatly, depending on the participants' circumstances, such as the time allowed for completion, the way the questionnaire is distributed and the types of questions about the participants' experiences. However, once a questionnaire is returned, it is difficult for the researcher to go back to the respondent for clarification to resolve an incomplete or ambiguous response.

Questionnaires contain many types of questions, such as: closed and open-ended questions, multiple choice questions, dichotomous questions, rating scales, constant sum questions and ratio data questions (Cohen *et al.*, 2011; Bradburn *et al.*, 2005). Therefore, to elicit answers to the research questions, the most appropriate form of questioning needs to be identified before designing questionnaire items. In addition, response forms should be easy to interpret, complete, and adequate for the purpose of the study. In the current study, as the sample group would comprise a mixture of people familiar with and regularly use the internet, and those could not, it was decided to distribute two versions of the questionnaire, a hard copy, and an online copy.

Czaja and Blair (2005) suggest that web-based questionnaires are an increasingly popular method of data collection. Various reasons encourage researchers to provide web-based questionnaires for participants. First, delivery can reach a wide range of contributors who are geographically distant. An attractive and interactive questionnaire, together with the

capabilities of dynamic multimedia on the internet, can be considered to be an important advantage for researchers who provide their survey on the internet (Couper, 2000). In addition, using web-based surveys allows researchers to manage the participants' inputs by leading them to participate in what the researchers need. For instance, in an online questionnaire, participants can select one of several options in the conditional questions, thereby hiding or showing parts of the questionnaire in a more effective manner based on their answers to the questions, but using a paper-based questionnaire, participants may choose more than one. Also, analysis of web-based questionnaire data is easier as the digital output can be automatically collated and represented graphically (Mann & Stewart, 2000; Baatard, 2012). It would appear reasonable to suggest that transcription errors may occur when transferring data from paper copy to electronic form, whereas in the web-based format, data can be transferred automatically.

However, online questionnaires still have some drawbacks. There might have to be fewer questions than in a printed questionnaire. Madge and O'Connor (2004) point out that rates of response drop off after 10-15 questions. Czaja and Blair (2005) agree with this, and suggest that online questionnaires should take participants no longer than 15 minutes to complete. Multiple submissions are considered another drawback of using online questionnaires. By mistake, participants submit the same questionnaire more than once, and that could affect the validity of the results (Zhang, 2000). However, if the questionnaire is well designed and is manageable for the respondents (that is, it is divided into sections and each section is separately and clearly displayed), the overall quality of the responses might not be affected. Further, there are a number of possible ways to prevent resubmission of an already completed questionnaire which the researcher can control. For instance, an IP or e-mail address is a unique identifier that can be used to promote an appropriate sampling procedure and deter multiple submissions by one individual (Baatard, 2012).

As the questionnaire for this study distributed to lecturers with different timetables and duties, distribution of the web-based questionnaire besides the hard copy assisted in collecting data. The majority of respondents may have access to the internet, even if they are out of work places. Thus, this study provided an online questionnaire to take advantages of this fact, and an attempt to avoid the weaknesses had been identified in the literature.

5.6.1.1 Design and pilot of the questionnaire

After deciding the purpose of the questionnaire, a number of steps should be considered such as the formulation of a statement of questionnaire aims, logical structure, and generation of the issues to be addressed (Lewin, 2005; Cohen *et al.*, 2011). Quick responses can be obtained through closed questions, such as multiple choice and yes/no questions. Bryman (2012) gives the advantages of providing closed questions as clear structure and easy to processing of the answers. Closed questions also enable responses to be compared quickly, because participants are not required to write extensively, just to indicate the weighting they assign to the question. In the online version, there is no possibility of placing more than one answer for each question, by mistake. Moreover, closed questions were used in the questionnaire to gain specific responses. Some of the participants may not have experience or valuable thoughts on the theme, and they may not be able to distinguish the different dimensions of the topic. Ranjit (2014) states that the reason possible answers to some closed questions are set out are so that participants may indicate the category that best describes their feelings.

Question construction should be provided in a logical sequence, such as grouping related questions together in similar areas to facilitate the framework of the analysis and the research study's claim of significance (Burgess, 2002). Planning, reading, exploratory pilot work, and design are required before the questionnaire is determined. Moreover, the questionnaire design was informed by the literature review insights and also the

theoretical framework that aimed at reflecting a brief description of the lecturers' perceptions regarding the factors that influence their participation in TEL CPD, the different design and delivery factors that may affect the effectiveness of TEL CPD implementation, and the impact of the lecturers' experience of TEL CPD in supporting TEL integration.

The pilot test is considered a crucial stage in the research process. It identifies areas of weakness with the data collection tool before the main research is conducted. The pilot test could be conducted on a small sample that is representative of the main sample of the study or with an expert in the study area, before conducting the formal version of the questionnaire (Burgess, 2002). The pilot test can indicate if the questions are fully understood or whether any have to be rewritten. Cohen *et al.*, (2011) claim that pilot tests are very important to check the clarity of items in a questionnaire, to identify any leading questions, to attain feedback about questionnaire validity, and to check how long it takes participants to complete it.

In this study, the questionnaire was designed in the first stage in English and subsequently underwent translation into Arabic in order to maximise accurate understanding of the intended contents. The draft was checked by my supervisor and other lecturers who have similar backgrounds in the checking process, and feedback was given. In order to accomplish clarity, the wording and layout were revised and improved many times with the aim of enhancing completeness and concreteness with respect to the examination of participants' points of view in understanding the questions. The first stage of the pilot involved three Arabic PhD students in the School of Education, all of whom were lecturers in Saudi Higher Education, notably pursuing a PhD in the UK, whereas there were two lectures in Saudi Arabia who were asked to comment on the questions and the design. As a result of running the pilot, participants raised several points that needed to be addressed: first, the number of lecturers that attended TEL CPD

needed to be clarified by stating how many times was deemed adequate for each level. For example, attending a TEL CPD session from one to three times is considered to be somewhat adequate. Second, some statements were not focused on the intended meaning of the TEL CPD context. For instance, 'Too much content was crammed into short time' was changed to 'Time is made available to practise and develop new TEL aspects'. Thus, all statements were focused on TEL CPD so as to ensure that all participants fully understood the context of the statement. Third, some statements were considered to be repetitious, which affected the length of the questionnaire. To rectify this, it was ensured that each statement addressed a specific concept and repeated statements were removed. Having edited the questionnaire, based upon the comments and recommendations received from the pilot groups, the questionnaire was given to two other Arabic PhD students. Furthermore, to ensure and maximise the validity of the process, as recommended by Brislin (1970), a different translator applied back (reverse) translation from the Arabic version to the original (English) version; that person is an expert and did not look at the source draft in order to judge and ensure the accuracy and equivalence between the two versions of the questionnaire before distributing the final form.

Altogether, the final version of the questionnaire consisted of four parts in a mixed format of multiple choice, Likert scale and open-ended questions (see Appendix 2). Section (A) contained personal information in the multiple choice format; respondents could select one answer or choose one of the blank options. Section (B) focused on the TEL CPD activities that participants had most often experienced, and what they perceived to be most effective; the responses were presented in a multiple choice format. Section (C) contained 25 statements in a Likert scale format to investigate the participants' perceptions and experience of CPD in TEL that comprised the different themes, objects and items in order to prompt the considered responses. Finally, section (D) used an open-ended format. As such, it enabled participants to add further comments

that might relate to the topic in order to add value to the study and highlight new ideas and areas for further investigation.

An Arabic version was distributed to participants as some lecturers have limited English proficiency and thus to ensure that the concepts were asked were understood clearly by the participants.

5.6.2 Interviews

The key concept of interviews is to understand the real meaning of what the interviewees are saying (Kvale & Brinkmann, 2009). Therefore, it is considered an ideal instrument for conducting a deep investigation into a phenomenon (Marshall & Rossman, 2011). Essentially, there are levels of fact and meaning to be covered in an interview, though it is more difficult to interview on the level of meaning (Kvale & Brinkmann, 2009). Consistent with the interpretive case study approach employed in this research, interviews are a useful tool in particular to attain the story behind participants' experiences. In-depth information about the topic can be pursued by the interviewer. Researchers in the interview can access the thoughts, ideas and emotions, which cannot be readily identified using other instruments (Mack *et al.*, 2011). Interviews related to social research are directed by a certain agenda of conversations and with certain people. In addition, interviews can be valuable as a follow-up instrument for certain responses in the questionnaires.

As with all research tools, interviews have both strengths as well as weaknesses. The interview method of the research is beneficial for programme developments, which aim for individualised outcomes, describe processes of the programme, explore differences in experiences and outcomes among individuals and understand the programme meaning in relation to individuals. Participants in interviews can describe their opinions and what is important to them by using their own words instead of being controlled by predetermined

categories. In addition, interviews allow interviewers to gain more information and to support interview participants understand the questions in the way they were intended. Researchers in interviews can utilise their interpersonal skills, knowledge and expertise to discover unexpected or interesting ideas or themes raised by participants in the interview (Silverman, 2010). The main reasons for utilising interviews are that they can be used in conjunction with different instruments in a study to follow up on the results that were unexpected, to validate another method or to delve deeper into the participants' motivations and their reasons for responding (Cohen *et al.*, 2011).

Nevertheless, using an interview to collect research data has some challenges. Interviews can be considered time-consuming. Interview transcribing and analysing consume much of the researcher's time during the research process (Bryman, 2012). Bias can occur, because the researcher may affect consciously or subconsciously interviewees to obtain a certain answer. Moreover, interviewees sometimes express more than what they want to say, causing them to feel regret, which could be viewed as intrusive. In addition, this instrument can be more interactive, impacting the personalities, interpersonal communication and moods between the researcher and the participants than other instruments, such as a survey; this can influence the study's overall reliability (Silverman, 2010). However, in this study, the researcher attempted to minimise such challenges. For instance, the interviews were based on rapport with the participants to encourage them to provide answers based on the framed questions. All the lecturer-respondents were interviewed individually in order to obtain their perceptions of the research questions. Additionally, after finishing the interview, a summary of the points that were discussed was shared with the participants to validate their answers. All the interviews were recorded using a digital voice recorder with the participants' permission, and the researcher wrote notes on the important points. Moreover, for each interview, a copy of the interview schedule was printed with enough space for taking notes. The

interviews were transcribed immediately after finishing each of them to retain the information for interpretation.

Within qualitative research, interviews can be structured in a variety of ways. In the unstructured interview format, the interviewer introduces the topics but holds no presuppositions or expectations about the encounter. In a semi-structured interview format, the researcher aims to discuss specific topics and guides the interview by asking certain questions leaving room to modify the questions based on the respondent's replies. In a highly structured interview, the interviewer uses a set of predetermined standardised questions (Robson, 2002). Therefore, various types of data can be obtained from interviews, as a flexible method of data collection, based on the purpose of the design. However, the type of interview format selected should be in line with the research aims and strategy (Bryman, 2012).

As a second tool for data collection, the current study employed semi-structured interviews with open-ended questions, which allowed more room for the interviewees to share their views around TEL CPD activities. In addition, this type would ensure points that are considered potentially crucial are covered. It acts only as a guide, while the interviewer and participants have flexibility to follow-up and introduce relevant points that may not have been considered previously, and this provides more emerging themes to be elaborated on during the course of the interview, instead of restricting both the researcher and participants (Cohen *et al.*, 2011). During the process of conducting interviews, a researcher can compare the various responses that participants have to the same questions. This may further generate qualitative data that can be used to notify and enlighten the interviewer, aside from the extra questions the interviewee could ask, which afford more information (Kvale & Brinkmann, 2009).

Unstructured interviews have been avoided in the present research study in order to support the general themes that need to be included in the data during the analysis phase

and to make the participants focus holistically on the topic rather than focus on one aspect of it; this approach was also selected due to the limited time scheduled for data collection. Moreover, Robson (2002) argues that researchers adopting unstructured interviews means a lack of contagious schedule for the interview, with only notes on major areas to be involved. This type of interview can lead researchers in many directions, especially if they do not have sufficient expertise, because an interviewer has no presuppositions or expectations about the responses from the interviewees within the framed questions that could impact the conversation or the participants' responses.

Considerations Relating to Interviews

The characteristics of the researcher, including age, ethnicity, gender, qualifications and status, for example, can all have an influence on the responses of the subjects (Denscombe, 2010). As an example, should the researcher be familiar to the subjects, it may be more likely that responses will differ to those that otherwise would have been gleaned had the sample and researcher been strangers, although the influences of familiarity could ultimately depend on the type of relationship between the two. The issues considered and up for discussion are also likely to have an effect on the data gathered (Denscombe, 2010): for example, the topic being of interest to those being questioned could influence the data. In regards this specific study, as an insider, i.e. someone to whom the participants are familiar with, there are a number of benefits identified, including a greater degree of openness in responses and a relaxed nature when answering questions. Importantly, however, one drawback recognised is that the participants may tailor their responses in order to be agreeable or to please the researcher. With the latter consideration taken into account, a number of actions were taken by the researcher in order to minimise the effects of the familiarity. Primarily, all aspects of the study relating to their own participation were completely explained (as discussed in more detail in the Ethical Consideration Section below). Secondly, owing to the fact that the

majority of the subjects have a wealth of experience and qualifications, they were considered well-positioned to understand research processes and the value of a research. Lastly, the participants were well informed in regards the research and interview process after having completed a questionnaire and being made aware of the researcher's identity, which therefore would reduce any influences associated with the researcher.

5.6.2.1 Design and pilot of the interview

The semi-structured interviews were based on the research questions to examine lecturers' opinions and views of their CPD in TEL. The potential for improving their professional development in TEL and what factors affect their developments were investigated. The interviews in this research attempted to provide thicker data, compared to the data generated from the circulated questionnaire survey, as well as to provide an in-depth understanding of the surrounding issues. As a result, the interviews focused on obtaining more in-depth information regarding the existing state of TEL CPD practices.

The interview questions were prepared in advance and they were developed to fit the aim of the research questions; they comprehended the meaning as suitable for the participants. In this study, semi-structured interviews were piloted before the main ones were conducted. Keeping the interview challenges in mind, I formulated and revised the questions several times as an attempt at providing a clear form whilst avoiding leading questions. The interview questions were piloted with two Saudi lecturers of a similar background. In the piloting interview, I attempted to recognise the time needed to cover the interview by introducing my study to the interviewees, avoiding ambiguous questions and expressions, and identifying any weaknesses in the interview planning and procedures so as to attain a useful experience of interviewing and how the process can be controlled. I achieved a practical experience by doing this pilot study before conducting the main study, as I added some questions and was trained to deal with challenges that would arise during the course of the interviews. The pilot interviews were beneficial; for

instance, that gave me the confidence to deal with and manage the interview time, phrase the questions and practise my interview technique.

The interviews were conducted after gathering the data from the questionnaires; this demonstrates that an appropriate interpretation gained from in-depth information was further expanded. The interview participants that were selected indicated their willingness to do so because they had clicked on the confirmation to be interviewed that was contained in the questionnaire. A maximum of one hour was scheduled for each interview. Moreover, an interview guide was used for the researcher to ask the questions that had been written; however, the exact wording and sequence of questions were not followed in the same way for each respondent (see Appendix 3 for a copy of the interview questions). The interview guide was useful to support the researcher to give clear instructions and discretion throughout the interview process. Two different methods were used in the research for the conduction of interviews with participants. Face-to-face interviews were carried out with males, whilst Skype and phone calls were used for female participants due to religious values and Saudi cultural traditions.

5.7 The Participants

The research sampling is “the segment of the population that is selected for investigation” (Bryman, 2012, p.187), and it relies on the study type, whether quantitative or qualitative. Furthermore, the size of the sample is determined based on the goals and purposes of the research. The research sample of this study consisted of lecturers at the College of Education at MU. This college regulated within its university under the supreme supervisory body of the Ministry of Higher Education. As the research aimed to understand the TEL professional developments of lecturers at Saudi universities and explain the opportunities and challenges they face for TEL CPD, it is deemed vital to involve lecturers in the studied college as important stakeholders. In addition, the reasons

for choosing this studied case include the fact that, at this college, the lecturers came from various backgrounds and specialise in different subjects; thus, the research findings would be representative of a variety of professional experiences and would reflect different views. Additionally, I selected this institution because I was able to gain easy access to the respondents as I am a full-time lecturer there. This also gave me the ability to encourage people to participate in the study. In this regard, for ethical considerations and to minimise possible bias and effects, the participants were assured that I was acting in my capacity as a researcher and this study was independently conducted for a PhD programme; they were also informed that as volunteers they could opt out of participating in the study at any time. Given other previous considerations, such as time, cost and convenience, other factors, such as the research purpose, were considered when the researcher developed a plan for the study sample (Cohen *et al.*, 2011).

Probability (random sampling) and non-probability sampling are the two kinds of approaches on which sampling is based, and they refer to the population representativeness from which it is drawn. In probability sampling, any person or other unit can be included in the sample on which the research is based. On the other hand, non-probability sampling cannot identify the probability of a unit. Interpretive research is more likely to rely on the purposive sampling technique within the non-probability type (Bryman, 2012). According to Bryman (2012), in the purposive sampling technique, as its name indicates, the research sample is selected by the researchers in a strategic way that conforms to the research questions. The main point in purposive sampling is that the choice of the participants in the study, such as individuals and organisations, is made with a particular purpose in mind. That means that the researcher would typically have predefined themes or questions. The current study adopted and used a purposive sampling technique that helped to deal with participants who support the focus of this study.

In addition, because of gender segregation in the Saudi tradition, equal opportunity was given for both male and female lecturers to participate in the study. Accordingly, the decision was made to distribute the questionnaire across all lecturers in the College of Education, with different campuses. However, the fact that there are separate campuses for males and females made it difficult to contact females for inclusion in the questionnaire distribution. To address that challenge, I contacted a special coordinator for different departments to collect the questionnaire data from female lecturers; thus, it took a longer time than anticipated to collect the results. Moreover, cultural restrictions might be one of the reasons why few females accepted the invitation in the questionnaire to participate in the interview process. Table 5.1 below represents the participants for the questionnaire.

Table 5.1: Number of participants for the questionnaire data.

Instrument	Male Lecturers	Female Lecturers
Questionnaire	59	44

In the second step of the fieldwork, the research adopted another technique as part of the qualitative approach, specifically a semi-structured interview to achieve the triangulation method. The semi-structured interviews with lecturers who completed the questionnaire and had expressed their willingness to provide further support, such as participation in the individual interview. Initially, the plan was to use some criteria to select the participants for the interviews, such questionnaire responses in the closed or open-ended questions regarding the respondent's experience of TEL CPD and years of teaching. Furthermore, the plan was in this stage of the study to select the participants to balance the needs of the study where applicable, in order to have a wide range of views. However, after receiving the completed questionnaires, only 12 participants (8 males and

4 females) provided their contact details and agreed to participate in the interview process. Therefore, all the interviewees were participants who were willing to take part in the interviews. In terms of the gender issue, it was impossible to conduct face-to-face interviews with female lecturers due to Saudi culture; thus, the interviews with females were conducted via phone or through social media applications, such as Skype. Table 5.2 below presents information about the interview participants.

Table 5.2: Number and background of participants for the interview data

Pseudonym	Sex	Qualification	Majors	Teaching experience (years)	TEL CPD experience
N1	M	PhD	Sciences	14	Extensive
N2	M	PhD	Sciences	9	Extensive
N3	F	PhD	Computer studies	7	Extensive
N 4	M	PhD	Social science	8	Moderate
N 5	M	PhD	Social science	5	Moderate
N 6	M	Master	Computer studies	6	Extensive
N 7	F	PhD	Sciences	11	Moderate
N 8	F	Master	Humanities	3	Little
N 9	M	Master	Social science	4	Little
N 10	M	PhD	Religious studies	7	Little
N 11	F	Master	Social science	2	Little
N 12	M	PhD	Sciences	5	Extensive

5.8 Data Analysis

In this study, two different types of data collection were used: quantitative (questionnaire) and qualitative (semi-structured interviews). Data of the lecturers' perceptions of their TEL CPD experiences were classified by themes based on the research questions. Each of the three key themes has different measured items and questions, and they were coded according to whether or not the data was quantitative or qualitative. Based on the type of data (quantitative or qualitative), different analysis tools and techniques were used to organise and analyse the collected data.

In the following section, an analysis of these two data collection methods is presented.

5.8.1 Quantitative data

Generally, an analysis of quantitative data is conducted via statistical methods, and selecting a method mainly relies on the quantitative data type (Healey, 2014). While the reason behind using the quantitative method in this study is the descriptive statistics used to complement the data obtained from interviews and not to test hypotheses, data coded and entered into a software program for analysis. There are different statistical software packages to analyse quantitative data, such as GenStat, Microsoft Excel and Statistical Packages for Social Sciences (SPSS). These software packages make the process of research quick and accurate, thereby allowing researchers to obtain greater insight. Moreover, SPSS is one of the most reliable programmes because it allows researchers to score, analyse and obtain quantitative data more accurately and in different ways, and it arranges the variables without the need for rekeying tests (Muijs, 2011). In the present study, quantitative data collected through the questionnaires was entered into and analysed using the SPSS statistical programme which the researcher had access to and was familiar with.

Different analysis stages were conducted to evaluate the questionnaire data. This began by defining and coding the data variables. This was followed by transforming the data into a numerical format so the data could be entered into SPSS and compiled into a data file. After correcting the errors in the data file, the appropriate statistical analysis was used to analyse the data. In the present study, descriptive statistics and tabulations were used to produce simple arithmetic data about the lecturers' views of their TEL CPD experience.

Moreover, comparison tests, such as Mann-Whitney U and the Kruskal-Wallis tests, were applied in an effort to present the differences between the respondent groups in the questionnaire. Non-parametric statistical tests, such as The Mann-Whitney U test (2) and the Kruskal-Wallis test (3), were used to show the comparison across groups as being different (Zhang, 2011). The decision was made to apply these two non-parametric tests in this study based on the following:

- The form distribution of the outcome in the participants was measured a histogram and showed not to be normally distributed.
- The data in the study are ordinal.
- Compared participants' groups were small.
- The comparison of responses was aimed between two or more groups to test the existence of statistical significant differences.
- Outliers data was found in the responses.

Accordingly, and on this basis, non-parametric tests were used to analyse the data and two comparison tests followed, namely, The Mann-Whitney U and the Kruskal-Wallis.

5.8.2 Qualitative data

Thematic analysis was utilised for the qualitative data to create networks, and organise and identify the themes within the data. Thematic analysis can be used across different methods. Guest *et al.* (2012) note that thematic analysis combines a bit of everything, from grounded theory to interpretivism, positivism and phenomenology, into one methodological framework. Braun and Clarke (2006) maintain that thematic analysis includes the generation and application of codes to data and the identification, analysis and categorisation of patterns into themes.

Guest *et al.* (2012) indicate that thematic analysis demands more involvement and interpretation on the part of the researcher. It moves beyond counting explicit words or phrases and concentrates on identifying and describing both implicit and explicit ideas within the data. Furthermore, considerations about the reliability of the data increase with the use of thematic analysis, more so than with word-based analyses, because more interpretation is used to determine the data items and apply the codes into chunks of text. Wellington (2000) indicates that there is no one right way to analyse data; however, some general guidelines emphasise how to conduct an analysis reflectively and systematically. The analysis of data requires researchers to organise and interpret the collected data. This begins by reducing the data, determining how the data are sorted and how the data are coded into categories and themes.

Bryman (2012) encourages researchers to transcribe gathered data as early as possible to promote clarification and make any possible modifications in the forthcoming interviews. In the present study, I transcribed all the interview data after the interviews were completed, which helped me become more familiar with and think critically about the data than would have been possible had I outsourced the transcription to others (Braun & Clarke, 2006). As the interviews conducted in Arabic, the transcription and coding process were in Arabic. Using Arabic transcription and coding were considered to

minimise meaning loss during the process of analysis, which could occur if the whole data was initially translated to English. Moreover, each interview transcription was sent to the interviewees to ensure and confirm that their responses represented what they meant.

Gibbs (2007), Treiber *et al.* (2012) and Saldaña (2015) referenced different stages in the manual coding process for organising and sorting data. They suggested considering the overall process more generally to develop a storyline first, which will help determine general themes and concepts as well as how to best code and organise data. When such a procedure is conducted, creating and coding data in a systemic way should involve a combination of pre-set and emergent codes, data organisation as to file something in a folder by using either phrases or words in margins for later ease of analysis, refining the codes by revising, adding, collapsing and expanding the coding categories and finally coding notes. Such notes may suggest a connection with other data and new interpretations as well as point towards questions to explore while coding and collecting additional data.

In the second stage of the data analysis, the process began by reading through each transcript with the aim of being aware of and understanding the overall ideas in preparation for the actual analysis process. The coding process began by reading with more focus, phrase by phrase, and generating initial codes across the entire data. For this purpose, all the evidence was underlined and the code was written above it. This was followed by identifying and grouping the codes into sub-themes, which were based on the connection between these codes, highlighted using different colours. For example, codes, such as time and workload, opportunities to practise the use of TEL and accessibility and awareness, were gathered under the sub-theme of 'constraints of TEL CPD participation'. The sub-themes were then categorised and grouped under three main themes that reflect the focus of the research questions. For this purpose, cards were used

record the evidence for each theme (see Appendix 7 for an example of these processes). Final analyses of the selected extracts were conducted to produce the complete picture and report, and to relate them back to the analysis of the research questions.

Interviews conducted in Arabic required the use of specialised software packages for data analysis. In the absence of such software, the data was analysed manually. Robson (2002) emphasises the limitation of analysing data manually, especially when there is large number of samples, and therefore the scholar encourages the use of software applications. Notwithstanding, analysing data manually was manageable given the small size of the sample in this research. Moreover, in the present study, the extracts used in the analysis were translated, and both the original Arabic and translated English (all quotations from the interviews) text were presented and checked by colleagues who are professional Arabic-English readers to judge and assess the translation accuracy. In addition, back translation was applied to the original source to ensure and maximise the accuracy and validity of the presented quotes.

5.9 Reliability, Validity and Triangulation

5.9.1 Reliability

Reliability and validity are considered the main tests to ensure and judge research adequacy. Within quantitative and qualitative data, reliability and validity have a different meaning and emphasis (Golafshani, 2003). In quantitative analysis, for instance, reliability refers to the consistency of the results in repeating the same findings when the processes are repeated under similar conditions within other contexts (Ruane, 2005). In general, it could be considered the stability or consistency of measurement. According to Bryman (2012), internal reliability indicates that agreement on the studied subject is achieved from different participants, while external reliability refers to the replicability of the study's finding. However, reliability is difficult to obtain in a qualitative approach

because this method focuses on specific occurrences and concomitances. Thus, in qualitative research, reliability refers to dependability, which is used to examine the consistency of the research process and product (Golafshani, 2003).

Different methods of research can be achieved with the reliability criteria. For example, extracting from an identified population equivalent data is considered the reliability of surveys, and the questionnaire results can be compared with the pilot study or other sources (Bush, 2007). Moreover, Cronbach's alpha is a tool that can be used to measure the consistency of the questionnaires containing questions of a Likert-type (Healey, 2014). The present study used Cronbach's alpha coefficient to assess the internal reliability of the questions in the questionnaire, and the resulting score was 0.878, which is considered to be highly reliable (Healey, 2014) (see Appendix 8 for a copy of the Cronbach's alpha coefficient table test).

Within the interview context, it is proposed to ensure that, while using the same procedures or schedule of two interviews, they acquire similar results or a similar picture, with the interviewer using the same procedures for different cases (Bush, 2007; Silverman, 2010). Furthermore, Golafshani (2003) argues that using both quantitative and qualitative methods ensures and improves the reliability of the data, and researchers can use mixed data for generalisation and confirmation of a research study's findings. In the present study, the overall reliability of the qualitative data was affirmed by the quantitative data that was used to examine if the results were consistent and similar. Additionally, semi-structured interviews were conducted, which ensured the consistency of the format while enhancing the chances of obtaining individual responses.

5.9.2 Validity

The validity concept is meant to “judge whether the research accurately describes the phenomenon which it is intended to describe” (Bush, 2007, p.97). Internal and external validity are two main types of validity concepts, which can be implemented in both quantitative and qualitative approaches. Internal validity refers to whether an explanation of a specific issue or event that the research provides is demonstrated precisely, as well as the suitability of the research to represent the phenomenon under investigation. External validity refers to the ability of the research findings to be generalised (Bush, 2007; Cohen *et al.*, 2011), which, in a pure qualitative research study, is almost impossible (Bryman, 2012).

In the questionnaire, two points cause invalidity. One is that the questionnaire respondents may not answer accurately. Another invalidity cause is non-response and not returning the questionnaire, which could have provided answers that differ from those of questionnaires already completed and returned (Cohen *et al.*, 2011). According to Briggs and Coleman (2007), invalidity causes can be minimised and removed when the rate response is high. In addition, invalidity in interviews is mainly caused by biases, including the interviewer’s biases and all possible bias sources, such as the characteristic of respondents and content nature of questions. This potential limitation cannot be completely avoided, as biases are bound to be presented. In this regard, however, invalidity can be reduced by transcribing interviews and asking interviewees to check them to maximise content accuracy (Cohen *et al.*, 2011).

To validate the instruments in this research, a pilot test was carried out to obtain valuable feedback from volunteers (see Section 5.6.1.1). Also, I translated the questionnaire from English to Arabic, the national language of Saudi Arabia. The questions were shown to two Saudi PhD students, one of whom is studying linguistics, to ensure that the translation of the questions was clear and correct for the participants (Xinglai, 2002) and

that the reverse translation process produced an intelligible questionnaire. All questions must be unambiguous and clear, using understandable and straightforward language (James, 2002). Most importantly in the present study, construct validity was established by triangulation. I used different sources and various methods of data collection, including a survey and interviews.

5.9.3 Triangulation

Triangulation offers a crucial process of ensuring the validity of case study research. Triangulation refers to the comparison of many evidence sources to determine the accuracy of information or data (Bush, 2007). In the research of the case study, using one source of evidence is generally not recommended, as using evidence from several sources would increase the confidence that the case study has rendered the event accurately (Yin, 2013). There is an emphasis on using different methodological perspectives to examine social problems. The use of different methods can enhance the research to avoid ambiguity or the bias of information obtained via a single source (Silverman, 2010; Yin, 2013). According to Bell (1999), who stressed that, in the support of two methods (triangulation), interviews can add more power to the basic methods of a questionnaire, interviews can “put flesh on the bones of questionnaire responses”, increasing the research scope and breadth (p.135).

Triangulation can be used broadly in different ways, such as through several observers, theoretical perspectives, methodologies and sources of data, but a focus on the methods of investigation and data sources has more consideration (Bryman, 2012). Two main types of triangulation can be classified. Methodological triangulation involves different methods that can be used to achieve and explore an issue. The other is respondent triangulation, which involves asking the same questions of various participants (Bush, 2007).

This study utilised both quantitative and qualitative methods for the collection of rich data by achieving methodological triangulation, which was recognised as providing a more comprehensive explanation of the phenomena, verifying one data collection method with the other, and promoting the overall reliability and validity of the research.

5.10 Ethical Considerations

Dealing with people, their behaviours and their beliefs, such as with social research, requires researchers to consider ethical implications (Berg, 2009; Bryman, 2012). The ethical implications applied in the case study are considered significant, as the lecturers were the participants, and the subject of the research could be considered sensitive. Most universities in Britain, including the University of Reading and other research institutions, subscribe to the British Educational Research Association (BERA), which adopted a set of ethical codes, rules and principles that should be followed to enable researchers to improve the process of conducting research (BERA, 2011). Therefore, it is important that the current study followed ethical considerations in compliance with the BERA and University of Reading criteria.

There are important guidelines and principles that must be considered and followed. The researcher's responsibilities to sponsors, participants and the community are the main aspects to be considered regarding ethical issues when conducting educational research. Regarding participants, the researcher should deal with them with honesty and openness, and this should be characterised by the relationship between the participant and the researcher. Privacy and anonymity should also be applied, wherein the researcher is responsible to protect both participant and data confidentiality and anonymity, as well as informed consent, i.e. informing the participant what the research is about, their involvement duties and participation consequences, and participants must be told they have the right to withdraw at any time from the study. Moreover, researchers must use

appropriate language for the relevant study population, as well as make the methods and data amenable when requiring external scrutiny (BERA, 2011).

There is a need for consideration to be directed towards external and internal ethical engagement when the researcher is recognised as an insider, as this will help to decrease any possible emotional, physical or psychological harm amongst the subjects (Floyd & Arthur, 2012). Importantly, external ethical engagement encompasses easily identifiable ethical issues, as well as those that are perhaps more superficial, including anonymity and informed consent. On the other hand, internal ethical engagement may be viewed as a more in-depth ethical consideration, encompassing moral dilemmas that an insider researcher may be required to manage once in the process of carrying out their study. In this regard, it is stated by Floyd and Arthur (2012) that, when it comes to fulfilling internal ethical engagement, there are no suitable checklists to lead the process; rather, there is a need for insider researchers to anticipate and prepare themselves for any problems potentially faced not only in the study design and application, but also in the period of time subsequent to study completion when professional and personal relationships might require time and effort to maintain, as well as when research confidentiality could prevent open and honest communicative exchanges with those known to the researcher.

Ethical matters dealt with in every single phase of the current study to provide respect to participants, as well as to protect them from potential harm. The following steps and procedures were followed to ensure ethical conduct. First, ethical approval obtained from the Institute of Education, University of Reading ethics committee before conducting the fieldwork (Appendix 6). Secondly, the research supervisor wrote a supportive letter to explain and confirm the nature and aims of the study. This was followed by official correspondence between the Saudi cultural attaché in London, the Ministry of Higher Education in Saudi Arabia, and MU. This aim was to acquire official and academic

support for the research. Thirdly, all participants' data and the personal information of those involved in the study were kept safe, only reachable by the researcher. Furthermore, data was protected by a password in a computer software program. In addition, each participant's real name did not appear in the research and pseudonyms were used instead. The researcher also enclosed and informed the participating lecturers of the procedures and aims of the study in writing and in advance as well as their right to withdraw from the study at any time (see Appendix 5 for a copy of this document).

For the internal ethical engagement, the researcher was recognised as an insider to the subjects. When considering an outside researcher, it may be suggested that they are less susceptible to bias and might be free from potential 'baggage', which could cause existing relationships with participants to be affected. Owing to the researcher's role as a lecturer at the College of Education at MU, however, the position of insider researcher was recognised as potentially beneficial owing to the ability to gain access to a study sample and achieve deeper understanding and valuable data. However, drawbacks could also be identified in this regard, including the fact that the sample may have wanted to be agreeable by provided answers they considered the researcher would want to hear, rather than being completely transparent. In an effort to ensure such factors were decreased to the greatest possible extent, the participants were assured that the researcher's position was centred on study completion, with an interest only in garnering insight into the issue under examination. Furthermore, continual review and reflection on the process was ensured by the researcher in an effort to ensure the eradication of any further bias.

5.11 Summary

This chapter has described the design process of the research, methodology, methods and procedures followed in the current study to explore the lecturers experience with CPD in TEL in the College of Education, MU. This chapter also aimed to justify the methodology and method selection. A demonstration of both approaches (quantitative and qualitative) has been conducted, and their purpose of use is to gain the advantages of each and to minimise limitations. The quantitative method involves the survey, and the qualitative method involves the semi-structured interviews. Moreover, the chapter has illustrated the case study, the participants and the data analysis; it has also presented an explanation of the validity and reliability of the data collection instruments. Finally, the data analysis and approach to ethical issues have been discussed.

Chapter Six

Analysis of Quantitative Data

6.1 Introduction

The study distributed questionnaires as one of the two methods used to collect data. This method was used to examine the major areas related to the research questions, notably by obtaining data about the bigger picture of the current situation pertaining to lecturers' perceptions and experiences of TEL professional development in Saudi Arabia. This chapter discusses the quantitative data analysis findings.

As such, the data analysis is mainly based on descriptive statistics, which provides a presentation of numbers and percentages regarding the participating lecturers' demographic characteristics (frequency distribution of age, gender, level of education, subject and years of experience) and the amount of TEL professional development they have received. This is followed by their views about more experienced and effective TEL CPD programmes. An analysis of evaluative statements is then presented in order to categorise the lecturers' perceptions about TEL CPD into three main dimensions: participation, implementation and impact.

6.2 Part One: Demographic and Background Analyses

Questionnaires were sent to all lecturers belonging to seven different departments in the College of Education (89 males and 71 females). An appeal was made, reminding lecturers about the questionnaire and the anonymity of their identities and the confidentiality of their responses in an attempt to obtain a higher response rate. However, not all the lecturers returned the surveys; in the end, a total of 103 surveys were completed and returned.

Respondents' demographic characteristics were gathered in the first part of the questionnaire. The gender, age, subject, the highest qualification in education, length of experience and amount of CPD in TEL information relating to each participant were included in this segment of the questionnaire.

A. Participants' Gender

The gender in this study was the first independent variable. In the first question, lecturers were asked to identify their gender. The data in Table 6.1 illustrates the distribution by gender of the 103 participants: 59 were male and 44 were female. This means that 57.3 % of the total number of participants were male. Some difficulty was encountered in contacting female lecturers because of the nature of the culture in Saudi Arabia, whereby men and women interact separately in most situations. However, the difference here was minimal, especially when noting that the number of female lecturers was already less than that of male lecturers in the case institution, as mentioned earlier. It can be said that, in terms of gender, the sample lecturers in the study equally represented both male and female perceptions in the studied case.

Table 6.1: Distribution of participants by gender.

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	59	57.3	57.3	57.3
Female	44	42.7	42.7	100.0
Total	103	100.0	100.0	

B. Participants' Age

The majority of respondents' ages fell into the age group 31– 40 years old, which accounted for more than half (53.4%) of the total number of participants (Figure 6.1). Lecturers are likely to be in this age group, with young lecturers needing time to proceed with their studies and qualifications, either at local universities or outside the country; they are normally expected to complete these by the beginning of their thirties. On the other hand, lecturers over 50 years of age are likely to have retired from their jobs or moved to administration positions. The number and percentages of those in the different age groups in the sample can be seen in Figure 6.1 below. Only 16.5% of lecturers were aged 20–30 years, whereas more were aged from 41 to 50 years (22.3%), with few aged over 50 years (7.8%).

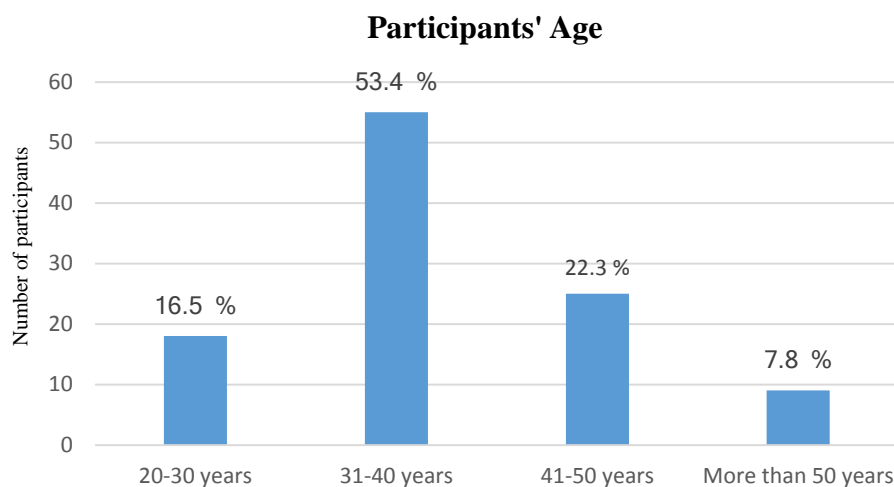


Figure 6.1: Distribution of participants by age

C. Participants' Qualifications

In this study, participants were requested to mark the highest level of academic qualification they had obtained to the date this study was conducted; these ranged from bachelor's degree to doctoral degree. To be one of the university academic staff, the minimum requirement in any discipline is a bachelor's degree.

The data in Figure 6.2 show that the most common level of qualification was a Doctoral degree (44.7%), held by nearly half of the sample. The reason for this is that the Doctoral degree is the expected qualification for lecturers to take up the many responsibilities that their job requires. The second most common grouping of lecturers was those who held a Master's degree (40.8 %), slightly below those with Doctorates. However, a small proportion, 14.6 %, had only a Bachelor's degree. This is in spite of the fact that the policy makers in the Ministry of Higher Education, in general, and in MU, in particular, encourage all Bachelor degree holders to upgrade their qualifications. The reason behind some of these Bachelor degree holders may be that they have just been employed and are preparing to improve their qualifications, or they could have family circumstances preventing them from continuing their studies.

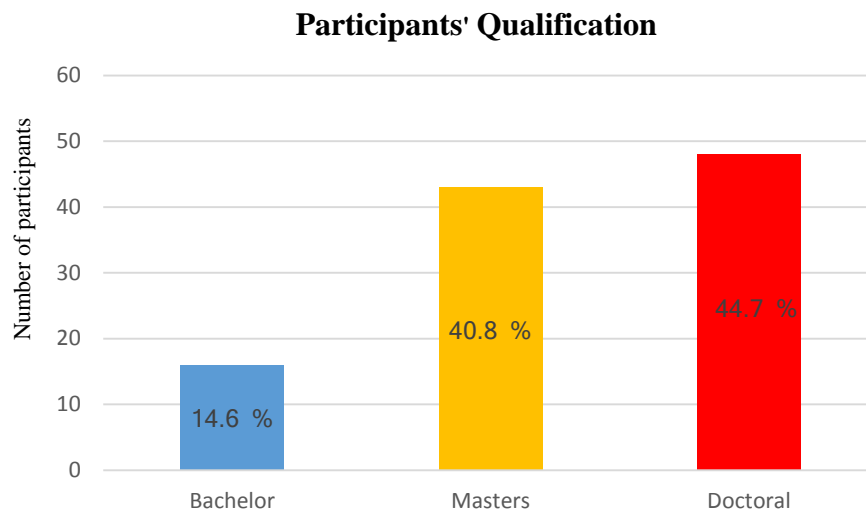


Figure 6.2: Distribution of participants by qualification

D. Participants' Years of Experience

Figure 6.3 illustrates respondents' length of experience in teaching. Most participants fell into the 2-5 years or 6-10 years' groups. Of those, 35 (34.0 %) had from 2-5 years teaching experience, and 30 (29.1%) had from 6-10 years. The smallest group of participants (7.8%, a total of 8) had teaching experience of less than one year. The 11-15 years group had (15.5 %), whereas those of more than 15 years group had (13.6%). In the current study, it can be argued that most lecturers had adequate experience in teaching, with such experience promoting the investigation relating to TEL CPD to report their technology development in practices.

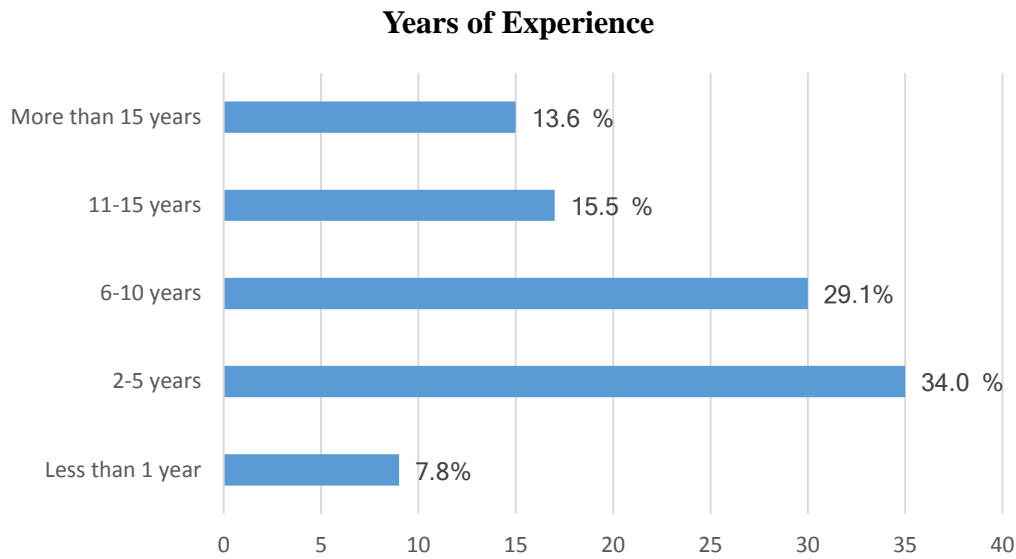


Figure 6.3: Distribution of participants by years of experience

E. Participants' Subject Areas

Academic subject area was one of the independent variables that participants were requested to state. Figure 6.4 shows that the majority of participants (52.4 %) were specialists in the social science and humanities area. This could be attributed to the fact that the institution case of this study was the College of Education, and most lecturers in this field are from social science backgrounds. In contrast, Religious Studies (16.5%), Sciences (18.4%) and Computer Studies (12.6%) had lower representation among participants.

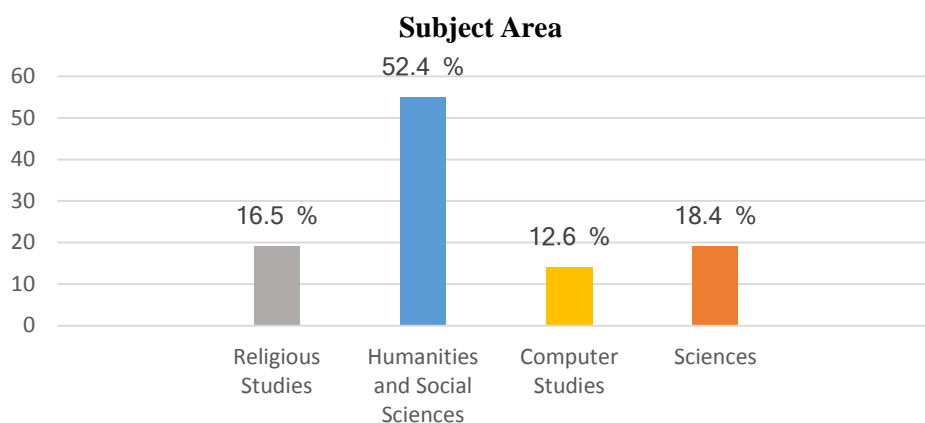


Figure 6.4: Distribution of participants by subject area

F. Amount of CPD in TEL

This question concerned the amount of CPD in TEL which participants had experienced. Participants were requested to state one of four answers: a great deal (seven or more courses), a moderate amount (four to six courses), a little (one to three courses) or none. The most common response was ‘a little’ (54.4% of participants), followed by (29.1%) of participants who had a moderate amount, and (23.3 %) who had a great deal of attendance. Of the case institution lecturers, (8.7%) had no attendance at any CPD in TEL. Nevertheless, the attendance of TEL CPD is not imposed; rather, lecturers are encouraged to attend such courses so as to improve their TEL knowledge and skills to be successfully integrated in their pedagogical practices, as mentioned earlier chapters.

Amount of CPD in TEL

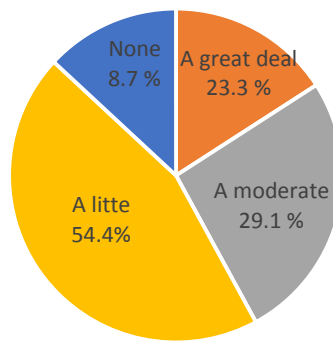


Figure 6.5: Distribution of amount of CPD in TEL

6.3 Part Two: Types of CPD in TEL

In the second section of the questionnaire, participants were asked to provide two distinct items of information regarding a list of types of CPD activities in TEL. In the first question, participants were asked to state their most commonly experienced TEL CPD activities (Section 6.3.1). In the second question, participants were asked to choose which type of activity was the most effective in their view (Section 6.3.2). Participants could choose more than one type if they had experience of more than one activity or perceived more than one activity as effective. Participants, furthermore, were provided with an open-ended question box to comment, if they so wished, on their experiences and effectiveness of these TEL CPD activities.

6.3.1 Experience of types of TEL CPD

Lecturers were asked to state, from the listed types, which types of TEL CPD activities that had experienced. Table 6.2 presents their responses. The data analysis reveals that all the types listed in the table had been experienced by at least some of the lecturers who undertook TEL CPD.

In regards to experienced TEL CPD types, the most common activities reported by respondents were face-to-face short-term courses (63.8%), followed by online learning (39.2%) and conferences (28.0%). Reading subject literature (21.9%) and attending face-to-face long-term courses (17.6%) were less often quoted. The least frequently listed types of TEL CPD were specialist subject meeting (11.5%), group discussion (14.6%) and peer observation (15.6%). The possible reason of short-term courses and online learning were the most experienced by lecturers as being mostly offered by the university for its member staff.

Table 6.2: Participation in different types of CPD activities

Activities	Percentage of respondents who had experienced the activity
Attending short-term courses (face-to-face)	63.8%
Attending long-term courses (face-to-face)	17.6%
Online learning	39.2%
Conferences	28.0%
Participating in group discussion (collaborative learning)	14.6%
Peer observation	15.6%
Publications (reading subject literature)	21.9%
Specialist subject meeting	11.5%

6.3.2 Effectiveness of CPD activities

In this sub-section participants were asked to indicate which TEL CPD types were the most effective for their TEL professional developments, and for promoting their learning. It is apparent from Table 6.3 that differences existed between those TEL CPD activities

that participants stated to be more effective and activities that they had experienced more. In general, lecturers to varying degrees, as presented in Table 6.3, valued all listed types of TEL CPD. The criteria for effectiveness, in the lecturers' views, did not seem to be related to the percentage of experiences. In this study, attending long-term courses (41.5%) and group discussions (39.8%) were rated as the most effective TEL activities. The findings in this part support the literature that the provision of collaborative and experiential learning opportunities included in TEL CPD are more to likely be effective as they enhance participants' experiences.

Conversely, conferences (29.1%) and short-term courses (28.4%) were close to each other and reported at the second level of effectiveness. The two least effective activities, according to respondents' perceptions, were publications (17.7%) and peer observation (12.5%). This could be attributed for the time limitation, or as they were most likely that lecturers to involve in and experience.

Table 6.3: Participants' views of effectiveness of TEL CPD activities

Activities	Percentage of respondents who rated the activity as effective
Attending short term course (face-to-face)	28.4%
Attending long term course (face-to-face)	41.5%
Online learning	22.9%
Conferences	29.1%
Participating in group discussion (collaborative learning)	39.8%
Peer observation	12.5%
Publications (reading subject literature)	17.7%
Specialist subject meeting	26.0%

The following section presents comments from respondents drawn from the open-ended question on types of TEL CPD.

6.3.3 Comments by participants (open-ended question)

In respect to the types of TEL CPD, seven respondents indicated that they were more likely to participate in short courses and online learning activities, as the short courses were usually based at, and provided by, the university and took place within their working time, whilst the online courses were controlled by themselves in their own free time and at their own convenience and choices. Moreover, three comments emphasised that lecturers considered in-house courses in TEL as their preferred means of professional development, with such courses more likely to address the relevant institutional needs of available resources, and suitable time and access to involve in as such courses are mostly provided in their working campuses.

Furthermore, there were two comments regarding the effectiveness of long-term courses. In their comments, participants assumed that, when they undertook long-term courses, they would normally be outside the work environment and could concentrate on TEL learning course without any distractions. In addition, the reason behind the effectiveness of this type of professional development is that it would ensure that all TEL course aspects are properly covered, and collaborative and experiential opportunities are provided.

Three negative comments were that the conferences provided abroad or outside TEL courses were given mainly to the doctoral level of lecturers, whereas master and bachelor degree holders were not given the opportunity to participate in such activities.

6.4 Part Three: Dimensions of the evaluation of TEL CPD opportunities

The third part of the survey included statements centred on analysing lecturers' perceived values around the TEL CPD courses that had been provided for them. In this section, items were divided so as to answer the research questions in a dimensional way in an attempt to be organised into the three main sections. In the first section, participants' views of the participation importance towards their TEL professional developments were considered. Following on from this, implementation factors that can influence TEL CPD effectiveness and quality were examined through participants' experiences and perceptions. Perceived outcomes were then identified with regards examining the impact of current provided TEL opportunities on Saudi lecturers. Moreover, lecturers were asked to respond to each evaluative statement to describe their view and assessment of their TEL CPD experiences on a five-point Likert scale: 1) strongly agree, 2) agree, 3) neutral, 4) disagree, 5) strongly disagree.

6.4.1 The First Dimension: Participation

One objective of the current study was to identify lecturers' perceptions on participation towards TEL CPD activities, whilst a second was to investigate what factors could influence their active involvement in such professional developments. The descriptive statistics of lecturers' responses in respect to 'Participation statements' revealed a mean score of 4.16 on the perception of participation scale, which falls into the high level range. Therefore, as Table 6.4 below indicates in terms of lecturers' responses to the participation items, it can be said that lecturers were overwhelmingly positive towards appreciating the importance of participation in TEL professional developments as being high.

The total agreement of the need of TEL CPD in terms of the participation dimension was around (80%), whereas the total of disagree was the lowest with less than (9%). Thus, the

total agreement represents the highest percentage, when compared to others, which indicates positive perceptions of these TEL professional developments and their roles of lecturers in terms of the importance of the learning and teaching process. More specifically, it can be noted that the vast majority of lecturers had highly positive perceptions of TEL programmes, either internally or externally, for all participation items, considering TEL knowledge and skills as useful and important, and also for their teaching practices and professional development. Through close examination of the participation items, more than (95%) of participants agreed or strongly agreed that TEL professional development was important to their teaching process and developments, and also as they need to keep up-to-date in TEL for the teaching and development purposes. Moreover, more than (80%) of these disagreed or strongly disagreed with the statement that TEL courses were not a priority for them, and agreed, however, with the statement that they are interested in learning more about TEL. Thus, this could imply that the majority of lecturers, according to their view and responses, were aware of the importance of the role TEL CPD plays in personal and professional development, and the need for such opportunities to achieve TEL competence for their successful professional practices. It can be concluded that lecturers have the desire to participate in TEL courses, as they seem to be aware of its benefits in terms of helping them to strengthen their ability of successful practice of educational technologies.

On the other hand, in the fifth statement, approximately (60%) of the participants agreed or strongly agreed that the lack of availability of time released for TEL CPD participation was considered a barrier to becoming involved in TEL programmes. In other words, despite the main trend of positive participants' view and the awareness of the needs for TEL courses, it can be noted from their responses that this view, to some extent, has been affected by the time factor to involve in TEL CPD. Accordingly, and at the end of this dimension result, it can be concluded that participants had strong positive perceptions in

terms of undertaking TEL programmes; however, although they have had such view, there was an indicated barrier that would limit and influence their positive participation perception.

In this section, furthermore, a significant difference in the TEL CPD participation dimension was identified with respect to the age of lecturers. Lecturers in the 20–30 years age group were more likely to participate in TEL CPD courses when compared with older age groups of lecturers ($P = .023$). The results indicated that lecturers in the 20–30 years group reported that they were more likely to be involved in such programmes as they needed to develop TEL knowledge and skills for professional developments.

Table 6.4: Responses to participation items

Participation items		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1- I am interested in learning more and continually about using TEL.	Count	61	37	4	1	-
	%	59.2	35.9	3.9	1.0	-
2- I need to develop my TEL skills and knowledge for professional development.	Count	72	26	3	2	-
	%	69.9	25.2	2.9	1.9	-
3- I feel I should develop my TEL skills to keep up to date with developments in teaching.	Count	73	24	4	2	-
	%	70.9	23.3	3.9	1.9	-
4- TEL professional development is not a priority for me.	Count	3	7	8	36	49
	%	2.9	6.8	7.8	35.0	47.6
5- I am interested in TEL courses but do not have the time.	Count	15	51	10	24	3
	%	14.6	49.5	9.7	23.3	2.9

6.4.2 The Second Dimension: The Implementation

The items of the effectiveness and quality of provided TEL CPD as viewed by lecturers in this study are presented in this section. The implementation dimension was designed to identify the general perceptions of participants regarding the design efficiency of CPD activities that provided in TEL, which was investigated by various items in the questionnaire, and whether or not such delivery met their needs and was effective from their perspectives. Table 6.5 indicates lecturers' responses to the implementation items that addressed the second research question. However, the results from this part show that participants' perception of 'the implementation' were in the low level (mean = 2.93). An indication from the following table that most of the statements that comprise the design of TEL CPD and meeting needs of lecturers illustrate an overall low level of satisfaction as the total responses of the effective implementation dimension of TEL professional development were (58.9%) disagree or strongly disagree, and (24.3%) were agree or strongly agree, while 'Neutral' was the lowest with only (16.8%). Consequently, according to participants' view, it can be said that the design and delivery of TEL CPD activities had not been effectively provided in terms of lecturers' satisfaction and needs. To be more specific, an examination of the lecturers' responses details that related to this aspect could be useful. In relation to the identification of needs were taken in advance before the provision of TEL CPD, more than (65%) of participants disagreed or strongly disagreed about this aspect. In the same vein, about (70%) of respondents were negative with the statement that represents TEL courses covered and met lecturers' development needs. Based on participants' responses, the vast majority of them perceived TEL CPD as not tailored to match the actual needs and interests of lecturers, and participants also claim that (as shown in the following table in item 10) their involvement of TEL CPD formats and designing choice was missed and ignored. Moreover, although a large number of lecturers expressed the opinion that the TEL courses provided were not based

on their real needs and preference, some constraints were identified within the provided design of TEL CPD. For instance, more than (62%) agreed or strongly agreed that experienced courses did not provide practical aspects equal to the theoretical aspects, and similarly with the question asked whether educational technology activities provide opportunities to practise TEL applications in the classroom.

On the other hand, respondents were equally distributed between agreement and disagreement status with regard to whether the delivered TEL courses kept pace with TEL developments in the educational field, (38.3%) of participants were positive, and around (39%) of them were negative about this item. Likewise, in relation to item 16, which asked respondents about their view of the amount of time they were given in TEL courses to engage in hands-on activities to practise newly developed TEL aspects, the participants were equally distributed between agreement and disagreement. This could be attributed as difficult, for some with their general experiences in TEL CPD and with these general questions, to be specific and they have chosen their perception in general towards such items.

Table 6.5: Responses to the implementation dimension items

The implementation items		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
6- TEL professional development is provided on the basis of my curriculum needs.	Count	13	24	11	42	13
	%	12.6	23.3	10.7	40.8	12.6
7- TEL courses meet and cover lecturers' development needs.	Count	7	10	13	49	24
	%	6.8	9.7	12.6	47.6	23.3
8- Lecturers are consulted in advance on the content of TEL courses before their provision.	Count	8	17	10	39	29
	%	7.8	16.5	9.7	37.9	28.2
9- Professional developments in TEL are comprehensive enough in designing and efficiency.	Count	7	39	23	30	4
	%	6.8	37.9	22.3	29.1	3.9

10- Lecturers are involved in the provision, format and designing of TEL professional development.	Count	6	26	16	42	13
	%	5.8	25.2	15.5	40.8	12.6
11- TEL programmes keep pace with improvement in the educational field and support them.	Count	10	29	22	32	10
	%	9.7	28.2	21.4	31.1	9.7
12- TEL professional development provides only the theoretical knowledge, and did not provide the practice of it.	Count	19	45	11	24	4
	%	18.4	43.7	10.7	23.3	3.9
13-TEL courses did not contain many opportunities to practice the use of TEL in the classroom.	Count	21	45	15	18	4
	%	20.4	3.7	14.6	17.5	3.9
14- The TEL applications used in TEL professional development are available in my classroom.	Count	5	20	19	45	14
	%	4.9	19.4	18.4	43.7	13.6
15- Technical support is available in TEL professional development when needed.	Count	10	22	19	41	11
	%	9.7	21.4	18.4	39.8	10.7
16- Time is made available to practise and develop new TEL aspects.	Count	6	34	21	36	6
	%	5.8	33.0	20.4	35.0	5.8

Trainer Competency

Furthermore, the current study sought to examine (as a main sub-dimension into the implementation part of the questionnaire) whether trainer competency was effective and supportive to the design and meeting needs. Table 6.6 shows the responses to trainer competency items, which indicates that the general lecturers' perceptions of 'Trainer Competency' were moderate (mean = 3.11). According to participants' view, it can be said that they were satisfied with technological instructors' quality in general, but instructors were not specialists in participants' specialist subjects. To be more specific, with the items' findings, the results from the question asked that the level of trainers' competency was satisfactory, in general, the responses indicate that the majority of respondents (55%) agreed or strongly agreed about this item. However, in respect of trainer specialisation in respondents' subject area and curriculum, more than (48%) of lecturers disagreed or strongly disagreed regarding this statement, while about (23%) of them were not sure. Moreover, participants were evenly distributed in relation to the item

that “Most TEL trainers are well qualified”. Therefore, from these results, it can be concluded that the general quality of trainers was acceptable in the lecturers’ experiences, but that participants would appreciate to participate in TEL CPD with trainers who are knowledgeable and understand their subject-specific demands.

Table 6.6: Responses to trainer competency items

Trainer competency items		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
17- The quality of trainers is satisfactory.	Count	8	48	25	20	2
	%	7.8	46.6	24.3	19.4	1.9
18- Most TEL trainers are knowledgeable in my subject.	Count	7	25	23	43	5
	%	6.8	24.3	22.3	41.7	4.9
19- Most TEL trainers are well qualified in TEL.	Count	6	37	27	31	2
	%	5.8	35.9	26.2	30.1	1.9

In addition, there were no significant differences among lecturers within the implementation dimension in respect to their age, gender, subject area or years of experience. This implies that all groups of participants had similar evaluation views of the provided TEL CPD activities.

6.4.3 The Third Dimension: Impact

This part of the questionnaire statements was presented to examine lecturers’ views on the impact and benefits gained as a result of experienced TEL professional developments on participants. The impact dimension is the third aspect of evaluating TEL CPD opportunities, which addresses one of the research questions. The general results from this dimension reveal that lecturers perceived the impact of TEL activities, both at individual and institutional levels, to be in the moderate level (mean = 3.22). In general, the results showed that lecturers judged that a positive outcome of TEL CPD on the

personal side was achieved including improvements in knowledge, teaching practices, and collaboration with others.

By representing the lecturers' responses in more details from table 6.7 below, the majority of participants were positive and in close to agreement (about 72%) in regards to the statement that experienced TEL programmes had provided opportunities to exchange knowledge and experience with others, which would lead to the TEL course flourishing. Furthermore, about (62%) of participants agreed or strongly agreed, in items 21 and 22 of this dimension, in which they felt to be more effective in their classroom practice after going through TEL developments, and also in relation to the question asked that their undertaken TEL programmes encouraged them to attend other digital technology courses. Thus, it can be said that, according to participants' view, positive impact on the individual was obtained as a result of TEL CPD.

On the other hand, in item 24, more than half of the participants (52%) disagreed or strongly disagreed with regards to the availability of follow-up and support when needed to maintain the gained improvements. Moreover, about (51%) of respondents were negative, whereas (18.4%) were not sure, in relation to the item that the access was made to TEL resources to practise what they learned through attending TEL courses. In other words, although participants perceive TEL CPD increased their personal development and positively impact them, it can be seen from the responses of the majority of respondents that this development, to some extent, the impact has not seen and facilitated in the organisational level. Thus, it can be concluded that experienced TEL CPD by lecturers may have had a positive impact on some aspects, a limited influence, however, could be noted on other aspects, particularly on the organisational level.

On the other hand, in respect to the impact differences among groups in the study's participants, there was a significant difference with respect to the teaching experience of lecturers. Participants with 11-15 teaching experience group were more likely to perceive

beneficial impact of TEL CPD compared with other teaching experience groups ($P=.019$). The results revealed that lecturers with 11-15 teaching experience were more likely to be more effective in dealing with TEL in the teaching practice as a result attained by experienced TEL CPD.

Table 6.7: Responses to impact items

Impact Items		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
20- I greatly benefited in knowledge from participation in TEL professional development.	Count	15	35	26	21	6
	%	14.6	34.0	25.2	20.4	5.8
21- I became more effective and capable in teaching practice with TEL, after participation in TEL professional development.	Count	14	50	22	15	2
	%	13.6	48.5	21.4	14.6	1.9
22- Participation in TEL courses encourages me to attend other TEL programmes.	Count	12	31	21	34	5
	%	11.7	30.1	20.4	33.0	4.9
23- Attendance at TEL professional development has provided me the opportunity to exchange knowledge and experiences with peers.	Count	24	54	11	12	2
	%	23.3	52.4	10.7	11.7	1.9
24- Follow-up and support in TEL are available in the organisation, after participation in TEL development.	Count	8	28	13	44	10
	%	7.8	27.2	12.6	42.7	9.7
25- Access to TEL resources is made available to practise and develop new TEL skills.	Count	5	25	19	41	13
	%	4.9	24.3	18.4	39.8	12.6

6.4.4 General comments by participants

In addition to above items, participants were offered an open-ended question on the evaluation of TEL CPD dimensions. Many participants responded with comments regarding these aspects.

Seven comments were made about the time aspect of lecturers' participation in TEL courses. Most of them asked for a specific time to be allocated, suitable for lecturers to involve in TEL activities. They assumed that, if lecturers were not given the time

opportunity, they would not be able to undertake TEL CPD, and these programmes would have a diminished role. Furthermore, some lecturers mentioned that TEL professional development coordinators should understand beforehand the provision of appropriate time by consulting lecturers at the beginning of the year.

There were five negative comments by participants who mentioned that all packages of TEL CPD seem to have been prepared for a range of audiences, including lecturers, workers or even students, in the same manner and without any differentiation in respect to real needs. Also, some participants indicated that, when these TEL courses were completed, there was no evaluation to ensure that the intended objective of learning had been delivered successfully. The TEL courses were just delivered, and the task of learning or development was considered finished.

In addition, three comments mentioned the lack of university support for attending such training. They suggested that the university should intensively encourage lecturers to take part in TEL courses for teaching and learning purposes. They mentioned that the university would not leave the choice of participation up to the lecturers if they really cared about the students' successful outcomes.

6.5 Summary

This chapter presented the results of the quantitative data analysis. The main aim of the questionnaire was to obtain information about and examine the major dimensions related to the main study questions regarding the evaluation of TEL professional development in a Saudi Higher Education context. This part of the research study explored the lecturers' perceptions about participating in TEL CPD programmes as well as their views of TEL CPD implementation and its impact on their professional lives. Firstly, the analysis examined the participants' characteristics, obtained from the first part of the questionnaire, in terms of gender, age, subject area and years of experience. Then, the

lecturers were asked to state the types of TEL CPD experiences they have had and to assess their effectiveness. The final part of the questionnaire investigated three dimensions related to the TEL CPD programmes that the lecturers had attended: participation, implementation, and impact. A separate analysis was conducted for each dimension.

The quantitative analysis results showed that the lecturers varied in terms of their TEL CPD experiences and their opinions about the effectiveness of TEL CPD programmes, which were influenced by their preferences and the availability of these courses. However, the lecturers reported positive perceptions about the participation dimension items, and they perceived the importance and usefulness of TEL both personally and professionally. The implementation dimension was ineffective from the participants' point of view, as their needs and voices were neglected. To some extent, the TEL CPD programme had a positive influence on the participants, but there were some limitations that reduced its impact, in particular, in relation to the organisational level.

Chapter Seven

Analysis of Qualitative Data

7.1 Introduction

This chapter discusses the analysis of interviews with 12 lecturers from the stated case study at MU in Saudi Arabia. This stage of data collection took place after the survey stage. The purpose of this qualitative data is to explore and provide insights as a result of data obtained from the quantitative analysis in order to more deeply investigate the current situation of the lecturers' TEL CPD experiences, as well as to broaden the analysis of the findings and clarify and confirm the study's results.

The analysis of the interviews is presented to provide qualitative data relating to the study's research questions and to identify the emergent themes. It also provides more details about the data in relation to the three main themes to facilitate the findings of this study. The first part of this chapter presents an analysis of the interviews focusing on the lecturers' involvement with TEL CPD. The second part examines the data from the interviews regarding the effectiveness of TEL CPD provision the lecturers experienced. In the last part, the analysis of the lecturers' interviews investigates the achievements they have experienced by participating in TEL CPD.

7.2 Involvement with TEL CPD

Investigating the lecturers' perceptions of their involvement with TEL CPD was one of the objectives of the research study. The study also sought to determine the factors that motivate and facilitate or inhibit lecturers from undertaking TEL CPD. The majority of the lecturers that were interviewed expressed very positive views about their participation in TEL CPD courses, and they considered it to be a crucial part of their ongoing

proficiency and development both personally and professionally in a teaching and learning setting.

This finding is in accordance with quantitative data in a way that such results would reflect the absence of the effects of the insider researcher in regards overall answers. Furthermore, the lecturers provided numerous explanations about what influenced them and they shared the reasons why they have been involved in TEL CPD programmes. Several categories were included under the involvement category in the interviewees' remarks, such as the internal and external value of participation in TEL professional development.

7.2.1 The intrinsic motivations

Lecturers mentioned some motivators for their desire to participate in TEL CPD activities. These were: keeping themselves up-to-date in the TEL area, maintaining their professional standards, utilising the opportunity of meeting learners' needs, and developing their practice in teaching. Specifically, the factor of keeping themselves up-to-date in the TEL area, which is seen as an important aspect in current days, was the major self-motivation for TEL CPD to be undertaken by lecturers as they repeatedly mentioned it, especially with emphasis on the dramatic changes and advancements in technology area. For example, one of the interviewees commented:

CPD in TEL is essential aspect. It would keep me and make me always as a fresh starter with new things in TEL to learn and apply, as technologies are always changeable and I need to keep understanding these changes over time. (N5)

Another lecturer also emphasised this point, stating:

I try to keep my eye on TEL courses throughout my career to involve effectively in them. CPD in TEL eventually would certainly in any way of

progression improve my TEL personal and career quality, enhance my confidence to use TEL properly in education, and also improve my TEL knowledge and skills because technology developments always require continued involvement. (N6)

One lecturer expressed the interest of attendance to develop TEL knowledge and skills. The respondent paid for some attended TEL courses with her own money as she perceives that:

I am interested in technologies and believe the need to develop this tendency by participating in various courses on TEL in education whether from work or business (private) providers. I paid many times myself as need to develop my skills in this area. (N3)

These accounts by the interviewees indicate that they have the willingness to undertake TEL courses as technology itself has a basic contribution to teaching and learning, and respondents would like to develop their skills further.

The acquisition of knowledge and development of teaching skills within TEL to create a successful learning environment appeared to be one of the key motivators for most interviewees. These are intrinsic reasons which lecturers are motivated by individual interest in the activity as they are not imposed to integrate TEL in their pedagogies, and just encouraged to do so. In a similar vein, enhancing the quality of education was one of the facilitators for involving with CPD in TEL. Three lecturers expressed the need for raising teaching and learning standards through TEL CPD activities in order to encourage professional development and motivate them to integrate TEL into their classrooms. They discussed the view that high quality lecturers can utilise technologies positively in the learning environment, and keep learning how to apply them successfully so that they impact on meaningful experiences of learning and teaching. These lecturers focused their

view on the development of teaching staff in order to maximise the successful achievement of learners' experience. References to the learner were included in some of their expressions, for instance CPD in TEL activities would be undertaken in light of developing the experience of learning with TEL for the learners' achievements and outcomes.

One of the interview respondents, who has extensive teaching experience, focused purely on the learners' benefits by stating that:

It does not matter what our perspectives and acceptance regarding TEL are. Nowadays, there is no doubt within educators about the importance of using TEL in education. So, for the learners' benefit and successful learning experiences, pursuing TEL CPD activities is essential to guarantee and attain these benefits. (N1)

In addition, the subject of TEL was seen as a vital factor in the continuing development and learning by lecturers to take part in TEL CPD activities. Some respondents stated that they would participate in TEL CPD as they viewed it as a tool to equip them with a subject that was very important in our modern days. They reported that TEL was an important subject that they felt they need to be well-skilled and knowledgeable in order to socialise and network with others for educational purposes.

For instance, one respondent, whose background is science, would like to have participated in TEL CPD; that person stated:

Technology and science are the basic areas in our modern days, and they change and develop every single day. If we do not care and pay attention to be knowledgeable and well skilled in them, our society and learners would suffer and be considered underdeveloped. The major key to overcome this aspect is to get involved in professional development to be always up to date with them. (N2)

When asked about the encouragement to undertake TEL programmes, one respondent said:

Let me be honest with you; TEL is not avoidable to develop in and learn. It is a crucial aspect for academic staff to adopt in such work and academic environment, as it supports achieving progress by dealing effectively with others in such tools. (N4)

Another internal motivation that could enhance TEL CPD participation is that of moving to another job position in order to achieve career growth, professional status and improvement. Some lecturers expressed the view that to get the satisfactory position that they hoped to be in, either in the same university or elsewhere, they should improve themselves in all aspects to enhance their profile to get such recruitment. Lecturers stated that having TEL knowledge and skills, especially in education, would promote such career growth, and only participation in TEL CPD opportunities would provide them with this enhancement.

For example, one interviewee expressed his view about this factor by stating that:

Many opportunities especially these days for us as lecturers would be offered to a qualified person who has particular experience or skills, and I think that TEL is an essential proficiency that job hunters care about and look at for many positions. For instance, I was asked if I had the ability to deal with some specific TEL areas, as they just asked me if I'd got these skills to be responsible and the head for a specific sector in the university. Therefore, if you are ready with such skills and knowledge, better job opportunities would be opened for you. (N9)

The other respondent agreed with the previous view, and she added:

I am responsible for TEL and e-learning in the educational faculty that I work in. As I always follow technology learning opportunities and I

attended a great deal of them, I was chosen to take this role in the faculty and that is what gave me this feature among my colleagues. Now, when I apply for other jobs in different places, I focus in my CV on TEL experience and skills besides my academic specialisation. I believe such an area would promote my profile to be more accepted in different places of work. (N3)

7.2.2 Extrinsic motivations

There are some external factors that motivate lecturers to participate in TEL CPD. The lecturer's career position and how other people perceived it could be one of the external motivators to take part in TEL CPD. More than one interviewee mentioned that they were involved in TEL professional development in order to maximise their basic knowledge and skills in all aspects of digital technologies in their specialist subject, as their career as a university lecturer was seen by others as requiring a qualified person capable of dealing with modern tools, and he would need to be well qualified to support his students' learning.

For instance, one lecturer, who has participated in many of TEL CPD courses, described the situation as follows:

I am a lecturer in a university, in which the majority of students and people think that I should be well qualified in all or most educational aspects, where the TEL domain is one of these. So, I always encourage myself to get involved in CPD activities to catch up with new things. I understand it is difficult to cover everything, but essential skills and knowledge, especially in TEL, I do my best to learn as most people would deal with them. (N2)

Additionally, a particular reason stated by two interviewees behind their involvement in TEL professional development was to receive a promotion. One of MU requirements for its academic staff who want to be upgraded in the academic positions, beside the research

demands, is to attend at least four general CPD courses and to get certificates that provide proof of such attendance. Thus, some lecturers would undertake CPD in TEL to fulfil this condition. This participation in TEL area is considered optional, as some lecturers would not become involved in TEL CPD modules if they do not perceive value of technology development or had experienced low attention or effort of offered TEL programmes.

For example, one of these lecturers commented on this aspect by saying:

Since I need to participate in CPD to be eligible to receive university promotion of getting a higher deserved upgrade in my academic position, I would participate in TEL courses beside my specialisation area. Because TEL is an essential component and skill in all aspects of life and also it should be incorporated in the curriculum. So, I will go -and prefer to go for it - as I see it as an important tool to be equipped with. (N11)

When the content of provided TEL activities were seen as clear, related and relevant to participants' needs, lecturers stated that they were more likely to involve in TEL CPD. The relevance of TEL materials to be covered in such programmes and seem to benefit academics, especially when these were related to lecturers' interests and needs, would provide a motivation for them to undertake the programme. Therefore, most interviewees implied that they would be motivated and encouraged by activities in TEL CPD that focused on relevant information or content, acquisition of knowledge, and skill enhancement that tackled their identified personal needs.

A respondent described his experience of participating in TEL learning activities, and expressed:

Usually I evaluate my needs and tell myself I need to develop myself in this particular TEL area as I feel I need it but cannot use it and I need to learn how. For instance, I know that I need to learn how to design electronic

exams and how to assess them electronically. When I found a training programme organised either by the university or another institution that address such need and attract me, I immediately would register and attend it. (N4)

Moreover, one respondent expressed the importance of involvement in TEL activities as being advantageous for Saudi Higher Education institutions, stating that those institutions need to implement such global features in a learning environment, and he would participate in such offered technology programmes to facilitate such need in Saudi Arabia. The lecturer indicated that:

I can say that applying TEL effectively in organisations of higher education for learning is unnegotiable. Without lecturers' involvement in TEL developments, institutions would really suffer from being globally underestimated because their students are not equipped with new innovations in teaching and learning. Also, higher education is now seen as a marketing route. So, to be successful in this marketing, you have to ensure the demands are employed, and the successful TEL incorporation in this environment would ensure your organisation to be in the safe place in this marketing. (N5)

In fact, some interviewees had mixed motivation to participate in TEL CPD between intrinsic and extrinsic motivators. Two lecturers gave their reasons behind such participation as allowing them to gain both internal and external advantages, as the following example shows:

Well, I have been motivated to engage in TEL courses, and I have. I chose to go for not only one aspect, but to fulfil many aspects of TEL. I believe that

some of them are needed to fill the personal development gap, such as being up-to-date in the TEL area, and the other to satisfy TEL external demands and requirements. In short, to kill two birds with one stone. (N7)

Some interviewees had different perceptions towards intrinsic versus extrinsic motivation. Some of them expressed the opinion that participation in such courses should be a purely individual choice, propelled and motivated by personal conviction. Thus, they thought that motivation to take part in a TEL course should be purely intrinsic.

One lecturer, who was experienced in taking TEL CPD courses, expressed this idea as:

I think that lecturers need to be personally convinced and aware of the importance of TEL professional development and the benefit of participation in such learning activities. If they are involved for external motivations, such as promotion or asked to do so, the ultimate objectives of attending CPD would be never be achieved because their attendance would be for just ticking boxes to show that they had done what they had been asked to do. I believe the self-awareness of such development is the most vital thing for successful improvement. (N6)

In contrast, some disagreed with this and felt that lecturers needed to be encouraged and supported externally towards their professional development. They emphasised that, when external motivation was applied to promote lecturers' involvement in CPD, the desired goals would be achieved. Also, if lecturers did not have the individual motivation and did not go for it, they would not understand and appreciate its importance and would not achieve awareness and confidence in TEL. One respondent felt that external motivation should always be present to get such benefits in TEL:

If you want your family members to be good swimmers, they have to get wet to fully understand how to swim properly. In my opinion, the situation here is the same as swimming; if you need lecturers to be well qualified and perceive the latest strategies in education, they should be encouraged somehow to go through CPD. Sometimes we can't understand the value of things till we try it or go through it. TEL CPD is exactly the same. Perhaps some people can't appreciate the importance of TEL till they see it and try it in such activities. (N12)

From the above, it is clear that reasons among respondents regarding factors encouraging them to involve in TEL CPD activities varied between internal and external motivations, or both together. However, in spite of the highly positive perceptions and motivation on the part of most lecturers to participate in TEL CPD for various reasons, they also expressed some concerns which hindered their TEL learning participation. The time requirements and their workload, lack of TEL resources, access and support, and the uneven quality of the courses were crucial factors that affected their participation in CPD in TEL and their awareness of its importance.

7.2.3 Constraints to TEL CPD involvement

Time and workload

One of the most challenging aspects identified by most of the respondents was the increasing workload demanded by the nature of their job which resulted in a lack of time to get involved in TEL courses. Time and workload were interrelated in preventing lecturers from participating in TEL CPD activities. Most of the interviewees complained about these factors, and they explained their difficulty in attending TEL learning activities as being due to the amount of time required to learn new TEL skills in light of their lack of spare time and heavy workload. Lecturers had personal and work

requirements that had to be fulfilled by a certain time and which therefore hindered their involvement with TEL training. Furthermore, some activities required lecturers to get time off and much time would be needed for traveling to attend conferences that were not locally organised. A common complaint, expressed by several lecturers, was that most lecturers had multiple duties, for instance, supervision and consultation on different students' levels, programs whether internally for the university or externally for outside organisations, besides the need to be up-to-date in their specific subject areas. Therefore, lecturers' feelings towards their workload and time availability could prevent them from active participation in TEL courses.

One lecturer explained this situation and presented an example of the time and workload limitations on CPD in TEL activities, by stating that:

The time is the main constraint to me; I find it difficult to fit and organise things into my day and how to go and get involved in TEL CPD when you have too many other things to be done which are considered as priorities. So even if we have more offerings in TEL courses in our campus, I doubt how many lecturers would actually take advantage and participate in it as the job demands and time constraints affect us. (N9)

The lecturer's professional life, which appeared from his tone, limited his ongoing participation in TEL CPD. Another lecturer expressed a similar concern, that there had been a significant increase in demands from the university, and even though there were specific hours in the schedule for professional development, she had not received any. She felt upset, especially as the time allocated for her research was taken up by administrative works. She commented that:

There are lots of tasks in the academic environment that need to be prepared and finished in detail for personal and institutional benefit, and I

believe TEL CPD is one of them. But, in my perspective, it is not an essential requirement to be monitored by administrators in my job. There are many priority tasks to be done in the view of university officials and TEL professional development is not one of them, and our time is spent for these tasks to be tackled. The workload would eat all the time up. (N3)

Also, attending many and different kinds of meetings affected lecturers and prevented them from undertaking CPD in TEL activities. For instance, one lecturer mentioned that:

Lack of time really matters. I have to attend many different meetings for different purposes. I usually attend at least two or three meetings in a week on different campuses. For example, I attend the department meetings, faculty meetings and post studies meetings....etc. After work, it's my own time and I do nothing related to my job development. (N10)

These comments showed that lecturers usually suffered from shortage of time and the heavy workload which comes from the administrative tasks and committees which are in the nature of work in higher education besides personal commitments such as the family, more than just the teaching task. It may also identify the lack of balance between priorities and expectations, or teaching and intensive research at the level of higher education. Thus, the nature of lecturers' job demands outside the classroom consumed their time and prevented them from participating in TEL courses.

Access to TEL resources

The lack of available TEL resources and support was raised by some lecturers as an inhibitory factor that affected their positive participation in TEL CPD. Some lecturers stressed that, without TEL equipment and basic resources in all classrooms and surrounding environment, the opportunity to involve, learn and integrate TEL in their

practice was small. Lecturers referred to the fact that they faced difficulty in getting their classrooms in the College of Education equipped with modern TEL resources such as new Interactive WhiteBoards (IWB) and fast speed Internet connection. They agreed with others that classrooms on some other campuses were fully equipped with modern TEL devices, but that most of the university faculties' buildings were not. Some lecturers mentioned that access to TEL resources, such as computer labs, is the key to acquiring TEL skills and knowledge and that the policy makers and educational technology providers should make them available for academic staff and learners. When modern TEL resources are available to lecturers, they could be encouraged to learn new skills and able to how to apply them effectively for educational purposes.

The comments of the lecturers below demonstrate the situation and their perceptions of the lack of modern TEL resources and support:

If lecturers were surrounded by TEL infrastructure and new resources in classrooms and faculty buildings, they would be forced automatically to know and learn how to use them. In my opinion, you would learn using TEL for two reasons: firstly, because you know your students are used to dealing with the resources that are available at the institution and you need to use that for them. Secondly, you do not want to be less than other lecturers who use these resources with students, and you feel you are less skilled than others in front of yourself and students. Unfortunately, this is not the state of my teaching practice at this institution. (N9)

Other respondents talked about the importance of TEL resource availability and also the technical support team, by commenting that:

I cannot see any point in attending any learning activities if I am not going to apply and use what I've learnt immediately. Imagine that I attended a

TEL course for three days about using some new applications in leaning with students or devices in the classroom, and these are non-existent or not found in the classrooms. I consider that course attendance is wasting time, and eventually I will totally forget what I learnt. Also, even if we have these resources in TEL, the availability of technical staff is rare and it is not easy to get help immediately. (N11)

These perceptions about the availability of TEL resources and support emphasise that it is important for educational authorities to secure and implement all basic TEL resources and TEL technical teams to provide an enhanced environment, which the lecturers viewed as being a crucial for their TEL learning.

Quality of TEL courses

A further point, mentioned by some of the lecturers, was that the information they may receive in advance about TEL courses could be misleading. They stressed that they may have seen an attractive course name, or the course seemed to be connected to their needs and interests, but then they found it different from their expectations. Lecturers needed advance administrative support and vital strategies to know how they should participate effectively in appropriate courses that matched their interests and actual needs. Their main point was that pursuing new learning opportunities in technology, and continuing to do so, is facilitated by attending good courses that meet their expectations and encourage them to attend further courses in the future. If, for whatever reason, neither is possible, academics are likely to become frustrated about participating in this field. The idea behind this reluctance to continue their involvement with CPD in TEL is that some lecturers had been negatively affected by irrelevant or poor experience of TEL courses. A hesitation about participating in future TEL CPD courses would occur due to fears of

repeating the earlier negative experience. For instance, a lecturer recognised how being upset by poor previous experience would inhibit participation in the future. He explained:

The only thing that could be preventing me from continuing the attendance of TEL professional development is my complete anxiety about the course and my concern that this course would not give me what I hope and expect, and the course name is not relevant to the course content. Many times I went for TEL courses that I found in leaflets, and they just put the name of these courses without any accurate description. I just had to estimate the benefit from the course title. (N4)

Another respondent also commented:

I heard about one TEL workshop and seemed be related and relevant to my needs, so I decided to join it. Unfortunately, it was poor and made me to doubt again to join such course without a clear policy and recommendation that help to go. (N9)

This challenge, as illustrated by lecturers' discussion, might threaten the continuity and sustainability of involvement in TEL CPD because the anxiety of repeated poor quality of professional development experiences.

Accessibility and Awareness of TEL CPD

Accessibility to and awareness of TEL CPD courses were two sub-themes that emerged from the interview responses. Three female lecturers mentioned that they found a range of TEL training programmes but they required them to travel for attendance. As the Saudi culture does not allow women to drive, female lecturers would find difficulty in participating in some TEL CPD. Some TEL courses were provided in the major cities, such as Riyadh or Jeddah, and female lecturers needed to get lifts to attend such courses. Thus, female lecturers in Saudi Arabia were more likely to feel that the opportunity given

to them to participate in TEL CPD was not as good as it was for male lecturers; moreover, they were not given easy access to locations. A female lecturer, for instance, suggested that any TEL learning activities that included women should take into account the accessibility issue. She commented that:

Sometimes I find good TEL courses and I think they would promote my TEL knowledge and skills and I need to participate in them. But when intending to register and undertake the course I found it difficult to go as I needed to travel and also I had to manage how to get there. In reality, I missed a great deal of these courses as their location was difficult and it was impossible for me to get there. (N7)

Another female respondent also expressed the same concern and added that:

It is not just managing yourself to go as a female, but you need to manage for two persons and schedule the time for myself and husband or brother. There is little chance of attendance in other cities that require traveling as my men relatives also have their work and demands to do. (N8)

Furthermore, the level of qualification appeared to be an issue related to accessibility, as one master's degree holder indicated that while some TEL opportunities aimed to enable development in the technology domain, they were only available for lecturers with a PhD. This was especially true for courses that were offered abroad, as explained in the statement below:

I tried to participate in some abroad conferences about TEL that were supported by the university, but the head of the department told me just PhD lecturers were accepted to apply for such activities. Particularly, courses presented abroad. (N6)

Awareness also is another issue raised by some lecturers as a barrier to their participation in TEL CPD. Four lecturers emphasised that wider advance publicity for TEL courses

would increase their active participation. They thought that repeated distribution of information on TEL courses and reminding lecturers of these activities would contribute to many lecturers' involvement. These lecturers felt that one of the most important factors was to provide and actively channel information to lecturers to give them information about the courses that will be offered in the future. They stated that lecturers could easily find what TEL courses were available, but nothing reminded them about missing TEL programmes. The lecturers' tone seemed to show that, if they did not actively look for these courses, they would miss them. A respondent, for example, talked at length about the importance of finding a systematic method for raising awareness of these activities. He stated that:

I appreciate that CPD coordinators pay attention to sending a list of courses to faculty deans and printing a huge number of leaflets, and posting them on the university's website to show the courses for each year. I think a more effective way would be to ensure that each of the academic staff is fully informed about the courses. That could be done by e-mails, texts and distributing information about the next few courses in each departmental meeting. I have often heard about TEL courses and conferences, but I missed the registration date as I was not informed about them in advance.

(N12)

This section has discussed the major theme of 'involvement with TEL CPD' and lecturers' perceptions about their participation in these programmes. Lecturers expressed their perception of the facilitating factors that promoted their involvement in TEL CPD. Keeping lecturers up-to-date in the TEL area, the acquisition of knowledge and development of teaching skills, learners' benefits, the subject of TEL, career growth and professional development were internal factors motivating lecturers to undertake TEL CPD. External factors that motivated lecturers were to get a promotion, relevant content

and meeting needs. Moreover, some mixtures of internal and external factors were identified as motivators. However, some constraints were mentioned that hindered their active participation. Time and workload, TEL resources, quality of TEL courses, accessibility and awareness were identified as barriers to involving in TEL courses. The next major theme ‘the provision’ analyses and discusses the interview data related to lecturers’ views on the quality and effectiveness of the TEL CPD that they had experienced.

7.3 The provision of TEL CPD

Regarding the evaluation of TEL CPD programme effectiveness, several interviews were conducted in the stated case study during which several questions were asked in order to obtain an in-depth understanding. The focus here in the ‘provision’ theme was on how participants perceived the quality of TEL-oriented CPD. The results of the qualitative data analysis reveal that there is strong agreement among lecturers that good preparation and design of the TEL CPD programme is a key factor in assuring its quality. In other words, the lecturers emphasised that the success of TEL CPD came from providing sufficient control of its format and content. Participants reported that TEL professional development was effective when the content was relevant to their needs and interests, and when it accommodated their subject area. If these elements were applied, the TEL courses would allow lecturers to enhance their TEL knowledge and skills and they would become more proficient in their teaching skills and subject matter knowledge. Moreover, good TEL CPD courses should apply properly planned activities that provide lecturers with ways to reflect on their thinking and practice that ultimately expand the TEL areas that they can utilise in education. As respondent explained:

Certainly I would like to be involved in TEL courses and activities that have a real target for a particular audience and which focuses on their needs.

When TEL CPD is provided in this sense, both quality and advantages for organisations and lecturers will be attained. (N2)

Regarding this notion, another lecturer added:

I believe that TEL CPD models are beneficial for us when such activities enable lecturers to acquire needed TEL knowledge and skills in pedagogy and content, and also reflect on my personal and teaching practice with TEL. I do not think lecturers can refuse to apply and practise effectively such improvements in TEL, only if they have negative attitudes towards TEL in general. (N12)

One participant mentioned that he had undertaken a TEL course in Blackboard that was organised and provided by MU. He sought to maximise his knowledge of the TEL tool that he would be using with learners and to keep his TEL skills and knowledge up-to-date by participating in this CPD activity. Also, the lecturer proposed that the TEL CPD content should provide new teaching techniques and a time for reflection on what had been learnt:

It will be more attractive if the TEL materials and contents are new to me and related to the subject matter, and also providers use techniques that are new to my experience and knowledge in which give me inspiration to learn and apply them. (N5)

7.3.1 Planning and identification of needs in TEL CPD

The preparation and design of TEL courses are key factors in maximising the chances of success in TEL CPD activities. Most interviewed lecturers pointed out that they were not normally involved in the planning and preparation stages of TEL programmes. They proposed that those who were responsible for the design and planning of TEL CPD

programmes should pay attention to the people who were going to take the course rather than neglecting them and preparing the courses according to their perspectives and or just institutional needs. A result of this was the general view that most TEL programmes were poor in quality. With such negative perceptions pertaining to the general quality of TEL CPD, which is in contrast with the positive perceptions towards participation questions, an indication of the presence of the insider researcher could not affect the open and honest responses relating to the phenomena under study. They believed that the success of TEL programmes was based on good preparation and planning to meet trainees' needs. The lecturers agreed that there were several values and principles that influenced positively or negatively the success of TEL courses, besides the importance of having suitable design. Thus, each stage of CPD activity should be carefully studied and evaluated.

For example, one of the commentators about this point stated that:

The accomplishment of effectiveness cannot be realised if you cannot provide a well organised and prepared course based on participants' needs. Having a course without advance planning and preparation will not reach and enrich TEL competency. Actually, one of the core reasons to provide a course is to apply new techniques and ways for trainees, and keeping them up-to-date with latest TEL changes and improvements in the educational field to expand their capabilities and performance. Thus, it is essential and significant to prepare TEL CPD that tackles lecturers' needs through taking more care and having very accurate needs' analysis at the preparation stage in order to successfully provide them. (N9)

A further perspective from one lecturer emphasised the need to understand each faculty and its members by differentiating their CPD needs even if this job would entail intensive time and effort:

Unsurprisingly, if you are not aware of who are going to attend your class with their different knowledge and skills, and you just feed them that what you have and think it is worthwhile to be provided, the comprehensive quality will be missed. I think that those responsible for TEL preparation and planning did not find out lecturers' and organisation's requirements and then TEL CPD activities become insufficient due to the lack of good preparation. To achieve such ambitions in TEL, intense investigation to assess participants' and institutional needs should be implemented carefully; this is better than not providing them with any effective outcomes. (N4)

Moreover, concerning identification of lecturers' TEL needs, most interviewees complained that most TEL CPD providers did not identify, consult or involve lecturers in the planning stage in order to understand the areas in which they needed improvements or their preferences in learning environments or styles. Interview analysis revealed that the majority of respondents stressed that the preparation of TEL CPD should begin by identifying and understanding lecturers' and faculties' actual needs in order to provide trainees the right components and to achieve the desired objectives. Additionally, the first step in designing TEL CPD activities should be based on identification of the lecturers' and institutions' shortages, practices and needs. Interviewees emphasised the importance of providing TEL programmes according to the requirements and shortages that needed to be filled, which should be addressed in advance to form a target.

One of the respondents, who is an experienced TEL CPD participant, emphasised that the most current TEL CPD lacked initial identification of lecturers' level. The interviewee stated that:

As the majority, in my opinion, of TEL courses are established in unstudied and random ways, they do not reach the required effective level that is

expected by lecturers and policy makers in HE. What I mean here is that TEL courses were not provided to fill particular important needs or aspects in TEL, besides the fact that most of these courses were not constructed on prior survey investigation to understand the particular TEL areas that needed to be met, and to develop a certain TEL course to improve particular needs. (N2)

Also, another lecturer supported this idea and stressed the need for prior identification. She stated that:

Without satisfying your customers, your business will be down. Any excellent TEL CPD activity should consider and realise the actual current situation and examine its real needs, and also to work on developing lecturers' or trainees' preferences and needs. In order to tailor and embrace these needs and needed requirements, firstly a study about TEL needs for lecturers and faculties needs to be made according to their actual assessments and needs. (N3)

However, one lecturer with intensive experience in TEL CPD mentioned that he had participated in a TEL training course provided by a professional training company in Riyadh. He had received an assessment form before the course in which the provider had asked for precise details of his TEL knowledge, skills and previous experience in the TEL field. Although this situation was rare, and just happened once with him, he expressed a high level of satisfaction with the course effectiveness and the outcomes he achieved.

I know it just happened once for me and I cannot say that my other experiences had the same feeling. I found this TEL course extremely useful, effective and worth travelling to attend. When you participate in a course

for which details about your knowledge and skills have been taken in advance to make the course specifically tailored to match your needs and interests, you do your best to be active and benefit from it as feeling committed about such learning, as there is no one else you could blame.

(N12)

As indicated by the qualitative data, most respondents' experiences show that analysis needs and design preferences of provided TEL CPD models were unfit to satisfy lecturers' and faculties' needs as regards content, preparation and identification for ensuring best performance and improvements of participants' actual and practical needs.

7.3.2 The content and design of TEL CPD

Most interview participants, however, perceived that TEL CPD content did not focus on their levels and pedagogical areas, and was not based on their practical skills. Participants reported that TEL CPD was generally provided without consideration of their actual situations. They discussed that these TEL courses were rigid, based on what TEL CPD coordinators and providers believed was suitable for trainees, and their content were not tailored to lecturers' individual styles and preferences in learning. Lecturers expressed the opinion that, since lecturers with various TEL knowledge and skill levels were brought together for one course, some of them would find it difficult to acquire benefits from the course. Thus, various TEL levels should be differentiated in the content for novice, intermediate and expert lecturers in TEL when providing CPD models. As stated by a respondent:

TEL CPD activities are given for all people who want to participate in them without any specific criteria such as TEL experience, skill and subject. It is our role and effort to go and look for which TEL course could match our needs, and you cannot be sure that exactly the course can support your

desire in learning. (N4)

Therefore, for a particular course, the trainees should have comparable levels of TEL knowledge and skill. One lecturer, whose background is in computer science, described how he felt when took a day away from his faculty to attend a TEL course. Due to the varying levels of basic TEL knowledge and skill, he spent more than half of the time just watching the presenter explaining some basics to other trainees, and he felt that he did not benefit from the course and he felt frustrated.

I really felt frustrated. Instead of benefiting myself in the TEL course, I tried to help the trainer explain how to use some TEL tools to some trainees who needed these basic things in TEL.(N6)

Similarly, one participant described the need to be fully aware of the course participant levels of TEL. The lecturer stated that:

I suppose that having an effective CPD in TEL course would take into account the individual lecturer's level through providing the appropriate content which provides these levels of TEL needs and requirements. Unfortunately, from my experience, I cannot remember any TEL course that really considered my specific curriculum and level of knowledge to provide a suitable content. (N5)

Another lecturer, who had a similar view with the above statements, thought that the content of TEL in CPD should be presented to aid lecturers' needs within their specific subject areas and pedagogical aspects, besides their technical levels with TEL:

I can say that the content of TEL CPD is very optimistic to serve all lecturers with their different abilities and levels. What I mean is that, in my opinion, if CPD coordinators seriously want to achieve effectiveness with these TEL programmes, they need to be sure to include different factors. One of these is that the TEL content serves the particular participants with

their subject and how to benefit from TEL in teaching it, and also to be more specific and link the lecturers' curriculum with the technical TEL skill that they need. When this is applied, I think we would see that TEL culture is effectively used in education. (N12)

From the previous views, the tone of the interviewees seemed to show that many TEL courses may exist for regulatory reasons, as one of the university regulations is to provide TEL programmes for lecturers. Changing the lecturers' performance and behaviour towards TEL in education could not be addressed appropriately when designing these TEL CPD activities. Also, they seemed to assume that the goal for some TEL course providers was that academic staff just go through these TEL courses and complete them, and their administrative duty would be done. Moreover, the relevance of content to lecturers' needs varied among participants. Some participants suffered as the content was not usually directly related to their personal and job experiences. Others confirmed that they just participated in CPD in TEL activities when these programmes were seen to be matched to their TEL needs, and when they thought they could benefit from doing so, such as learning a specific skill that needed to be developed. For example:

Even if I stayed for a while without being involved in any CPD activities, I would never ever go through any courses when the title and content description of this course does not give me what I think I need to develop in my needed areas of knowledge and skills. I really wonder if someone would participate in a course that does not match his/her desire to improve and without any self-assessment and considerations. (N9)

From these opinions, it appears that lecturers received content of TEL CPD activities in one size to fit all without any pre-assessment of their actual levels or of their preferences

to be provided with appropriate content. It seems that the decision to go on these courses was up to the academic staff.

This view refers to the need to tailor TEL CPD content to the needs of the lecturer and the organisation to have an effective impact, and to implement their preferences in planning and designing the course content. However, flexibility and collaboration with peers, especially when based on online courses, were acknowledged by five participants to be provided in the content design. They affirmed that these features in the content appeared to be implemented by providers to enhance the participants' experience of TEL courses. Moreover, respondents considered that flexibility and collaborative forms, to some extent, provided a satisfactory level of TEL CPD effectiveness, as it they were able to take advantage of those features to benefit their own learning. For example, an interviewee stated:

To be fair, although the content was not related to my subject and pedagogy and was purely on skills' development, I took two online courses, flexibility and discussion with other trainees were provided in these courses. I chose my suitable level icon and had the opportunity to discuss with others. For me, I found them very effective since I joined the content and level I needed and that was appropriate for my level. (N7)

Also, other respondent added further:

Perhaps the thing that most satisfies me, based on my personal experience, is the opportunity, provided in the design of many of the courses, to talk with other participants and discuss some points regarding TEL development. Time was given, either formally or informally, to socialise and discuss things with my peers. (N2)

These perceptions from the respondents emphasise that ensuring flexibility and collaboration features in the content is crucial because, in general, the participants view

these as important traits in TEL professional development. Furthermore, the presence of these factors promote to some extent the achievement to reach a level of development and goals in provided TEL courses. To examine this aspect further (the implementation domain), some sub-themes underlying and related to the design and delivery of such developments are discussed below. These sub-themes consist of various concerns regarding the effectiveness factors that were mentioned by interviewees for each aspect of TEL course design.

7.3.3 Practicality in TEL CPD

Some interviewees mentioned the necessity of ensuring that practical aspects were achieved within the experience of CPD oriented TEL. Lecturers in the qualitative analysis varied in their responses regarding the practical aspects of their TEL professional development. Some of them highlighted that they were not able to practise what they had learned theoretically. They emphasised that some TEL CPD was purely theoretical and that they could not be sure if they would be able to implement it in practice. However, three participants acknowledged that the balance between theoretical knowledge and practising skills was adequate in their TEL courses.

The reasons behind the differences in participants' experiences of practice during courses could be attributed to course duration, availability of resources, quality of course design and the ability of the trainer to ensure that additional opportunities to practice were provided. In this vein, participants with negative views stated their dissatisfaction with TEL courses which had merely presented theoretical concepts and had not incorporated practical skills. One participant expressed his feelings about this and stated:

I am fully sure that theoretical knowledge cannot be neglected in TEL CPD courses, as theories are the vehicle for such initiatives. Nevertheless, with TEL, if the practice does not accompany the theories, the learning of it would

be useless and a waste of time. If I feel that TEL knowledge is understood, that does not mean I can apply it properly, and sometimes I struggle - is this exactly what I should do? (N10)

Another participant gave an example from his experience:

Probably most of us have experience of how talking in theory about driving is found and we think we were ready to do it, but when practising in the field things are different. This is exactly my experience of some TEL courses, and I feel I need monitoring by a professional to make sure things go right. (N5)

Therefore, TEL professional development should enhance lecturers' skills in dealing appropriately with TEL in their pedagogy, which cannot be gained by just offering theoretical knowledge. Theory in educational technologies can be part of a wholistic approach that provides proficiency but this alone cannot achieve the desired outcomes in the TEL domain by avoiding the practical part of the course. Putting trainees' learning into practice is essential to maximise the effectiveness of TEL learning.

On the other hand, there were participants who expressed their satisfaction regarding the practical segment of TEL courses. They emphasised the importance of ensuring that hands-on practical skills were employed. Participants who gained practical skills besides theoretical knowledge were more confident in applying TEL tools in their teaching. Although they mentioned that these TEL tools such as using Blackboard were not immediately related to their curriculum, they tried to employ the TEL skills for educational purposes as they considered themselves proficient with them after trial and practising them in TEL CPD. Since the content of most of these courses was not really related to the lecturers' pedagogical needs, lecturers tried to take advantage of their TEL CPD courses to adopt these developments in their teaching, as they viewed themselves as being able to acquire the ability to integrate technology into their practice.

One of those who had positive experience with TEL practice pointed out that:

I attended a course about web2 in learning, and the trainer explained how it works in general and its benefits in education. In the first part of the course he explained it theoretically and honestly I was not sure what that really meant accurately. I fully absorbed the mechanism of web2 by practising it with the trainer and using it with Wikispaces platform as a learning tool. He gave us the opportunity to try it and use this tool with the training participants, and we tried to be as the tutor who can aid and monitor learners. I cannot achieve this understanding and the confidence to use it with my students without this effective practice that we had. (N9)

Consequently, the TEL CPD role was seen by respondents to be more effective when practice was included with theory. They were seen to supplement each other and the absence of either one of them would render the goal of the TEL course ineffective. In particular, lecturers were not interested in pure TEL theory in education; their learning, therefore, should be translated into applicable practice in order for CPD to be successful. This was evident from the previous views and experiences of the lecturers who were influenced positively or negatively by the presence or absence of practice in these activities. A balance between theory and practice should therefore be implemented to make lecturers and TEL CPD more effective in the educational field.

Timing and Duration of TEL CPD

The timing of CPD is an important component to be taken into account since lecturers are normally busy and have many duties. Providing a TEL course that does not fit in with their preferences and working schedules would reduce opportunities for successful implementation. Emergent qualitative data of respondents regarding the importance of the timing and duration of TEL CPD reflected two main issues. Firstly, the importance of

providing TEL CPD at suitable times for lecturers. Secondly, the necessity of allocating sufficient time during the course for lecturers to ask questions and interact with each other and with the trainer, as well as not offering long sessions with limited and repeated content which cannot sustain the participants' interest. Interviewees thought that those in charge of designing, delivering and scheduling TEL CPD need to plan courses carefully considering the duration alongside the course content.

Due to the differences in personal work demands and profiles of individuals, participants acknowledged the difficulty of satisfying all lecturers regarding the desired timing of TEL CPD. However, they suggested finding a balance which would accommodate the majority. In fact, the qualitative results of the lecturers' interviews were conflicted in respect to the TEL CPD timing, as two of the interviewees preferred that the courses be held over the holidays, especially if travel was required to. In contrast, four lecturers emphasised that holidays were for rest and relaxation from work and all things work-related.

For example, one of these interviewees expressed this feeling about the experience of timing in relation to TEL CPD:

I missed many TEL courses due to most of them being organised and offered during the busy teaching times. CPD in TEL timing should be properly considered for its audience. For example, the last TEL course that I missed was in the last term because it had been offered in the exam weeks. So, providers should recognise the appropriate time to implement such a course to be suitable for as many lecturers as possible. (N1)

Another lecturer called for matching course timing to academic staff and their institutional needs and preferences through systematic coordination with each institution's management. She highlighted this concern and stated:

Yes, I believe that TEL CPD models improve academic staff effectiveness for both faculties and themselves, but under several factors, and selecting the appropriate time is one of the main influencing factors. Specifically, in my experience, a great deal of these courses are conducted at our busy time during the term and lecturers' hours. For TEL CPD to be most beneficial, early and easy coordination with faculty management should be considered to avoid wasting money and time, and also to achieve TEL goals and objectives. (N11)

From these perceptions thus appropriate timing of TEL CPD that accommodate lecturers' and faculties' schedules would enhance effective opportunities for TEL learning.

On the other hand, having an adequate course duration was another issue raised by participants. Lecturers emphasised the importance of managing an appropriate TEL activity duration to ensure that all necessary elements were covered. Course content, critical thinking, discussion and practice should be given enough time in each course, by giving each aspect its own allocated time.

Respondents emphasised that when content was crammed in with a lack of time for each part of the training, ineffectiveness resulted. Thus, organising a suitable duration for TEL CPD to provide trainees with full learning opportunities was thought to be needed to maximise the effectiveness of TEL training. If such elements were not offered adequately, lecturers found it difficult to proceed with understanding of the TEL course agenda.

Three participants stressed the need for deep consideration with a long enough duration of the course. One of these lecturers reported that:

Sometimes we felt as trainees more time was needed to give us a chance to try, consult, ask, share and practise new TEL issues. However, when there

are many TEL concepts to be covered by the trainers, clarifications of details and providing all content aspects sufficient time to be well understood and confirmed by training participants - the trainer has to be quick to cover all these TEL items in a limited time. (N7)

In contrast, some lecturers suffered from the opposite in which the time was too long compared to the actual course content and activities. Frustration and loss of engagement was the main characteristic of such a course. A negative reaction was expressed towards doing a small number of activities and little content in a lengthy course. For instance, one of these commentators said:

Good time management of TEL courses must be precisely done. Imagine I attended a course in one of LMS applications (Blackboard) and this was organised to be for two days. We spent most the time with just the trainer talking about its basics and also with many repetitions. Every single minute should be valued, and not just passing time to make the training. (N4)

This could be attributed to the fact that different course participants had different TEL knowledge and skills whereby those who were advanced would find it useless and boring to spend long time on basics and repetition. The trainer, who is the course leader, should be well qualified. Trainer competency is another CPD aspect that influences the success of TEL CPD delivery.

TEL Trainer Competency

Trainers play a key role in managing and delivering an effective TEL course that provides a worthwhile experience for participants. Lecturers in this study held differing views regarding the TEL trainers' competency in general. A few of them expressed satisfaction with, or at least acceptance of, their experience of TEL trainers, while others stated that the trainers were not qualified and were inappropriate to deal with TEL CPD

activities. However, all the interviewed participants confirmed the fact that most TEL trainers were not specialists and they were not prepared to deliver TEL material related to the lecturers' subject, curriculum and pedagogies.

Those interviewees who considered the TEL trainers to be acceptable and at the qualified level thought the trainers managed the course content and participants well, as well as in delivering technical skills. Also, they believed that these trainers were qualified in TEL in general and that they were able to advance the lecturers' effectiveness with TEL. For example, one of the lecturers believed that even trainers who were non-specialists in curriculum matters were able to help participants understand and use general TEL skills effectively.

One lecturer expressed his view by stating:

I think that professional TEL trainers have a positive impact on training audience if they properly gave a positive experience. Although the TEL trainers knew nothing about my specific curriculum area, I benefited from several TEL courses. When TEL trainers have training abilities, management, technical skills, they would eventually provide a good experience for participants. For example, many professors can teach you in the curriculum and pedagogical routes in general, and you could use them in your specific subject. Therefore, qualified TEL trainers could promote and present your goal even if they are not specialists in your subject. (N5)

However, other interviewees mentioned different aspects of their dissatisfaction with the TEL trainers' competency. Some of them stated that, in general, TEL trainers were not successful, and they were not professional trainers. These TEL trainers did not have the basics to be effective, even less to satisfy lecturers based on their specific professional needs. One of these lecturers expressed that:

In my experience, TEL trainers do not perform very well to deliver TEL content to trainees, and also they fail to make them engage actively in the course. Despite the importance in the TEL course of title, content and modernisation, trainers were not as good as I hoped to be responsible for delivering these courses. In fact, I attended some TEL courses where the trainers were originally IT technicians and not really from the CPD interest area. (N10)

Another lecturer, who specialises in computer science and who has intensive experience in TEL CPD, added a similar view that TEL trainers were not qualified or professional; she thought herself better than some of the TEL trainers:

A good TEL CPD provision mainly depends on a professional trainer who possesses qualifications, knowledge and experience in TEL, and also the ability to link and employ such experience in training situations, or an effective TEL learning experience would not be obtained. Honestly, many times I felt that I would do the trainer's role, as I felt myself better than those ineffective trainers. (N3)

From this lecturer's tone, it seems that the lecturers who formed the target of the current study perceived themselves as experts and therefore had less trust in trainers. They expressed the opinion that cost, acquaintance and availability of trainers were factors that determined most TEL trainers' selection for leading a course rather than qualifications or professionalism. Moreover, some participants emphasised that, to enhance the quality of TEL courses, a strategy to attract professional TEL trainers from institutions that specialise in TEL, and especially from Western countries, should be applied to maximise the effectiveness of the TEL CPD and to guarantee that a sufficient technology practice is provided to facilitate learning. It can be said that, for some participants, local knowledge

of TEL was not effective enough to promote and support the improvements needed for their technology professional development.

For example, one lecturer commented about this point, stating:

I think that TEL trainers are just not highly enough experts and they do their best to successfully deliver what they had been asked to do and what should be done in TEL courses. However, I wonder why TEL course coordinators don't deal with professional providers and bring TEL experts from abroad to translate their successful TEL experience to lecturers. I understand the difficulty - and also huge money has to be spent - but I am sure the level of effective TEL courses and usage would be hugely improved. (N12)

The TEL trainers' competency from the qualitative data revealed that the participants believed that most of the TEL CPD trainers were not competent. Responsible providers for delivering TEL CPD activities for lecturers should take into account the importance of selecting qualified and specialised TEL trainers in order to meet the lecturers' needs.

Overall, high standards of CPD in TEL design and provision were demanded by the lecturers to bring about their successful adoption of TEL in the learning environment in order to equip themselves with the teaching skills to be key providers for learning, and for the successful outcomes of their learners. In their experience, most CPD in TEL content was not really relevant and did not relate to lecturers' specific pedagogy or curriculum. In addition, the practical parts of TEL courses and hands-on opportunities were applied but limited. Technical and pedagogical features should be combined together without focusing on one side and missing the other to provide an effective experience of TEL CPD. Any design and content of TEL CPD that failed to focus on the needs of lecturers, was not relevant to their subject or classroom practice, or had poor design format was ineffective. For CPD in TEL to be successful, the lecturers believed

that several aspects should be taken into account by the providers, namely, auditing of lecturers' professional needs to design the content, format, practicality, timing, duration and choice of TEL trainer.

7.4 Impact of TEL CPD

The level to which lecturers felt that TEL CPD impacted on them was one of the illuminating aspects of the research objectives and findings. Two levels of impact, 'individual' and 'institutional', were perceived by lecturers and are discussed under the impact theme. The qualitative data show that all of the interviewed lecturers concurred about the impact of TEL CPD on different aspects, and they emphasised the importance of providing effective TEL CPD to enhance outcomes for lecturers and their institutions. Although the general level of TEL CPD design and its meeting of lecturers' needs was minimal, most interviewees reported that at least a positive outcome had accrued after involvement in such TEL activities. This impact, though, was reported as achieved on the personal level, however, low or negative on the institutional level, and lecturers emphasised that more effort should be made to achieve successful TEL integration within the Saudi Higher Education context.

7.4.1 At the individual level

Most respondents felt that TEL programmes had brought them some benefits. They reported a positive impact on their personal perceptions of TEL, increased confidence in using TEL, the acquisition of new TEL knowledge and skills, sharing of knowledge with peers and thereby developing better peer relationships.

Increased beliefs, confidence and teaching practice in TEL

Four lecturers stated that they had begun to appreciate some significant useful features of TEL following their experience of TEL courses. A deep-seated belief about how TEL

could advance their personal, learning and teaching lives had been gained as a result of attending such courses. Although these lecturers admitted that they had not learnt pedagogical and curriculum aspects with technology in the TEL activities, they had understood the essential nature of technology and its purpose in education, and they had become convinced of the need for greater investment in these innovations. These four interviewees seemed satisfied with their progress through certain aspects of TEL (knowledge, skills) since they had previously known nothing about these particular angles of TEL development. Thus, absorbing the potential value of technology in enhancing various personal and learning aspects, as a result of these TEL programmes, changed their beliefs towards TEL in education in a positive way. These lecturers changed their perceptions and became more familiar with technologies and their pedagogical potential.

One of these respondents, who had little experience in teaching and TEL CPD, felt more positive about TEL after participating in the course. This lecturer stated that:

I had the feeling that people who like to use TEL and love technologies they're born with it and not made to that. Now, I am quite positive about TEL after participation in CPD. This participation gave me a better understanding of technologies and adopting them in the classroom. Greater awareness of learners' needs for TEL and its potential in learning was made for me. After one course I tried to book the computer lab in the faculty, and use it with my students. I am sure without such involvement in CPD I would have never achieved this progress about educational technologies. (N8)

The lecturers with increased positive perceptions affirmed that TEL CPD had had an impact on them and had changed their views about TEL. They confirmed that their ideas about themselves, learners and teaching were improved. Moreover, they mentioned that

an interest in continuing with TEL development and learning was kindled as a result of their perception change. In this respect, one of the respondents added that:

I have no doubt that TEL programmes impacted on my views and totally changed my awareness of TEL. I believe that I can't use the latest educational technologies because of some inhibitors such as resources, but at least I'm now fully aware of TEL's importance and effectiveness in learning. (N4)

Furthermore, the increased level of confidence was one of the main single issues across interviewees that was manifested in increased use of TEL, and also in developing positive TEL practices. Five respondents discussed how attending TEL activities had played an important role in making them feel confident in having the necessary skills and in achieving greater understanding of the useful applications of TEL. These lecturers said that their confidence in TEL had increased, and that this had helped them try technologies into their curriculum after attending a TEL CPD course. The value of this confidence in TEL, from the lecturers' perspective, is that it encouraged them to continue to seek opportunities to enhance their TEL learning, and to feel confident in their job. Building lecturers' TEL capacity in terms of knowledge and skills through TEL professional development would increase their TEL confidence and their ability to make a positive difference on the personal and workplace levels. As an example, one of these interviewees who had felt a positive change in confidence said that the TEL training experience had allowed him to achieve this change:

In fact, there is not a great change in my own TEL use, but I found myself more confident to apply and practise TEL with my students in the classroom. I was unsure if I could use TEL applications properly for learning purposes,

but following my trial of TEL applications use during the TEL programmes, I felt I could use them. (N9)

Another interviewee also commented that the gain in confidence in using technologies was one of the most valuable results of participating in the TEL learning activities. He said:

They gave me a sense of confidence... I mean when attending TEL courses and observing how others deal with technologies and how they work in learning environment. I suppose that if you don't get involved in it, don't do it, you would be worried about how to use it properly. I believe the confidence is an important aspect to get, and this confidence makes you feel you can do your job with self-confident value. In short, it's more about my role satisfaction and being more confident to contribute in the learning environment. (N10)

In addition, one respondent mentioned that in the past she was uncomfortable with using TEL in teaching. She explained that she was teaching what she had read in the textbook and could not go further. She commented that:

I was anxious about using TEL, and when I saw things in the course I said I could do that in the classroom on the IWB. I came back and used it the next day. (N11)

In terms of the individual, personal impact, two lecturers commented that their understanding of TEL in teaching, and their application of TEL knowledge and skills, increased by participating in TEL CPD. These courses offered lecturers opportunities to examine their TEL knowledge, skills and practice and guided them to expand their learning development. By involving in TEL events, lecturers felt that they gained new TEL skills and knowledge, acquired different strategies and roles based on TEL for learners, and that the courses prompted them to evaluate, change and develop their own

current practice in teaching and research. Moreover, respondents stated that the TEL learning had contributed insights into their personal TEL use and classroom instruction. They expressed how TEL CPD had impacted on their instruction by saying that they had tried to utilise the new TEL approaches that had been introduced in the courses. One of these commentators believed that the TEL programmes had given him new TEL knowledge and skills, stating that:

They provided me with a better comprehension of TEL for learning purposes in my classroom and for my own research. I attended several TEL courses and I tried to apply what I learnt in my teaching settings. (N2)

Another lecturer discussed how the TEL professional development was reflected in his teaching practice. He thought he was better at understanding to meet some of learners' needs and had changed his personal use and teaching practices. He commented:

I have tried to apply technologies in classrooms with my students such as Prezi, and I've applied a variety of instruction techniques with TEL in attempting to match the diverse learning styles of students. (N5)

Sharing TEL developments with peers

Sharing knowledge and experiences with peers through TEL CPD activities was discussed by some respondents. They valued the opportunities provided in the TEL courses for lecturers to share their TEL experiences and practices and review them with others. In particular, they reported that various aspects of their fellow lecturers' TEL practice and resources that they shared had encouraged them to broaden their horizons in TEL. TEL knowledge, practical ideas and learning styles were enhanced from interaction with peers through TEL CPD. Furthermore, having ongoing relationships with others was mentioned as one of the positive outcomes of these activities because they promoted

socialising. Some respondents appreciated the benefits they had derived of peer networks for exchanging TEL knowledge, pedagogy and practices.

One of the interviewees felt that the sharing of TEL experiences with colleagues was a crucial aspect of TEL CPD. He explained:

I think and find the opportunity to meet and share with other people who have similar goals and interests is a useful thing. I just can learn lots from their own TEL experiences and discussing with them things which give you a wider perspective in TEL area. (N1)

The other lecturer discussed how she learned from her peer network through which they communicated following the TEL courses:

Within TEL courses we as trainees talk through many issues related to TEL or many different things around the nature of our academic life. In my experience, I sometimes after participation, I came up with one or two contacts, usually over Twitter accounts, who have similar specialisation or interest, and I benefit so much from sharing professional issues between us. (N7)

In this respect, also, one of the respondents added that:

I'm now aware of how to engage with online academic groups with shared interests regarding learning and development. Without such courses, I couldn't have reached this level. (N9)

From the lecturers' voices, however, the impact of TEL CPD seemed to be purely on an individual level as the majority of interviewees claimed that after attending TEL activities they were positively convinced and more likely to integrate and adopt TEL, but that organisational culture and assistance were missing. Even though the majority of lecturers reported little impact of TEL CPD modules on the individual level, they found them to be valuable and beneficial in light of technological developments. However, they

expressed difficulty with integrating most of the educational technologies they had learnt into their learning and teaching situations. Moreover, the positive impact of the courses faded when they did not find the appropriate environment to practise what they had learnt in order to apply it in their teaching.

7.4.2 At the institutional level

Lecturers reported a poor level of impact at the institutional level following their TEL CPD activities, considering themselves incapable of integrating technologies into their academic work. They noted that their institution functioned the same as before their TEL courses and that nothing had changed along with their own TEL development. The level of TEL demand, evaluation of its use and provision of resources were not appropriate. Thus, lecturers experienced a frustrating outcome from developing and practising TEL pedagogy. In addition, the lecturers reported the presence of a TEL trend within the institution that was pushing lecturers to adopt TEL effectively. It appeared that lecturers were further pressured to utilise TEL as a result of their CPD attendance.

The interview data suggests that the institution's lack of adaptability and the absence of a structure to support a TEL were seen as a significant factor in prohibiting lecturers from utilising technologies as the outcome of their CPD. A more advanced infrastructure and institutional management of learning technologies would enable lecturers to implement quickly their newly learnt TEL knowledge and skill in their teaching and faculty practice. In regards reporting a pool-level of impact and criticising the management and institutional level for fostering the application of learnt TEL, participants were more likely to add value in mind of developing their practices, and it appeared that they said what they wanted to say, with nothing relating to the effect of the insider researcher's role or job.

One of the respondents, who is experienced in TEL CPD and who has been teaching for 10 years, expressed the idea behind this notion by stating:

If interactive whiteboards, good internet connectivity, access to a wide range of reliable software and hardware resources and suitable TEL labs are provided in the institution, I think absolutely lecturers will apply what they have learnt in TEL programmes. I believe it is not just resources but also culture for officials and lecturers, they are needed to be both linked to see the impact of such development. (N2)

Another interviewee declared that:

I think that monitoring what have been developed by lecturers, and providing essential factors that needed be realised determines the whole process. The good conditions in lecturers' environment for ensuring the best application on what have been learnt would help achieving the determined goal. In my view, our organisation fails to offer such needed conditions. (N9)

Furthermore, four respondents indicated that their ability to properly apply the new TEL knowledge and skills they learnt in TEL CPD courses was negatively impacted by the institution's failure to provide intensive follow-up TEL assistance and/or additional opportunities for professional development, if needed. Thus, lecturers may have neglected new TEL developments when they could not integrate or practise them in their actual learning, teaching and working settings. In addition, respondents commented that it was up to them whether or not to use their newly developed TEL aspects in their own practice. One respondent, for instance, discussed the problem of the lack of follow-up assistance after TEL courses. This lecturer commented that:

Follow-up strategies in TEL must be applied for lecturers to ensure the successful implementation of technologies. Sometimes the need to improve

or to make sure of some points in what you learnt is needed. In this way, if follow-up is not present, the enthusiasm to apply what you learnt in educational technologies will disappear. (N12)

The inconsistent level of students' TEL knowledge and experience emerged as one of the challenges for some lecturers in trying to apply outcomes of TEL development with their students. According to some of the lecturers, who were a little frustrated by the students' TEL ability, some students could make it difficult for lecturers to integrate and apply the technologies they learnt through TEL CPD into the teaching and learning environment. These lecturers acknowledged that while their students' generation was highly adept at using technological information tools, such as Facebook, Instagram and Snapchat, within social applications, they could not deal properly with platforms that were intended for learning purposes, such as Blackboard, a specific learning management application tool used by lecturers. Moreover, some students had no idea how those platforms work. One respondent, who specialises in science and who had adequate experience in TEL CPD, explained her feelings about using TEL with her students; she noted that some of her students' ability with technology made this impossible. She felt that her role was just to apply what she had learnt in TEL to maximise the effectiveness of teaching and learning, not to teach students how to use this technology application at the expense of her specific curriculum task. She explained that:

I took Blackboard training courses and decided to use it and make it part of my students' blended learning. I was really disappointed when I tried to upload materials on it and my students did not know how to use, communicate or find them. In my opinion, this is because students are not used to dealing with it for their learning. I personally attempted to explain it to them but eventually I realised that the time scheduled for my curriculum

was rarely enough for it, without spending time on such TEL application.

(N7)

Another respondent suggested that compulsory training in specific TEL tools should be provided for students to ensure that TEL implementation was effective for both lecturers and students. He commented that:

Technology coordinators at the university should provide training on specific applications for students that would be used in their studies or with lecturers. I think lecturers would be motivated to develop themselves and apply the TEL tools they learnt based on the existing TEL that they have used in their teaching environment. (N4)

These perception and visions from interviewees emphasise that in terms of the impact of TEL at the institutional level, the lecturers felt that more effort should be made to bring in their individual improvements and integrate them effectively. Support was hardly provided by the institution for lecturers to integrate TEL into their teaching and working settings. Moreover, the inconsistent TEL backgrounds of students was another issue that, from the lecturers' point of view, could lessen the positive outcomes of TEL CPD courses.

7.5 Summary

The findings from the interviews provide an in-depth understanding of the lecturers' perceptions of TEL CPD involvement, the design and implementation of these courses, the extent to which they meet their needs and their impact. In general, the lecturers had positive perceptions about TEL CPD, and they welcomed participation in TEL professional development. Moreover, they appreciated its necessary role in education. The lecturers also mentioned some constraints that would affect their opportunities to be involved in this type of professional development, and they felt that these constraints

should be addressed to maximise their opportunities for participation. However, the design and delivery of current TEL courses, and the extent to which they met the lecturers' needs, were not currently at a level that satisfied the lecturers. The general opinion seemed to be that these programmes were mandated from the top and lecturers were not involved in their design in light of their pedagogical and personal needs. Finally, TEL CPD had a positive personal and individual impact on the lecturers. It had given them insights into new TEL applications in teaching and learning. However, at the institutional level, that impact was poor; the lecturers felt that more TEL strategies should be implemented so they could integrate their personal and professional development into educational technologies in their classrooms.

Chapter Eight

Discussion

8.1 Introduction

This research has sought to examine the factors of TEL professional development opportunities and their roles in positively or negatively influencing lecturers in Saudi Higher Education. To achieve this objective in the study, questionnaires and interviews were used to elicit lecturers' views concerning the development of their own digital skills and competencies, to understand how training is provided and works in practice, and to discuss their views of possible changes that may result from this TEL CPD input. In Chapters 6 and 7, findings from the data collection related to the research objectives were presented. This chapter discusses these findings in an attempt to highlight implications in light of the theoretical perspectives and reviewed literature.

The organisation of the discussion chapter follows the order of the research questions. Therefore, the answer to the first question will be covered in the first part of the chapter, in particular highlighting lecturers' motivations and orientations towards their learning and TEL development. The second part of the chapter will focus on participants' experiences in TEL CPD environments focusing on structure or design and delivery of these programmes. The final section of the chapter discusses participants' perceptions of change within, and usage of, educational technologies as a result of involvement with provided TEL opportunities. In addition, this chapter concludes with implications for implementing successful TEL CPD activities. The intended implications here could generate new insights for educational authorities, TEL CPD providers and coordinators in higher education in order to help them recognise and adopt effective TEL CPD opportunities. This could ultimately result in the enhancement of successful integration of TEL in the learning and teaching environment.

8.2 Participation in TEL CPD

One of the main purposes of this study is the examination of lecturers' perceptions about their involvement in TEL development activities. Lecturers had different reasons and intentions for engaging in TEL CPD. The discussion of this theme suggests that there are inherent opportunities, but also challenges, for lecturers when they take part in TEL professional development. Accordingly, two sub-themes were included: the first one is the motivation factors, which focuses on reasons contributing towards such involvement; the second sub-theme is the barrier issues, which focuses on the factors that inhibit academics' engagement with the TEL CPD opportunities provided to them.

8.2.1 Motivation of lecturers in TEL CPD

The findings of this study, from questionnaires and interviews, indicate that lecturers' views towards participation in TEL were overall highly positive. These data show that the reasons for adult learners to take part in TEL professional development are diverse, based on their perceptions and experiences of educational technologies. According to the results, both intrinsic and extrinsic motivation contributed in engagement with TEL CPD. These various motivations include, for instance, self-interest and keeping up-to-date with TEL knowledge and skills, overall improvements in teaching and other aspects of the job practices, the possibility of promoting the educational system quality and learners' outcomes, as well as career progression/promotion. These TEL activities were seen to improve both knowledge and skills related to the significance and function of the TEL aspect in the current era, while also enhancing the lecturers' own professional development. Therefore, lecturers obviously recognise and are aware of the importance of continuing professional development in educational technology. They appreciate the usefulness of increased acquisition of TEL for personal and educational purposes and

how they can gain professionally from such developments through undertaking TEL CPD.

The results of this study suggest that the perceived motivations to take part in TEL programmes are mainly related to participants' personal goals to utilise such development. In contrast, the need for technology development for the organisation's benefit, as the educational institution needs to keep up with the demands of internationalisation and marketing trends in higher education around the world, was rarely referred to among interviewees. In other words, as joining TEL CPD for lecturers in Saudi Arabia is optional, their individual enthusiasm and willingness seem to be currently the key players that lead to their self-development in TEL. Thus, these findings reflect Knowles's (1984) position within adult learning theory that the personal aspirations of adult learners to learn things that have value for their current or future needs tend to stem from their recognised need to improve their education as a result of their social roles. This shows that adult learners are more likely to be internally rather than externally motivated.

Throughout this study, the results are in accord with other studies conducted on academics' motivational factors in attending TEL CPD. For instance, Georgina and Hosford (2009), Birch and Burnett (2009), and Tabata and Johnsrud (2008) argue that academic interests and beliefs in the importance and need for TEL are necessary, not only for academics to participate in continuing development, but also for fostering positive technological applications in the educational process. In addition, keeping up-to-date in technology knowledge and skills was shown, by a substantial proportion of lecturers in this case study, to be supported by such involvement, particularly in areas that are subject to continuous dramatic changes, and CPD is seen as the only way they are able to keep abreast with advances in technologies. This motivation to keep up-to-date with technology for enriching knowledge, skills and pedagogical approaches reflects

an appreciation of its role in promoting academic success, and consequently influences further engagement with CPD in TEL (Waycott *et al.*, 2010; Jones *et al.*, 2010).

Furthermore, the participants highlighted that aspiration towards developing both teaching skills and new learning styles that are affected by technologies also prompted lecturers' participation in TEL courses. This is a corroborative goal that was acknowledged by Osika *et al.* (2009), Daly *et al.* (2009) and Dash *et al.* (2012), who perceived that lecturers tend to be motivated by the need to improve their teaching practices by the use of TEL, not only for their own performances but also to meet the expectations of their own institution. Moreover, they feel the need to tackle issues within the teaching process, which, in turn, affect the learning outcomes. The evidence revealed in this investigation is that these lecturers have a deep awareness of the importance of participating in TEL professional development. To them, educational technology is a relevant subject and tool in education, and they are aware that updating their knowledge and skills in it is necessary for their personal and career development and is in line with the demands of a twenty-first century education. These are seen as important factors that reflect the demand to be highly skilled in order to meet the needs of modern educational developments aligned with Saudi visions. This represents the principle of adult learning theory that problem-solving in real-life learning is centred around adults learning and taking responsibility for their own learning (Knowles *et al.*, 2015). Experienced lecturers in this study emphasise the importance of learning TEL for learners' outcomes, a result which also corresponds with Osika *et al.*'s (2009) assertion that the more time academics spend in the classroom as teachers or learners, the more likely they are to believe in the significance of technology's role in the classroom.

Other motivating factors emerged from the lecturers interviewed in this study. For example, gaining a relevant qualification and being capable of dealing with technology related to career development prompted them to respond positively towards the need for

TEL CPD participation. These aspirations were felt by lecturers to assist them in being upgraded to a higher position, in moving to a better workplace and in keeping up with the prestigious appearance of being an academic within the Saudi philosophical tradition, and especially in the teaching setting. From a constructivist perspective to these contributions of learning TEL such as competency in the appearance to support students, Reagan (2005) asserted that individuals construct the meaning and need of learning within a cultural context that is affected by variable interactions, such as the social factor. Also, from other research, such aspirations for career progression could lead lecturers to appreciate such innovations and lead them to look for extra technological development in order to master other aspects of technology for career enhancement (Fry *et al.*, 2009; Nachmias *et al.*, 2004). In this regard, the results suggest that TEL professional development officials offering relevant and credible qualifications would be instrumental in motivating lecturers to continue their involvement in these courses. Without such assurance of accreditation, academics who might have wanted to participate in TEL courses might find their motivation reduced.

Mapping lecturers' responses on the foregoing aspects such as to being up-to-date and developing teaching practice with technology as presented in the findings chapters, they showed a variety of self-defined reasons, interests, and motivations for participating in TEL programmes. Although self-directed development is considered to be more practical and effective than that which is influenced and directed by others (Minott, 2010), external strategies by organisations and policy makers, and systematic regulations placing emphasis on TEL CPD involvement, seem to be in urgent demand in the case of Saudi Arabia. This demand seems particularly urgent when one takes into account the fact that no specific rewards, salary benefits or systematic points in the lecturers' profile exist for participation in TEL programmes. It is important also to acknowledge that whereas institutions may encourage developments in technology they do not impose their

adoption, and this indicates that lecturers' participation is mainly self-activated. As demonstrated above, the views of lecturers are a prerequisite for success (Pelgrum, 2001) as the most crucial agents of change and reform in respect to developing and integrating technologies in education. When lecturers are convinced and show a level of commitment to continuous involvement in accelerating the implementation of successful TEL in higher education, then this intrinsic motivation, combined with extrinsic organisational values, can make the whole operation more efficient, as all affected components assist in achieving the intended goal. Thus, I would argue that, as there is currently a lack of clarity in performance management criteria and a lack of systems in place which are centred on an impact assessment of lecturers' performance ensuring that innovations are applied in the teaching setting, practical interaction with lecturers and strategies by policy makers should be activated. More specifically, as the education system in Saudi Arabia is centralised, there is a danger that lecturers' self-initiative to attend TEL CPD activities may be diminished or lost should there be no system in place to maintain such developments. One's personal interest in the needs for TEL CPD, external priorities and professional demands should always correlate with and complement one another.

To summarise, lecturers' responses displayed elements of various motivations for taking part in TEL professional development and these were related to their concerns about obtaining and developing knowledge and skills that enhanced themselves as a person, improving teaching skills or work related issues, and gaining leverage for a promotion related to their academic career. Thus, if lecturers' motivation were to be supported by organisational structures such as TEL accreditation, then it would enhance effective participation in and implementation of TEL innovations in education.

8.2.2 Challenges faced by lecturers in TEL CPD

Despite the vast majority of lecturers, as discussed in the foregoing section, expressing their strong aspirations to learn about new technologies, the findings indicate some concerns affecting lecturers' decisions which served as barriers towards professional development involvement in TEL. All the respondents faced some limitations that reduced their willingness or their activity in their TEL development. Examining the findings reveals five obstacles in this sub-theme: time and workload, quality of TEL courses, availability of technological resources, accessibility, and awareness of provided TEL opportunities. These barriers can be attributed to the management role in providing effective support and being aware of or tackling lecturers' concerns around participation in TEL CPD. As adult learning theory indicates, lecturers' readiness to learn is an essential aspect of their personal development, and the learning environment needs to be highly supportive for these adult learners (McQuiggan, 2007; Knowles *et al.*, 2015). Therefore, a difficulty exists for lecturers to strike a balance between their positive aspirations for involvement in TEL and the constraints which exist in relation to various aspects of TEL activities.

The lack of time and heavy workload were reported by lecturers to be the main obstacles to joining in TEL professional development courses. Respondents referred to the time problem here as their difficulty in managing their many responsibilities, such as teaching, research, and family obligations. These results correspond closely with those of other researchers (Badge *et al.*, 2005; Becta, 2008; Birch & Burnett, 2009; Georgina & Hosford, 2009; Tabata & Johnsrud, 2008) who found that time and workload were primary concerns that limited lecturers' willingness to learn about educational technologies. This concern was related not only to participation in development, but also to using the new knowledge and sharing experiences.

In this study, the time problem was ascribed to lecturers' different contexts, personal and

institutional. For instance, some of interviewees interpreted time after working hours as their own time and not as a time to participate in such development. These respondents thought that an inconvenient time for the provision of professional development would prevent them taking part in TEL activities as they lived far from the course location, had evening work or other responsibilities, or were just exhausted after long teaching hours. This indication supports Charalambous and Karagiorgi's (2002) assertion that teaching staff prefer TEL professional development to be during working hours. Such TEL CPD provision needs to be supported in the study context as a way of increasing the accessibility of such opportunities, and of decreasing lecturers' concerns about TEL courses. By doing this, lecturers would be more likely to participate and to take full advantage of the valuable learning opportunities on offer.

The quality of TEL CPD was also a concern among some of the interviewed lecturers, who reported that this aspect would affect their participation. They reported that prior poor experiences of TEL CPD negatively affected their willingness for future participation, they found that their expectations of benefitting from these activities were frustrated, leaving them dissatisfied and reluctant to repeat the experience. This result is in accordance with Afshari *et al.* (2009), who identified that when TEL learners are exposed to disappointing experiences of TEL programmes, their motivation to participate further will be reduced. Piaget (1973) emphasises that, within individual constructivism, the effect of prior experience plays a crucial role for new learning that is based on gained ideas and activities. Thus, real practical strategies, such as the identification of lecturers' TEL needs and interests in terms of ensuring they are allocated relevant training activities, need to be devised to support the favourable intentions of lecturers towards technology (Sorcinelli *et al.*, 2006), including the assurance of specific programmes that provide for their target audience (Gulbahar, 2007).

At the same time, the results indicate that the lack of up-to-date resources within the teaching and work settings were perceived as inhibitors, as the interaction with such modern resources and tools and the feeling of a desire to develop were missed. Although respondents acknowledged the huge effort by the government and the Ministry of Higher Education in spending large sums on technological resources for learning and working environments, the practical distribution and implementation of these resources in some institutions was poor. Chitanana *et al.* (2008) asserted that lecturers' decisions to participate were enhanced or limited by their access to technological devices and laboratories. Other researchers argued (Tabata & Johnsrud, 2008; Cheawjindakarn *et al.*, 2012) that, without suitable and available resources for TEL for academics, the appeal for such development would be meaningless.

For some respondents, such as N7, the awareness of TEL CPD opportunities was limited. Awareness of the existence, provision and content of TEL development was lacking. Some mentioned that they became aware of TEL opportunities through internal communication through heads of departments or self-searching the university portal. Other studies have found that academics' awareness of technological developments and integration strategies was directly influenced by their management and institutional support, and that such support affected their attitudes and participation in TEL CPD programmes, as they needed to feel a part of the technological vision and policy, and this gave them encouragement (Keengwe *et al.*, 2009; Osika *et al.*, 2009). It seems that spreading messages from management to academics through their existing communication channels could be insufficient. Lacking communication about TEL developments, the effective integration of technology may not be achieved as staff are not aware of what changes are expected and what future plans need to be addressed. As adult learners need to be aware of and involved in the necessity of TEL CPD and they must pursue subjects that have immediate personal and career goals (Knowles *et al.*,

2015), an absence of active communication can result in a delay of successful TEL development and implementation (Rogers, 1995). An awareness of TEL visions and provided developments would allow lecturers to become more involved and to take more responsibility towards learning in order to achieve TEL's goals in a teaching context.

Interestingly, there were differences in this study between male and female lecturers regarding accessibility, with female lecturers tending to perceive difficulty in accessing some TEL CPD courses. This difference probably occurred in the particular culture and context of Saudi Arabia where women are not allowed to drive; thus, it can be difficult for women to travel freely. These female lecturers expressed their willingness to be involved in TEL activities, but the distance to the venue was seen as a barrier. Gusky (2000) noted that a proposed innovation would not be achieved if it were provided in a culture or context that was incongruent with its assumptions. To initiate any development procedure, an investigation has to identify, first, the cultural principles of the specific persons to which it is adopted and only then to make practical attempts to address this target culture with the proposed developments (Guesky, 2002). Thus, Saudi cultural traditions, with their differences from other cultures, even from Arab neighbours, need to be carefully addressed before thinking about the actual practices of TEL CPD for lecturers. Consequently, such differences should be reflected in the policy and strategies of the provision of TEL CPD, and, for female lecturers, it seems that provision during working hours is an appropriate choice to address the two concerns of time and accessibility.

It is clear that all the above barriers to TEL professional development engagement result from lack of management support and inconsistent developmental policy decisions. These issues can undermine the ultimate utilisation of the TEL opportunities provided. Such problems, in turn, reduce lecturers' motivation to take part in these developments, especially taking into account their positive intentions towards TEL CPD, as previously

mentioned. In the absence of appropriate organisational culture and support for TEL CPD, therefore, a positive organisational cultural framework that addresses such issues to encourage development for lecturers urgently needs to be introduced. This would enable academics, administrators and policy makers to implement effective structures for TEL development and integration. A suitable understanding of this model, based on all the underlying principles involved, would also be essential. This model could then support lecturers in recognising potential conflicts and in implementing developments in their specific settings (Eraut, 2009).

8.3 Practices of TEL CPD

A second objective of the research was to investigate the effectiveness and quality of TEL development programmes currently provided for academics. For effective academic learning and development experiences, it is important to ensure positive learning conditions (Banks *et al.*, 2004). Providing such successful conditions, and drawing from the TPACK model (Mishra & Koehler, 2006), adult learning (Knowles, 1984) and the constructivist visions (Piaget, 1973; Vygotsky, 1978; Kalpana, 2014) as the theoretical frameworks underpinning this study, lecturers would be supported to be motivated, to develop and understand new technological information, skills and new visions, and to efficiently change to best technological practices in their personal, pedagogical and career settings. In consequence, the development provision of educational technologies has raised issues regarding the design and evaluation of development programmes. Guskey (2006) and Goodall *et al.* (2005) emphasise the necessity of CPD evaluation about the practice to be used as evidence for stakeholders to report on how such process and practices are set up to satisfy contemporary needs. This research into lecturers' TEL professional development reveals that the extent to which courses meet their individual learning needs and expectations was not fully considered. Nevertheless, some features

listed in the literature on successful TEL programmes were acknowledged, at least by lecturers, to have promoted their development and were identified in detail. The results of this study raised three issues to be addressed and discussed regarding the effective provision of aspects of TEL CPD.

8.3.1 TEL CPD Planning and Identifying Needs

Identifying lecturers' development needs and organising programmes to meet these needs is a key aspect of academic technological development; it also determines the effectiveness of the programmes provided. Without needs' identification, characterised by precise checks, academics cannot demonstrate efficacious improvement as a result of attending TEL opportunities (Hoekstra *et al.*, 2009). From the results of this study, it is apparent that aspects of identifying actual and curriculum needs are also compounded by a lack of understanding in the planning stage where what lecturers need to learn was in contrast to what scholars suggested. As mentioned previously, when learning objectives and the reason participants come to the activity are poorly defined, learning is impeded. As Knowles (1984) stressed, adult learners need to be aware of what they need to know and why, to be responsible for their own decisions (a self-concept), to be motivated to understand new information; and they need to come with clear intentions and aims. In some cases participants pointed out that there were plans and needs assessments but some Saudi studies, such as those of Almulhem (2013); Ageel (2013) and Al Ghamdi (2015) who led action studies for conducting their research and in accordance with the literature recommendations for successful TEL courses, showed that needs assessments were implemented in only a few situations. TEL CPD for lecturers is provided by both external and internal (their institution or university) providers and the findings in this study reported that lecturers faced problems as a result of these providers neglecting to consult over what to offer according to lecturers' various contextual needs, and neglecting to plan their development in TEL in more effective ways.

Therefore, it can be argued that one of the most crucial factors in effective TEL CPD implementation was absent from the majority of technological programmes. Also, the result of this study was inconsistent with the requirements for efficient TEL development agreed by several scholars, such as Birch and Burnett (2009), Mclean (2005) and Yardy and Huxtable (2011). They asserted that having a strong assessment, as a part of the planning stage, with clear objectives and expected abilities for all involved parties within the faculty, should be one of the central planks of an effective programme, and that appropriate planning would lead to higher achievements from TEL training. A fuller interpretation of the real needs of all parties, such as lecturers' personal and curriculum needs and also the organisational culture structure, and available resources, would assist them in managing changes more effectively through the offered TEL development programmes. Nevertheless, it has been argued that it is confusing to focus on the conflicting needs of academics and organisations when implementing multiple policy TEL initiatives and other professional development opportunities, especially because both groups have different priorities for CPD interventions and different requirements for how these differences should be addressed for TEL CPD (Daly *et al.*, 2009; Foa, 1993). It is therefore a key issue for senior leaders to identify needs explicitly and to plan TEL opportunities in a strategic way that balances the needs of academics with those of their organisation.

Findings from the study suggest that as lecturers have different motivations, experiences, contexts and backgrounds from each other, it is crucial that programme providers analyse critical information about the participants before the actual implementation of the course, such as their qualifications, subjects taught and years of experience, and why academics choose to attend the particular programme. From this discussion, it may be claimed that it would be impossible to provide a programme that fits all participants' needs or to personalise the course for each person. By employing a procedure for identifying needs,

however, the technological course providers could revise their planning, pay more attention to participants, and adjust course content to address all participants' needs. In this context, then, lecturers could develop professionally while immersed in many aspects of a flexible programme that met their TEL needs in various contexts. Such a programme could match their ability levels, while still keeping the core elements of the programme. Furthermore, through the long term process of auditing academics' needs, a useful information source could be built up for administrators and providers to understand the common TEL needs of lecturers in relation to their backgrounds, and this would enable them to attract academics to the programme in a more active way. Consequently, in order to exert a major positive influence on academic development, TEL programme providers should be characterised by a thorough and practical assessment of needs, more consideration at the planning stage, and by having enough flexibility to address different needs. Fulfilment of these criteria would maximise the potential of such interventions and would thus raise the effectiveness of TEL professional development (Hoekstra *et al.*, 2009; Yardy & Huxtable, 2011).

8.3.2 The Design of TEL CPD

As discussed in the previous section, needs assessment is rarely applied to the planning of TEL development in the context of the Saudi Higher Education institution participating in this study. Thus, TEL courses are, in general, designed without a clear rationale and as a result usually fail to tackle key professional needs. With such a situation, the achievement of a good TEL CPD design could depend on chance, and the capacity and experience of TEL courses providers to promote the content and the format design. Hence, following systematic development procedures, and having the ability to respond effectively to adult learning demands, would maximise the success of the provision of TEL CPD, and help avoid ineffective components, such as irrelevant content

and the skill level of CPD participants (Kirkpatrick & Kirkpatrick, 2009). It is important for lecturers, as adult learners, to be fully aware and informed about the format and materials in the design of the programme in which informed decisions will be taken regarding their development, otherwise a resistance to positive change and further development could be created (McCarney, 2004).

As reported in this study's results, there was some confusion over the overall recommendations for designing course content and materials through participants' preferences, previous opportunities, and knowledge and skills, and then building the content by addressing various aspects of TEL such as the focus of the domains in TPACK model for lecturers' development. This confusion seemed to make it difficult to implement the course content in an effective way. It is proposed that when content is designed based on the recommended principles of interaction, the course content will not only lead to the development of the necessary skills to use the tools, but it will also lead to the successful use of educational technologies in terms of how these can contribute to effective teaching and learning (Koehler & Mishra, 2009). Lecturers' different experiences of TEL courses indicate the need for commitment from providers to achieve effective design of TEL courses. This is an expected result as providers varied in their capacity and competency; however, they were not found to use a systematic procedure. This conclusion contradicts the view of Cimer *et al.* (2010) and Alaajez *et al.* (2010) that the design of the content in such development courses needs to accommodate the characteristics of a specific audience. This showed therefore the importance of (pre-formative) evaluation (Goodall *et al.*, 2005; Guskey, 2002) to adjust and design the programmes' content on the basis of preferred and existing academic knowledge and skills, and the actual demands in the lecturers' career and classroom settings.

The findings of this study suggest that a balance between theoretical knowledge and practice is crucial as activities to practise what was learnt in the pedagogy were not given

in most of the TEL programmes. Successful design of TEL CPD is characterised by combining essential components in the content design, such as active learning and linking theory to practice, and the flexibility in the designed content to make the content applicable to the participants' particular targets and specification to accomplish course learning aims more effectively (Fraser *et al.*, 2007; Kauffeld & Willenbrock, 2010; Schraeder, 2009). In this regard, lecturers confirmed that the main content provided was the theory or technological skills to deal with tools, but these were not efficiently intertwined with pedagogical elements for their practice. The value of combining technological and pedagogical conditions, and utilising thinking skills such as problem solving and independent thinking in the TEL CPD content, is that participants will be enabled to transform their teaching practice and will be encouraged to maximise the potential of TEL in their teaching environment (Daly *et al.*, 2009; Sandholtz & Reilly, 2004). Also, lecturers' mixed experiences point to the importance of hands-on training, in agreement with a number of studies (Hramiak & Boulton, 2013; Hsu, 2010; Mouza, 2007; Skidmore *et al.*, 2014; Wachira & Keengwe, 2011; Whitehead *et al.*, 2003) which all indicate that putting knowledge into practice during TEL CPD offers participants familiarity with the appropriate operation and application of TEL. Therefore, the interaction of TPACK knowledge dimensions emphasises the importance of such a combination in order to promote the successful design of a technology learning environment. This can, in turn, help a successful application of TEL in a teaching setting (Mishra & Koehler, 2006), and ensure that lecturers come away with a sound understanding of how incorporating theory (discussion) and actions (hands-on) can work together effectively (Attwell & Hughes, 2010).

However, although the overall TEL CPD content design was considered to be ineffective from the lecturers' point of view, participants acknowledged that collaborative learning had been experienced in their TEL learning, and that there had also been flexibility in the

content, to some extent, in the online courses. It appears that these participants had practised, at least in some ways, from their point of view, collaboration and flexibility features in the design of TEL learning within the courses they had joined. For example, respondents had practised in their traditional (face-to-face) and online courses, and they had had a chance to communicate and discuss with peers in order to develop their practices in TEL learning and their personal connections through their interaction. According to the social constructivist approach, it is well-known that providing opportunities for learners to learn and interact through reflection and discussion in order to share meaning and understand concepts results in increased learning (Vygotsky, 1978). The results in this study reinforce the research of Kelly (2013) and Good and Weaver (2003) that learning in a community and making networks with peers enhance the experience and effectiveness of TEL professional development and need to be provided in the design so that learners can interact with others and learn together. This is especially useful when there are similarities in background, content-area, years of experience, and development needs. In agreement also with Kelly's (2013) research, when this feature is included in lecturers' TEL courses, these adult learners can trust each other, which makes them more ready to learn and to achieve collective critical reflection. In addition, despite the fact that the respondents who participated had different needs and experiences, they acknowledged that a successful element in the design was the building of knowledge among the participants.

The results of this study, however, caution against optimism regarding the use of collaborative learning in TEL courses and the achievement of creating social networks that support the lecturers' learning and teaching process. As will become more apparent later in this chapter on the impact of TEL CPD, the emerging data do not reflect the real utilisation of such communities and networks with peers for learning TEL tasks, as empirical evidence is missing. Thus, it remains unclear to what degree efficient

collaboration and building a community of practice should be structured into the design. Such collaboration and sharing experiences through TEL CPD need to be implemented and reflected in a way that improves deep knowledge and skills as shaped by collaborative practices, and which is reflective of the participants themselves in the learning process (Daly *et al.*, 2009).

8.3.3 The Delivery

Given the surrounding stages and procedures needed to provide effective TEL professional development, the delivery process is seen as vital in enhancing the real success of such activities. TEL CPD needs to be delivered in an appropriate environment and with the appropriate tools for academics to comprehend the course materials according to their needs. The emphasis was on providing a suitable time and duration for the TEL course, while also ensuring the availability of technical support to solve problems for its duration, and respondents' views of the effectiveness of the delivery stage found in this study were various. However, the results also indicated that there was a gap between trainers and participants in their curriculum and specification area.

When lecturers participate in their TEL development, reasonable timing and duration for delivering course materials can exert a great influence over the effectiveness of the technology development. The findings of this study revealed that respondents found the timing and duration to be a concern to a varying degree. Participants were unsure how to judge the general trend of such matters in the programmes they had experienced and they had very few comments to make about the time and duration of the CPD programmes. For instance, some thought that long-term courses were more effective at covering the focus activity comprehensively (as indicated also in the quantitative data). However, they also believed that the long duration of a programme could lead to repetition, which could lead to frustration and abandonment of the programme. Nevertheless, the overall

divergence of opinion over the timing and duration was not surprising, and such responses were expected. This might be due to the lack of clarity of how to decide the appropriate times and durations, or due to a lack of rationale for providing a definite duration.

Although the significance of maintaining suitable times when providing TEL development and the importance of providing enough time to allow learners to interact fully with the course content and trainer are apparent, a clear rationale about these issues as part of effective practice in delivering TEL CPD is rarely discussed in the literature (Al mulhem, 2013). The majority of scholars, such as Alhazzani (2013), Fitzgibbon and Jones (2004), Bolliger and Wasilik (2009), and Banks *et al.* (2004), have shown that the failure to anticipate sufficient time duration negatively affected the delivery of successful TEL programmes. Hence, giving instructions for the suitable duration of a TEL development, to be followed by evaluation, is difficult; rather, the activity duration is that which enables participants to profit from the development properly and sufficiently (Birch & Burnett, 2009). Therefore, it can be concluded that various conditions and factors related to participants and content need to be respected to arrive at the most suitable timing. An adequate duration needs to be informed by the content objectives while appreciating learners' demands, rather than stipulating the length in advance. In other words, the time issue within the content delivery has to be balanced against the current teaching expectation.

The issue of trainer competence is also linked to the facilitation of the delivery process of TEL programmes. This kind of competence is central to the advancement of TEL knowledge and skills which will enable academics to adopt innovations in their practice (Bennett & Leduchowicz, 2007; Lawson, 2009). In this context, trainers are expected to deliver the instructions, adapt content and materials according to participants' needs, and arrange a proper environment for adult learners to improve their technological

competence. However, respondents' perceptions of trainer quality fell into two different camps. From the results of this study, many lecturers shared satisfaction at the level of qualified trainers regarding managing the programme content, supporting participants to develop technological skills, using TEL effectively, and extending their thinking to explore new knowledge in TEL. In contrast, some interviewees expressed negative views about the general competence of trainers which led them to evaluate them as undermining their successful TEL development, as the trainers did not provide the basic services for the development process.

These conflicting views may due to differences in personalities and independent skills which seemed to be an important factor for such a judgment. This is consistent with the studies of Harris *et al.* (2010) and Yigit (2008) which demonstrate that some participants do evaluate trainers on the basis of such criteria. A case in point is that some academics in this study prefer a trainer from western countries or specialised institutions in technology and science domains.

Unfortunately, the findings of this study indicate that the majority of lecturers had not experienced TEL training with a trainer who was a specialist in their academic area. It could be argued that a level of consistency between the academics' professional actions and values and the trainers' role would facilitate a significant sharing of expertise in their areas, would inspire participants, and would enhance the perceived effectiveness of the TEL development (Georgina & Olson, 2008). Trainers should have competence in the pedagogy and curriculum in the courses they provided; without this, the requirement for lecturers to integrate technologies into their pedagogical practices would be over-ambitious. However, due to the fact that the trainers in this study were not specialists in the learners' academic areas, the findings cannot be used as evidence to support the conclusions of Ofsted (2008) and Attwell and Hughes (2010) that specialist trainers in the lecturers' area is seen as a significant indicator of the success of the delivery stage.

The main argument here, however, is that, as mentioned in the previous sections, the connected stages of the training process reinforce each other and it is this relationship which therefore ensures the effectiveness of the TEL development cycle. Since the content design is not related to the actual curriculum areas of participants, the trainer's job is just one of transmitting TEL CPD. Thus, effective technology development is built upon the interaction between participants and activities. This focus on interaction is supported by Schraeder's (2009) argument that in order to be called effective, TEL CPD needs to go beyond a practical delivery process by revisiting educational strategies and encouraging learner contributions with a view to enhancing pedagogical techniques. At the same time, the preferences of TEL participants in the methods of delivering the learning content such as the desire to learn in small groups, should be taken into account by trainers (Farrant *et al.*, 2008). Furthermore, the trainer should be in attendance at all times to maximise the efficiency of the delivery (Georgina & Olson, 2008).

In addition, the effective delivery of TEL opportunities requires the immediate availability of technical support to facilitate development and learning. Absence of this feature could hinder the successful delivery of the academics' technology development and limit their engagement, as illustrated by the findings of this study. The necessity of this support confirms Bowe and Pierson's (2008) assertion that technical support should always be present with TEL CPD to avoid making technical hitches problematic for the learners, and also to promote progress and content by effective delivery. This finding of the study supports other results regarding this issue, such as those of Osika *et al.* (2009), Karagiorgi and Symeou (2007) and Cheawjindakarn *et al.* (2012), who identified that, with delay of technical support in real time, TEL course delivery becomes unattractive and it becomes more difficult to achieve its purpose. The results suggest that, while waiting for long periods for programmes to process, lecturers' engagement was reduced. Therefore, it is not surprising that lecturers could not make sufficient use of their

participation in TEL CPD, and that this aspect of technology development worried them.

When considering adult learning, a comfortable learning environment in which adults learners can formulate their own learning objectives and identify strategies for utilising the resources available to them to accomplish their objectives is a necessity (Knowles *et al.*, 2015; Hernandez *et al.*, 2009). In the provision context, therefore, respondents' results emphasise that designers and providers of TEL staff development were often unsuccessful in making the content and format, selection of trainers, and other processes that underlie course packages effective, especially in regard to the principles of pedagogy and curriculum. The origins of this gap in implementation arose from the divergent commitments and understandings of course designers and TEL CPD coordinators regarding the real objectives of using technology in teaching and career development, and academics' preferences and needs for development and integration of technology.

Specifically, in the studied case, rather than being given the opportunity to investigate the programme's content and design, lecturers were directed to develop and use technology in their teaching according to the required modern mode of Saudi educational practice. This approach did not take into account the reality of the lecturers' circumstances regarding learning and development in educational technology and, by thus impeding effective implementation of TEL CPD, it was an obstacle to improvement. Reflecting on this aspect of the study, it seems evident that course providers need to actively communicate with learners regarding their respective roles and commitments during the course and to clarify the essential values and aims of the course. Such interaction is a vital component for achieving the ultimate success of the institutions' vision and for raising awareness among academics of the contribution of TEL professional development towards their own professional efficiency.

8.4 Impact of TEL CPD

Leaving aside the understanding that TEL CPD was introduced to bring about positive changes in the way lecturers develop and integrate technologies in their practice, the research investigated how lecturers' experienced TEL CPD and how this affected their technology development and integration. This section of the study addresses the respondents' perceptions of the learning outcomes achieved from their experience of TEL CPD. It refers to literature such as the evaluation model put forward by Guskey (2002) in order to examine how this professional development was perceived by the academics and how it was utilised to improve their teaching and development processes. This section consists of two parts. The first part presents the view from a personal level, examining the perceptions of the academics towards the new knowledge and skills, and the second part presents the view at an institutional level, investigating the adoption and incorporation of the newly learned TEL tools and practices in the learning environment.

In general, despite the finding that the provision of TEL opportunities was mostly seen as unsatisfactory regarding design and content, other findings suggest that TEL CPD in fact supported a range of personal aspects and played an important role in lecturers' experiences. It resulted in, for example, a greater appreciation of TEL in learning, a greater interest in attending related course opportunities and in presenting TEL in pedagogical practice, and a desire to exchange ideas and communicate with others about TEL. However, participants concurred on the limited extent of real changes brought about by educational technology in supporting their development within their institutional environment.

Lecturers adopted certain strategies to put individual TEL developments to good use. The following two parts present this situation in more detail.

8.4.1 Changes on a Personal Level

The impact of TEL CPD on individuals was evaluated regarding changes in cognitive knowledge and in related issues such as teaching practices. Some aspects of the qualitative data which emerged under this section also contributed to the evaluation. The majority of participants indicated that an impact had occurred in developing general TEL knowledge and this impact meant that they experienced an increasingly positive attitude towards, appreciation of, and confidence in using TEL in education. For a number of participants, involvement in TEL CPD assisted in increasing their knowledge regarding the potential of TEL in their professional practice, which, in turn, increased their general awareness of technologies in learning. Therefore, it can be argued that TEL CPD resulted in academics developing positive perceptions of participating in TEL opportunities for their own intrinsic value and as an advancement in the academics' own knowledge, while also providing clear evidence to the academics of the overall value of TEL's innovative role in the educational process. This is in accordance with Scott and Mouza's (2007) and Daly *et al.*'s (2009) research that in an impact context, beliefs are changed in a positive way and a greater appreciation is acquired of the concept and practice of technologies as a result of undertaking TEL CPD. This seems to be the fundamental advantage of the TEL learning experience in this study: it promoted the usefulness in trying and adopting technologies for learning and teaching purposes, and, at the same time, participants successfully re-evaluated the potential associated with the adoption of TEL. Where TEL information included examples of theory or practice, this encouraged new opportunities for positive beliefs and attitudes. More importantly, lecturers in this study recognised the key features of technological concepts in their professional practice as in agreement with the studies of Morgan *et al.* (2006) and Mouza (2007), despite the fact that the TEL CPD was, in their view, ineffective in its overall design and provision, a failing which can, according to studies by Brinkerhoff (2006) and Aminudin (2012), inhibit such change.

These results make it clear, therefore, that if policy makers in Saudi Higher Education really want to implement technologies in their institutions and to overcome the resistance from academic staff, then efficient provision and design of the TEL learning environment is essential to achieving this goal.

Moreover, the lecturer' confidence and their success experienced in this context are evident in the study results, which showed the increased of confidence of lecturers in using technologies in their learning setting. This corresponds with Ertmer and Leftwich's (2010) research, where increased confidence was shown as a positive change as the move towards TEL practice was fostered. It is necessary for academics to acquire confidence in their TEL adoption and thus to reduce their fear of technology, particularly as students' skills in technology continue to advance. Moreover, interest shown by academic staff is not enough by itself to integrate educational technology into learning and teaching: there must also be an emphasis on their increase in confidence and on their development of a personal identity as digital practitioners (Greener & Wakefield, 2015). The growth of confidence can again be seen in this study when some academics discussed their trial attempts, i.e., when they decided to integrate what they had learned in TEL in the classroom immediately after their participation. Without having experienced such courses, from their own reports, they would never have had the courage to use it with students. Thus, this experience was deeply beneficial for some lecturers, especially those who were not confident about dealing with TEL. However, it is important to recognise the role that the pedagogy and specific subject knowledge of each member of academic staff plays in advancing TEL integration (Greener & Wakefield, 2015). In the study case, this change in confidence was acquired despite the lack of intended curriculum goals by the trainers, and consequently the confidence to try TEL in their pedagogy can be assumed to depend heavily on the teaching experience and subject knowledge of the lecturers.

Another impact of the programmes was that this increase in TEL knowledge and skills led to a tendency for lecturers to change aspects of their teaching practice. Their TEL development experience supported them in valuing the potential of TEL tools to make classes more interactive so that their students can have a better learning experience. These changes in lecturers' teaching behaviour revealed in the study support claims discussed in the literature, such as those of Scott and Mouza (2007), Daly *et al.* (2009) and Heaney (2004), and suggest that academics in the case institution can reflect with TEL in new ways in their current teaching and thereby maximise learner outcomes when the real TEL development occurs. A wide range of technological tools was employed by lecturers to practise their newly-acquired TEL skills with their students and peers. For instance, study data revealed that lecturers used Twitter, Wiki platforms or Prezi as newly learned media and tools to teach and communicate with learners.

Again, even without the application of pedagogical content knowledge interaction as emphasised by the TPACK model regarding the effective adoption of TEL (Koehler & Mishra, 2009), experiencing TEL knowledge and skills development seemed to help course participants to plan new approaches to using TEL for future implementation to bring changes to their routine and increase student engagement. However, this led to lecturers experiencing some negative effects when they tried to implement TEL in their classes, such as a lack of interaction among their students when asked to engage with communication tools, and this tended to discourage lecturers from maintaining the practice. While, informally, Saudi's young are characterised as a generation of digital users (as described in Section 2.3), the lack of engagement here can be attributed to the possibility that the more exciting features of the use of TEL in the classroom were not effectively utilised by the lecturers.

More importantly, participants did not focus on changing their underpinning instructional approach by providing content in a way that is facilitated by technologies, either

explicitly or implicitly, and their use was just the traditional method of transferring content but represented technologically. As a consequence, this led to the understanding that really effective TEL CPD needs to directly address the pedagogical content knowledge of the participants' curriculum; this would be more meaningful to them. This reflects the recommendation arising from Kanaya *et al.*'s (2005), Loucks-Horesley *et al.*'s (2003) and Aminudin's (2012) research, that professional development strategies need to be consistent with the curriculum, as this enables participants to value the deep advantages of the newly adopted TEL practices. Therefore, awareness should be raised among providers of TEL development that they need to help change lecturers' behaviour by including in the design process both new knowledge and new practices that stem from lecturers' own knowledge and curriculum. This would have a greater impact on lecturers' teaching practice within their subject area.

Another clear result from the study was the strong personal conviction of the lecturers about the extent to which social networks supported their TEL development; they commented that they appreciated the potential of connection and accessibility with a variety of contemporary resources and technologies for their own learning environment and in association with others' learning. This is in accordance with the findings of Smith (2015) and Couros (2006) that social networks, maintained by participants from past courses, are important and that course learners usually prefer to create their own relationships in a way that facilitates their development by exchange of ideas and information based on their particular TEL needs, rather than being controlled by those delivering the content. Such opportunities for informal talk are seen as crucial for positive outcomes from the programmes provided, as learners can develop and change via enthusiastic networks of individuals in blame-free conditions (Daly *et al.*, 2009). More evidence for the benefits to learners of online social networking is provided by Ferrier *et al.* (2009) and Guskey (2002). Their studies suggest that positive relationships

can promote the right environment for reflective learning as participants share their own experiences and accept criticism and assistance, thereby establishing a culture of trust; thus, and as a result of successful TEL CPD activities, a community of learning is developed which is not controlled by the course providers. For example, post-participation discussion or recommendations about specific information in TEL via social media applications among participants have been reported. This corresponds with Alrubian's (2014) study within the Saudi context. In that study, interactions among Saudi teachers had a highly positive impact on their practice, enhancing their professional development.

It is evident, therefore, that expanding time and opportunities for social interaction with peers during activities can be beneficial and can meet the demand to increase chances for learners to reflect and, equally, to build their own networks.

Considering the aforementioned aspects of the impacts of TEL CPD, it is clear that there were positive personal effects on the participants from TEL CPD. These advantages of the adoption of development in TEL were in the areas of attitudes, confidence, behaviour and social networks. These were due to the reflection of lecturers on the process of technology developments and their understanding of the active and interactive roles by which they could assist in the learning environment. Nevertheless, it is possible that the most significant point emerging from these results is the congruence between these findings and those of Kanaya *et al.* (2005) and Keengwe *et al.* (2009). They assert that when guiding participants towards building knowledge and reasoning skills, the focus should be, crucially, on the participants' curriculum area. To enhance academics' reflection on their learning and thereby maximise the opportunity for TEL integration, TEL CPD outcomes have been shown to improve if the opportunities provided are related to the curriculum and give chances for participants to be involved in activities and discussion.

8.4.2 Changes on Institutional Level

As Millwood *et al.* (2013) argue, when lecturers are immersed in a technology enhanced environment with supportive leadership, they exert greater effort and make choices to transfer their new knowledge and skills in TEL integration and usage. Research has found that there are no benefits to the learning environment from having developed individuals in TEL without concomitant changes to the organisation's culture and values in the direction of inspiring technology changes; lecturers tend to make effective changes in technology when they are in a supportive culture (Ertmer & Leftwich, 2010; Turnbull, 2006). The potential development of the institutional culture and policy requires that academics apply, reflect and share better visions and models of TEL in their learning and teaching contexts. When taking the view that developments in TEL involve the growth of all integrated components in the whole learning environment, it follows that providing fundamental opportunities for embarking on TEL adoption and practice is crucial in the institutional environment. All of this reinforces the message that accomplishing active TEL use in practice does not come purely from individuals' competence (Beckton, 2009; Kirkwood & Price, 2006), but that culture and leadership support play a major role in leading these changes.

The findings of this study indicate that there is no positive impact on institutional practice as a result of academics experiencing TEL programmes. It has been claimed that changes in the role of academics when TEL is integrated into classroom practice is often accompanied by changes in their status and power and in organisational culture (Schraeder, 2009). Nevertheless, analysis of the interview data shows that some lecturers would not have achieved any TEL development if appropriate support and culture had not already been available in the institutional context. This shows that some level of support is essential for any progress to be made in TEL development but, as Kim (2013) acknowledges an organised system of comprehensive support throughout an institution

would involve practically every member (Kim, 2013). Thus, the results suggest that it would be difficult to obtain TEL plans, policy and development in Saudi Higher Education through investment solely in individuals' preparation and improvement, and that it is vital to pay attention to the context in which the TEL development is to be integrated.

The findings of this study have shown that the lack of provision of appropriate technological resources, lack of opportunities to practise new skills, and the lack of readiness of technical support teams have deterred many lecturers from immersing themselves in TEL application in their environment. The shortage of technological resources meant that lecturers were constrained to strike a balance between the positive changes they desired and the reality of their institutional context. A number of studies (Bowe & Pierson, 2008; Karagiorgi & Symeou, 2007; Osika *et al.*, 2009) have cautioned that, if there are delays in TEL, either in resources or technical support, it is hard for the full, positive impact of technology on a faculty to be achieved, and it is also extremely difficult to encourage academics to continue with their own self-development in TEL. In addition, the argument made by Cheawjindakarn *et al.* (2012) is supported in this study's findings, that when relevant resources and technical support are placed appropriately in the organisational context, the contribution from lecturers to promoting the power of TEL professional development in the learning environment is likely to be significant. By way of illustration, participants mentioned that the technological equipment they had available to them consisted of overhead projectors in some classes, but no internet connection and no smart whiteboard, although they had attended advanced training sessions about designing models over Web2. Therefore, TEL CPD should be constructed and provided in line with institution policy and support, so that achieving the desired TEL outcomes is more possible.

Regarding following up and maintaining improvements, the importance of organisational and leadership strategies, by which it could be ensured that new developments are operated effectively and improved constantly, was underestimated. Lawless and Pellegrino (2007) and Efaw (2005) argue that experience in just one area of TEL CPD can lead to the achievement of new ideas and skills awareness; however, this is unlikely to lead to the intended outcomes in the learning environment unless active and appropriate follow-up is implemented. Therefore, it is suggested that technology development needs to be supported by organisational follow-up which would then deepen the technological content knowledge gained from course participation. However, this result is not surprising as although it can be assumed that effective CPD is a cycle of related components that affect each other (Goodall *et al.*, 2005; Williams, 2007), in this study the essential components of evaluation before and during the programme were not carried out and therefore the absence of these components was experienced as a weakness of the TEL CPD.

On the other hand, the readiness of university students to use TEL is an issue affecting the transmission of outcomes achieved from TEL CPD, and this readiness emerged from the interviews and relates to the institutional and leadership roles in this context. The lecturers' experiences in the case study illustrated this concern with the organisational environment by articulating how unsure they were about their students' ability to cope with using technology tools in learning, and how this influences whether innovations are adopted. It has been suggested that, if students were ready to use, and had a better understanding of, the intended technology tools, it would be beneficial, as academics who had developed in TEL tended to change their practice easily, and their students would facilitate them to appreciate and value new practices. This finding concurs with those of Afshari *et al.* (2009), Hruskocy *et al.* (2000) and Daly *et al.* (2009), who state that, to be able to feel the impact of participants' TEL personal and professional

development, students need to possess the required competences. In addition, lecturers' commitment and expertise are needed to empower them to be more motivated and curious to implement TEL within their pedagogical practice. This link might convince policy and leadership officials to train students based on aspects developed by academics in order to see the connection between new pedagogical practices and positive outcomes from TEL opportunities. In addition, encouraging students to use TEL tools effectively for their learning would encourage their instructors to satisfy students' technology enthusiasm by practising these educational demands.

It could be argued that one of the causes of this lack of effective implementation of TEL in Higher Education in Saudi Arabia is the absence of an actively supportive organisational culture. A fuller understanding of the impact of organisational culture on TEL practice could then aid in adopting effective strategies based on identifying and resolving potential conflicts and in managing change. This would help to ensure lasting improvements in TEL integration, with a practical approach in the specific context of that organisation's culture and structure. As the scope of organisational culture in TEL CPD is limited, this study just states that organisational culture plays a crucial role in lecturers' TEL CPD. The role of the organisational culture should be taken into account when planning, including all the integrated characteristics that affect TEL development and resolving learning conditions. It is necessary to emphasise here that, although it was appreciated that it might be difficult to achieve a fully supportive organisational culture, as the literature suggests (Kim, 2013), this study reveals that some aspects of the intended goals of TEL CPD appeared, but these were only weakly supported by the organisational strategies in the current situation.

Through the preceding discussion, this research has attempted to understand the provision of TEL professional development opportunities for lecturers in the higher educational setting in Saudi Arabia. From the lecturers' experience, what are the

development factors and conditions for, and impacts of, TEL CPD? In adopting technology, it has been emphasised that appropriate CPD is necessary to lead to successful change and practice in higher education (Bennett *et al.*, 2010; Butcher & Stoncel, 2012). This study has focussed on in-depth actions and interactions among the elements of a cycle that should produce an effective process for reaching the intended goal, and an attempt has been made to address each aspect to achieve understanding among them. Having said that, various reasons were found for the different concerns of these Saudi lecturers participating in TEL CPD. Improvements in personal knowledge and skills, and career relevance were identified as aspirations. The broad concept found in this context was that lecturers had an appreciation of the importance and potential of TEL development in their lifelong growth and as transformational experiences. Therefore, an emphasis on aspirations for improved job prospects indicates the need for credible TEL CPD qualifications. This feature of development is reflected here, where TEL professional development is seen to be a changing and dynamic process prompted by individual initiative and involving social interaction and which helps to develop competence in the academics' environment.

However, as TEL development is part of their wider experience and commitments in life, lecturers need to make judgments and make a balance among their different demands, particularly as adult learners (Knowles, 1984). This tension, and the extent of lecturers' aspirations to develop themselves, puts great emphasis on the support role of management to accommodate their various concerns and to fit into this reality in an appropriate way. The socio-cultural setting in Saudi Arabia implies specific considerations, such as accessibility for women. Therefore, it can be argued that the extent to which participation is able to satisfy both lecturers' enthusiasm and their concerns will determine their decision to continue making use of these opportunities. Thus, as Saudi Higher Education promotes this opportunity for learning and encourages

it through a number of technology projects (Ministry of Education, 2014), it is crucial to resolve lecturers' concerns about TEL CPD participation.

With globalisation and increasing modern demands for Higher Education in Saudi Arabia, TEL CPD is perceived as a means to equip lecturers to cope with the rapid changes in the nature of knowledge, and to acquire effective expertise and skills to deliver such new demands in the curriculum in order to enhance students' learning (Al-Ghamdi & Tight, 2013). TEL CPD's impact and lecturers' mixed experiences of the quality of activities provided reflect such effective implementation. Having said that, and drawing from the findings, the planning, design and implementation of TEL professional development indicates several problems with the current TEL opportunities in Saudi Arabia. These problems mainly arise from the lack of needs assessment, and the lack of specialisation in the content and trainer corresponding to the lecturers' curriculum and job needs. Consequently, due to the scant consideration paid to providing such development in light of clear and specific objectives for learners, the main provision is focused on general knowledge of TEL content, which has no limited influence on the underpinning pedagogical process.

Nevertheless, some features of learning were adopted, including social interaction, combining theory with practice, and expanding the availability of development opportunities and effectiveness. At the same time, the critical goal of TEL CPD implementation as enhancing the approach to teaching, learning and instructional design was not reflected in most of the TEL activities. Thus, it can be interpreted that integrating adult learning features into the structural design, based on participants' specialisation and needs, should be activated by TEL CPD providers. This would lead to effective TEL CPD provision as an appropriate input to reflective practice in Saudi Higher Education.

Although it is acknowledged that change is a difficult process, as it encompasses both cognition and behaviour, participants who are expected to change must understand the

change and be able to practise it (Fullan, 2016). This expectation was partly met by lecturers, who changed their attitudes, confidence and skills regarding TEL, and this can be seen from their changing views and practice in the study results. Lecturers' continuously changing practice is an indication of their making informed decisions in their teaching settings. This suggests that, in order to obtain the intended outcomes to illustrate the change, pedagogical and curriculum change should be reflected at this stage. However, assumptions by policy makers and educational authorities in transforming the traditional learning environment to a technology- enhanced learning environment cannot work simply by presenting TEL CPD opportunities from various providers, distributing technology devices, and asking academics to start using technologies for their educational benefit. Therefore, the gap exists between decision makers' intentions and lecturers' experiences of TEL professional development. Consequently, giving strong leadership support, especially within the cultural context, would help to facilitate the potential value of TEL development, and enable it to have a crucial impact. This would be aided by involving academics in the planning stage. Effective implementation, ensuring that underpinning pedagogical approaches are related to preferences and needs, also requires adequate resources and technical support and a culture that actively emphasises the desire to integrate TEL effectively. It can be said that any intended goal changes need to be negotiated in the balance of power between lecturers and organisational context. Adopting a new transformation depends on an appropriate learning environment being established by organisational policy and support.

It can be concluded that TEL CPD initiatives can have an impact on individuals' general knowledge, attitudes, confidence and skills, as individuals reach different levels of achievement. However, policy makers in higher education need to ensure that appropriate conditions are met to have a reasonable expectation that lecturers will integrate TEL into their everyday practice effectively.

8.5 The Proposed Model of Research in The Light of the findings

By identifying the implications of TEL CPD programmes for lecturers, a proposed model is introduced for the purpose of effective development in the context of Saudi Higher Education, and, in particular, MU. This suggested model covers all related contexts (participation, implementation, and impact), as affecting the field of TEL CPD of lecturers. The model suggests the importance of ensuring all aspects are provided with an emphasis on each phase, with such aspects needing to work together, as each aspect could positively or negatively affect the other. In other words, focusing on one aspect of provided TEL CPD courses which is considered to be effective may not lead to achieving overall success of all TEL professional development practices.

Figure 8.1 reflects the proposed model for the influenced factors in the successful practices of TEL CPD. These factors formulate a framework for TEL CPD practices and the relationship between them. For instance, participation is the vital factor that underpins the other factors as it means that lecturers are actively involved in TEL opportunities. Next, implementation is influenced by the effectiveness of designed programmes to help lecturers learn efficiently from such delivered opportunities. Finally, impact is the ultimate aim of such interventions to facilitate lecturers' adoption of TEL in the learning and teaching environment.

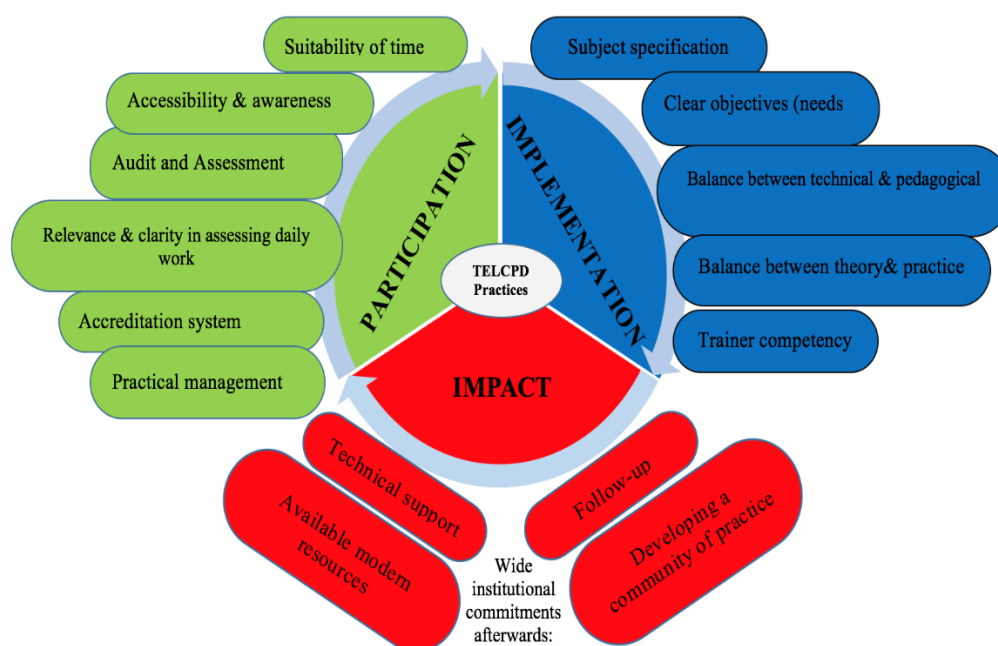


Figure 8.1: The proposed model for TEL CPD practices in Saudi Higher Education.

8.6 Application of TEL CPD Model

This section presents an example of an application of the proposed TEL CPD Model in order to exemplify how all stakeholders involved need to work together to facilitate effective experiences for the participating lecturers. All three related stages that are part of the TEL CPD process (participation, implementation and impact) have an impact on lecturers throughout the TEL CPD process and need to be considered carefully.

At a A university, for instance, when intending to provide an effective TEL CPD activity it is necessary to be aware of and have information about the lecturers' profiles, such as their qualifications, current TEL knowledge and skills and their work duties, as well as their specific academic area. Each lecturer's profile must be evaluated systematically, and lecturers should be rewarded with points or bonuses reflecting their involvement in TEL courses in such a way that would encourage them to take TEL CPD courses and feel that the decision to participate is a requirement rather than an option. Before launching

the TEL intervention, providers need to discuss with lecturers the intended focus of the course and the proper time and place in which it will be held in order to meet the needs of the majority of the target participants. After all the lecturers' profiles are reviewed, an active communication channel should be established to make participants aware of the course focus and agenda and be reminded of timings. The management team within the university needs to ensure that attendance credits are recorded so the lecturers will know that their participation is valuable and they can refer to the CPD course for different purposes, such as listing it on their CVs, applying for promotion or securing new positions.

When lecturers participate in the actual TEL learning process (implementation), the course objectives and content, which are based on the lecturers' needs and preferences, need to be clear and relevant to participants' subject area. This relevant content should strike a balance between theory and practice to make the learning objectives comprehensible for the participants. Moreover, the provision of the content needs to address the pedagogical and technical aspects of the information equally to enhance the lecturers' ability to adopt the developments in their practices so they can achieve their learning and teaching goals. In the implementation stage, these aspects need to be delivered by a trainer that is a specialist in the participants' academic specialism to facilitate in depth sharing of expertise.

After engaging in the TEL learning process, the impact phase in the TEL CPD Model involves the support and policies that A university needs to implement to help lecturers to utilise the developed and learnt TEL aspects. TEL CPD participants need to be asked by their institutional authority about their TEL learning. They also need follow-up slots or courses to ensure that proper development in TEL occurs, so they can become more aware of TEL and gain confidence in adopting it in their classrooms and emphasise the importance of such development within their institutional practices. In addition, the

responsible management within an organisation needs to provide opportunities for lecturers to engage in social interactions with their peers to share knowledge pertaining to TEL. Management also needs to provide technical support and the latest technological resources to accommodate the lecturers' areas in order to enhance the application of their developed TEL skills in the curriculum.

Considering the aforementioned aspects of the TEL CPD Model, in order for A university to implement successfully technology development, a positive reflective cycle of continued development in TEL would enable lecturers to feel that they have achieved the intended outcomes of the TEL learning. By applying these aspects within each stage of the TEL CPD process, the aspects would have a positive effect on each other and lead to overall success. Thus, ensuring that each of the recommended participation aspects is activated would facilitate lecturers' learning in TEL (the implementation). Ensuring that each of the implementation aspects is provided properly would enable lecturers to acquire the TEL skills they need, so they can utilise them in their classrooms and across the organisation. In the final stage, when lecturers return to the institution to apply what they have learnt in TEL and each of the impact aspects within the model is secured, lecturers would be motivated to participate in TEL CPD courses again, which ensures that this cycle of continuing development is productive.

8.7 Summary

This chapter has presented a discussion of the research findings which address the specific research questions of this study. It has been shown that, starting with their experiences of participation, lecturers were aware of the value that TEL CPD plays in influencing both their personal improvement and career progression. Various features in the design and implementation of the TEL CPD, such as finding out whether lecturers felt that they could successfully balance their workload in order to participate, pointed to

a need for a more careful assessment of lecturers' needs and preferences. In addition, the impact on participants showed that this was strengthened as they advanced in TEL attitudes, knowledge and skills. However, this discussion has also shown that the teaching and learning process faces deep challenges, and that interventions in the curriculum approach and organisational culture are crucial to obtain dynamic integration and produce effective change.

Chapter Nine

Conclusions and Implications

9.1 Introduction

The aim of this final chapter is to reflect on the investigation into TEL CPD in Saudi Higher Education and to draw conclusions which may contribute to wider research. Another aim is to explore the factors which need to be considered for the efficient utilisation of provided TEL CPD so as to improve the effective integration of TEL by lecturers in Saudi universities. This chapter begins by providing a summary of the main findings; it then draws attention to the contributions to knowledge and implications of this study, while identifying its limitations and making some suggestions for further research. The final section is a reflection of my research journey, with focus on the learning experience.

9.2 Summary of this Study

This study sets out to investigate TEL CPD programmes and identify both opportunities and challenges encountered by lecturers in Saudi Arabia. The main purpose was to explain, understand and interpret reasons behind the effectiveness of TEL CPD opportunities in the promotion of Saudi lecturers' practice with TEL integration, and the particular experiences lecturers have in this regard. The context of these TEL professional development opportunities was the Saudi Higher Education sector, which was considered in detail in Chapter 2. This study was developed out of a theoretical framework based on the interrelationships between adult learning and constructivism theories and the TPACK model, and with reference to a wide-range of relevant literature. After introducing the basic study concepts and rationale in the literature review, criteria

for effective TEL CPD were established. Taking all of the above into consideration, the overarching research question of the study was formulated as follows:

- What factors are recognised as important in line with the promotion of TEL CPD for lecturers at Saudi universities from the lecturers' perspectives and in relation to their experiences?

To address this demand, the following sub-questions, branching out from the central research question and the literature review, were devised:

- What are the factors influencing or hindering lecturers' perceptions of and aspirations for TEL CPD participation?
- What are the characteristics affecting the effective implementation of TEL CPD?
- What is the perceived impact of participation in TEL CPD?

In order to address the above questions, an interpretive paradigm, in line with social constructivist views, was adopted. Both the paradigm and approach were justified by the nature of the study (in terms of its aim and specific questions). A combined research design was deemed appropriate for the purpose of this study. With regards to understanding the individual experiences and perceptions of lecturers in terms of all the stages of provided TEL CPD programmes, questionnaires (n = 103) and interviews (n = 12) were conducted with male and female lecturers from one Higher Education institution (College of Education at MU). Data obtained from the questionnaires was analysed using SPSS, and data from the interviews was analysed using coding and thematic techniques.

Accordingly, the main findings are discussed below.

Question 1 (Participation)

With regards to lecturers' participation in TEL CPD, various reasons have been found for lecturers taking part in these programmes, such as keeping up-to-date in TEL knowledge,

and extending skills and personal development in teaching and job practices, all of which are highlighted as crucial motivations. At the same time, lecturers detailed that TEL CPD courses stimulate students' learning outcomes and also help them to achieve a better position in their job. However, such inspirations of participation do not exclude a combination of both the intrinsic/extrinsic motivations by lecturers over the values of TEL programmes. The broad meaning of TEL professional development found in the Saudi lecturers' context reflects various potentialities that are capable of contributing to personal and professional growth with an ongoing emphasis placed on shifting and affecting life demands and experiences. This study has shown that the majority of lecturers have the same personal initiative for such development, and is the leading factor which most positively affects lecturers' participation in provided TEL programmes. Therefore, arguably, systematic and structured organisational demands accompanied by support, such as an annual academic assessment for participation, could enhance TEL professional development as a dynamic process underpinning effective growth.

However, five main types of challenges were reported to reduce lecturers' inspirations towards TEL CPD, namely time and workload, quality of TEL programmes, availability of technological resources, accessibility, and awareness. The tension between lecturers' development and other existing work commitments and concerns was acute for them. As learning and development are a part of wider adult learners' life experiences, lecturers need to ensure a balance across their different commitments. Similarly, assurance of the quality and relevance, provision of the necessary resources, and guarantees of the accessibility of communication channels all encourage lecturers to align their TEL CPD participation with their work life. This finding seems to emphasise the need for more support from management. The results essentially show that the lack of a stable organisational framework regarding the involvement in TEL CPD and management support may negatively affect lecturers' participation.

Question 2 (Implementation)

Concerning the implementation plan, design and delivery, various aspects were presented pertaining to the characteristics of provided TEL CPD programmes in the Saudi context.

The major results emerging from the fieldwork are as follows:

- In terms of CPD in TEL practices, there was a significant gap between lecturers' needs and the provision available to them. Participants acknowledged that the TEL CPD programmes provided failed to meet their previously identified personal and curriculum needs, pointing to the fact that these programmes need to be well considered in the planning stages so as to ensure effectiveness. As an effect of the little attention paid to the needs analysis and preferences of lecturer development in TEL and to the organisational structure and resources, TEL courses seem to be provided mainly with the aim of delivering technology learning skills and content, and this focus can reduce the effectiveness of the implementation.
- The general design of the TEL CPD programmes provided reflects some issues in TEL implementation, such as a lack of balance between theoretical knowledge and practice, a difficulty with providing the contents on the basis of existing TEL knowledge and needs, and an over-emphasis on technology skills. TEL CPD activities in this regard have focused mainly on general TEL knowledge and skills, as opposed to making them intertwined with TEL pedagogy and a reflection of the technology role for learning purposes. Although the level of design was insufficient, some learning features were established for participants. For instance, collaborative learning, to some extent, was experienced by lecturers in their TEL courses. As the study shows, such feature design can be an efficient way (but not the sole means) of developing lecturers in TEL.

- Various experiences and views in terms of the delivery process of TEL CPD activities have been outlined in this study. Appropriate time and duration, besides the instant technical support, were amongst lecturers' concerns regarding the quality of the delivery phase. Although there is little evidence in literature to support the idea that careful consideration of the duration and pace of the delivery of the course is a critical factor, lecturers' experiences indicate that a well-designed TEL programme needs provide the development materials over with a steady pace and with consideration of the necessary interaction for such development. Moreover, the lack of technical support constitutes a crucial concern for many lecturers against engaging effectively with such development. Aside from this, there was agreement that the general capability of TEL CPD trainers was perceived as effective for lecturer development in regard to general TEL knowledge and skills. However, such a satisfactory level did not match the academics' subject areas and pedagogies, and this was seen to limit the opportunities of sharing expertise in the participants' areas and teaching practices, and to thus to curtail aspirations of full TEL integration within the curriculum.

Question 3 (Impact of TEL CPD)

Although CPD-related TEL was designed and employed for use without considering individual needs and learning preferences, there was a range of personal advantages according to participants' perceptions, as a result of TEL professional programmes. These advantages concerning the adoption of development in TEL were in the areas of attitude, confidence, attempting the integration of TEL in teaching practice, and developing social networks, and were related to the reflection of lecturers on the process of technology developments and their understanding of TEL roles in the learning environment. The findings of this study indicated that by developing general TEL knowledge, lecturers increased their positive attitude, appreciation and confidence in

using TEL in education too. Arguably, the success of the attempt itself to integrate TEL in pedagogical practice could also be thought to be influenced by such changes in lecturers' knowledge, attitude and confidence.

Although the TEL programmes prompted the improvement of individual aspects of TEL, nonetheless, there has been a gap in terms of meeting the diversified needs of learnt TEL aspects in the context of the institution. This study's findings show that the positive impact achieved through individuals' TEL improvements tend to be undermined by institutional culture and practices. The organisational support and policies were not as supportive as they needed to be in order to achieve effective lasting changes and fully integrated adoption of TEL. As the participants commented, the lack of provision of appropriate technological resources, technical support and opportunities in practising new skills, follow-up improvements, and the readiness of university students to deal with such developments, were all identified as a deterrent to transferring the skills that were learnt from the TEL programmes. All these factors were regarded as issues in relation to lecturers' personal and professional development. Furthermore, the successful implementation of TEL and the realisation of its objectives in the learning and teaching environment were also thought to be inhibited by these factors. With the increased demand for TEL in the Saudi Higher Education sector and the need for it to be accompanied by individual development, results in this study show that improved organisational culture and support are crucial in lecturers' TEL CPD.

9.3 Contributions of this Study

The current study makes a number of contributions in the light it sheds on lecturers' development in TEL in the Saudi Higher Education domain. It discusses the wider context of the professional development process (encompassing all stages of TEL development programmes for lecturers), something not previously addressed in other

studies. By so doing, the research provides insight into the need for established criteria for effective TEL CPD programmes, while also using an approach that is supported by the literature on ‘what works’ in the context of the Saudi Educational System. To the best of the researcher’s knowledge, a search of works in the literature published in the field of technology development programmes found only a few studies that had investigated lecturers’ developments in TEL in the Saudi context (Ageel, 2013; Al Mulhem, 2013; Al Ghamdi, 2015). These empirical studies focused on designing a specific training package to test the impact and emphasise the importance of developing academics in the TEL area. However, the current study provides an in-depth understanding of the factors influencing the effectiveness of TEL programmes not only for one specific course with only one stage in TEL development such as the implementation, but for all the stages and general TEL professional development opportunities experienced in the Saudi Higher Education context, and the whole purpose of the study is with a view to providing a model for planning TEL CPD programmes in the future. This study builds upon previously conducted studies by taking an in-depth look at lecturers’ perceptions of TEL professional development, and by addressing the factors of CPD activities involved in TEL programmes, with the specific purpose of establishing successful practices and the effective integration of technology in education. Accordingly, this study is the first of its kind in Saudi Arabia to investigate in-depth the factors influencing the effectiveness of TEL CPD courses. Furthermore, the Saudi educational context is an interesting one; heavy investments in technology, big plans concerning educational reforms and developments, and a highly centralised system mean that the voices of lecturers are mostly absent. Thus, this study provides insight into reforms and TEL professional programmes, not only in the Saudi context but also in similar educational contexts, such as those of the Gulf States.

A further contribution made by this study is the model of TEL-based CPD (see Figure 8.1), as discussed in Chapter 8, where this model highlights the importance of the factors involved in the area of effective TEL programmes. Through this proposed model, a comprehensive picture of what characteristics are affected under participation, implementation and the impact of a TEL programme was established based on the experience of lecturers. This offers a framework to TEL CPD programme developers, TEL coordinators, and policy makers in the Saudi Higher Education sector for designing and providing the necessary environment for such development for lecturers and for then promoting effective TEL conditions for integration. Although this framework is specifically related to the practices of TEL professional developments in Saudi universities, it is likely that consideration of the assumptions and recommendations contained herein would be of great value to anyone planning for TEL CPD provision in general.

Methodologically, this study contributes to the emergent trend in empirical research design. Traditionally, the quantitative approach is more popular in the research community in Arabic countries, as shown by the literature review. However, there seems to be a growing interest in the qualitative approach with researchers and policy makers appreciating the contribution that qualitative methodologies offer in knowledge construction. By so doing, this research provides a holistic view of the investigation through the adoption of data triangulation from different sources. Furthermore, the focus of the interviews of this study provide new, in-depth insight into TEL professional development practices and experiences in Saudi Higher Education, rather than providing the more general overview which can result from a quantitative approach.

9.4 Limitations of this Study

Several limitations need to be acknowledged in this study, as for any academic work, no matter how precisely it is designed and conducted (Strauss & Corbin, 2008). Despite both quantitative and qualitative methods being used to answer the three questions in this study, some limitations remained.

As discussed in Chapter Five, a case study strategy supports researchers in investigating in-depth a given setting and can produce comprehensive and rich data. However, the findings would have been more desirable had they included more colleges in different universities; this would have been valuable in generating more variations and communities in the evaluation of such a large-scale TEL programme. However, considering the limited time of the PhD journey and the single researcher team, it was difficult to expand the study in this way, and so the focus was placed on one college in order to investigate the situation in more depth. The main aim of this study was not to generalise findings to other contexts but to obtain a deep understanding of the current practices and experiences, with the hope of garnering rich details representative of the picture of the college under examination. It was hoped also that this focus would provide a starting point for the exploration of other contexts.

Another limitation of the study was that the focus was placed on lecturers. It is possible that other people involved in TEL CPD courses, such as course designers, providers and the coordinators of professional development in Saudi Higher Education might have different views and perceptions regarding TEL programmes for lecturers. However, the research sought to investigate lecturers' perceptions and experiences, as they are the main audience in such developments, with their voices in the process being recognised as significant and needing to be heard.

Another limitation of this study is related to the interview data gathered from female lecturers (as discussed in Chapter 5). Due to the gender segregation principles and

traditional policies between males and females regarding communication within the Saudi society, the researcher carried out the interviews by telephone and online communication applications, meaning the active interaction in the interviews between the interviewer and interviewees could not be as pronounced as the face-to-face contact with males. However, the female lecturers interviewed in the study were encouraged to be free in responses with the researcher, as the ultimate purpose of this study was to provide valuable insight into TEL CPD practices.

Whilst acknowledging these limitations, as has been shown, steps by the researcher have been taken wherever possible to minimise gaps in the understanding and validity of the results.

9.5 Implications

It is acknowledged that the findings from this study cannot be generalised, as this study has focused on one higher education institution, in an attempt to inform TEL CPD provision in Saudi Higher Education. Accordingly, the conclusions drawn could be applicable to other similar contexts, although attention would need to be ensured in terms of the differences between economic development, educational development and organisational culture. Nonetheless, there is the hope that the results of this study might provide valuable insight and understanding into TEL-oriented CPD practices for lecturers in higher education. Furthermore, the desired finding of this thesis is that it might potentially be beneficial to policy makers, managers, TEL CPD designers and coordinators, and researchers in the domain of technology professional development. In order to maintain the role for new changes required in this era, and given the rapid pace of contemporary society and the intimate links between an educational system and its environment, the author hopes, as was argued in the first chapter, that a more thorough understanding of the influencing factors of TEL CPD programmes in Saudi Higher

Education has been provided. Thus, the following key implications can be drawn from this study for the effective TEL CPD development and implementation of such programmes in Saudi Arabia, as well as overall.

Policy Makers

The results from this study propose that policy makers in developing countries, such as Saudi Arabia, should use their power to shift their educational policies and practices towards a more systematic policy and system that regulates, accredits, encourages and oversees the TEL CPD programmes required in the job market for lecturers. This, in turn, would lead to the targeted transformation of effective practices in higher education. By the same token, there is a multi-level intervention, as this study suggests, containing human and material factors in this process for successful integration and development of TEL in the educational context. Moreover, creating a specialised TEL CPD framework that undergoes frequent review so as to ensure it is in line with change is seen to be urgent. This could be an effective and efficient approach for the Saudi context, especially with the emphasis from the lecturers' experiences that a clear vision of needed developments and transformation is missing.

Management Support

The views of the lecturers indicate that the role of management in universities plays a major role in fostering the success of TEL CPD. For such support in TEL CPD, there is a suggestion to:

- Provide a supportive management role that understands lecturers' preferences, needs, and concerns so as to ensure they are supported in their involvement in TEL programmes.

- Ensure that the accreditation of experienced TEL CPD is linked to lecturers' profiles, and this accreditation can then be used as a tool in the support of promotion and/or keeping a particular grade in their role, for instance.
- Promote opportunities and venues for lecturers in both formal and informal settings as they can discuss with, mentor and support each other in TEL professional development. In this regard, local, regional and national communities of practice should be encouraged and facilitated as the findings of this study indicate it is beneficial for lecturers in their professional development.
- Ensure that follow-up and support in TEL are provided within the organisation, if needed, when lecturers try to use their TEL in the teaching setting. In addition, train and support students to deal with the technologies that lecturers use with them for learning objectives.
- Keep an organisational culture that enhances TEL implementation with clearly stated standards, objectives, structures and assessment methods, which make positive interaction with academics' development in TEL and also encourage them to improve performance and skills.

TEL CPD Providers

TEL programmes need to be offered with the main focus on the specific audience that is going to participate. Designing a TEL CPD course for lecturers that provides the effective learning experience, should consider these points:

- Conduct ongoing analysis of needs for lecturers and the evaluation of TEL courses provision, which seek to stay up-to-date concerning the full picture of the current statues and accordingly facilitate experience and involvement in TEL activities by lecturers.

- Achieving balance between theory and practice of all-round TEL knowledge and skills should be implemented by TEL CPD designers so as to ensure clear reflection on technology tasks and practice, with such a balance needing to ensure the curriculum aspect is provided with general TEL knowledge and skills.
- Make sure that technologies in such development programmes are appropriate and relevant to lecturers' work and to the teaching environment to be used, and also to provide sufficient technical support when needed in both TEL courses and institutions.
- Ensure that the features of learning tasks such as collaboration and flexibility are provided in the content in order to make the experience meaningful. Make sure, also, that there are opportunities for hands-on demonstration of the learnt TEL, with the purpose of facilitating their successful application in lecturers' teaching environment.

It is not being suggested that following the above will result in complete success; rather, attention also needs to be directed towards the culture, status and conditions of the teaching profession. Nonetheless, such suggestions need to be articulated and taken into account by stakeholders when applying different approaches. In this regard, a short presentation will be carried out and a summary of the study will be sent to people of authority and professionals in the Saudi Higher Education field. Through the conferences, seminars and workshops that are conducted in MU, I will make contact with the HoDs, Coordinators and Deans. In addition, papers will be presented both at regional conferences in the Gulf States, as well as at international events.

9.6 Suggestions for Future Research

The current study proposes several areas of possibility for further research. The first is to investigate the opportunities and challenges experienced by lecturers while covering more academic departments across a wider range of different colleges and/or higher education institutions. This should be determining whether the results from this research are indicative of experiences across the broader context, and it should also obtain a comprehensive picture of factors related to TEL CPD opportunities. Owing to the fact that lecturers' TEL development is seen to be a continuous process, with the current work representing an overview of the present situation in the areas under examination, it would be valuable to complete a longitudinal piece of work with the aim of garnering more understanding of TEL CPD in Saudi Higher Education.

The second main area for future research is to investigate the relationship between the perceptions of those lecturers with the perspectives of managers or other stakeholders of TEL CPD practices who are responsible for lecturers' integration and the improvement of TEL in the same university to determine whether they agree on any of these points. When compared, a reflective approach could be established in line with their perceptions, promoting an active framework that satisfies all the parties involved in TEL professional development.

The third area is focused on a follow-up work, in line with the application of the suggested TEL CPD model (see Figure 8.1). This would also be viewed as valuable. Investigating the proposed framework from this study can provide tested evidence of these suggested factors for the successful provision of TEL CPD in Saudi Arabia.

Finally, owing to the fact that the overall objective underpinning TEL CPD is focused on improving learners' overall learning capacity, a research study into the impact of TEL CPD on classroom practice provides a further possible area of examination in the Saudi context.

9.7 My Learning Journey

Every phase spanning the four years of this PhD study, such as establishing and outlining the study agenda, designing and devising the work, gathering data, completing data analysis, and writing up the study, has had its own peaks and lows. In the preliminary stage, as an example, when first coming up with the idea for the study, my supervisor carried out general meetings to discuss the research agenda. Through these meetings and by taking on-board what was said, I was able to reformulate the study topic. This was a repeated and commonly revisited consideration, with focus directed towards overcoming any obstacles at the start of the study journey. Challenges first began to arise when planning the study design.

The other stages to follow become more and more challenging and far more complex, although some did get easier. Challenges included the acknowledgement that there was a need for more critical reading, greater reflecting, discussion on the research topic, and the need to write more critically whilst overcoming barriers. Such skills were difficult to develop. At times, I experienced feelings of frustration when submitting work as, at times, albeit alongside encouragement, I also came to face criticism and the identification of points for further development. However, this allowed me to improve and to strengthen my skills and improve my writing. This process became less difficult as time passed, with an abundance of support offered by my supervisors and colleagues, as well as through reflection and self-study.

There is much in common between my learning trajectory and the issues outlined in the thesis in relation to CPD. A number of opportunities are available to PhD students, including conferences and colleagues, libraries, online sources, supervisor support, seminars and workshops, the Reading Researcher Development Programme (RRDP), study groups and research groups, for example. As a student, I was able to utilise some of these opportunities to facilitate improvement in my research skills and a greater degree of

motivation to expand on my competence in this arena. Furthermore, due to the fact I am a researcher in the beginning stages, our needs analysis underwent regular evaluation, resulting in assignment to different RPD courses. These analyses proved valuable in helping me to critically examine my own development and address the areas needing improvement.

This work has allowed me to improve in various areas, including critical reading and thinking, problem-solving, the completion of long- and short-term studies, the critiquing of other works, and sharpening my social science research skills. In my own social life, as a result of the metropolitan setting of this work, I have also been able to develop and improve upon my own interpersonal skills, in addition to my levels of self-confidence and my time-management capabilities. This work has changed not only my academic skillset but also my professional life as a whole.

References

- AAFAQ. (2014). Future Plan for University Education in the Kingdom of Saudi Arabia. Retrieved July 23, 2014, from <http://he.moe.gov.sa/en/Ministry/Deputy-Ministry-for-Educational-Affairs/Pages/.aspx>
- Abu Qudais, M., Al-Adhlesh, M. & Al-Omen, A. (2010). Senior faculty members attitudes in Jordanian universities towards using information and communication technology. *The International Arab Journal of Information Technology*, 1(4), 135–141.
- Abuhmaid, A. (2011). ICT training courses for teacher professional development in Jordan. *Turkish Online Journal of Educational Technology*, 10(4), 195–210.
- Ageel, M & Woollard, J. (2012). Enhancing University Teachers' Information and Communication Technology Usage By Using A Virtual Learning Environment Training Course, At 6th International Technology, Education and Development Conference, Spain. 05 - 07 Mar 2012. 11 pp.
- Ageel, M. (2011). The ICT Proficiencies of University Teachers in Saudi Arabia: A Case Study to Identify Challenges and Encouragements. *University of Southampton's Doctoral Research Journal*, 8(2), pp.55-60.
- Afshari, M., Bakar, K., Su Luan, W., Samah, A., & Fooi, S. (2009). Factors affecting teachers' use of information and communication technology. *International Journal of Instruction*. 2 (1), 77-104.
- Ageel, M. (2013). *Using A Virtual Learning Environment To Increase The Use Of Information And Communication Technology By University Teachers At Jazan University, Saudi Arabia*. PhD thesis, University of Southampton.
- Akhorshaideh, O. (2013). *Investigating Factors Which Influence The Quality Of Training Programmes In Public Universities In Jordan*. PhD thesis, University of Salford.
- Al-Asmar, M. (2009). Faculty professional development needs: Future perspective. *Umm Al-Qura University Journal of Educational and Psychological Sciences*, 1(2), 234–320. [In Arabic]

- Al-Ghamdi, S. & Tight, M. (2013). Selecting and developing high-quality academic staff. In A. (Eds. In Smith, L. & Abouammoh (Ed.), *Higher education in Saudi Arabia: achievements, challenges and opportunities* (pp. 83–93). London: Springer.
- Al-Ghadyan, A. (2004) *The attitudes of university academic staff towards e-learning and in-service training in Saudi Arabia : an analytical study* , Durham theses, Durham University.
- Al-Hattami, A., Omar, M. & Elmahdi, I. (2013). The need for professional training programs to improve faculty members teaching skills. *European Journal of Research on Education*, 1(2), 39–45.
- Al-Hojailan, M. (2013). *The Effectiveness Of The Social Network In Higher Education In Saudi Arabia: Action Research To Develop An Elearning Conceptual Model Based On Blog Tools*. PhD thesis, De Montfort University.
- Al-Jarf, R. (2007). E-integration challenges for rectors and deans in higher education. In *Computer and Advanced Technology in Education Conference Proceedings*. ACTA press. Canada.
- Al-Khalifa, S., & Garcia, A. (2013). The State of Social Media in Saudi Arabia's Higher Education. *International Journal of Technology and Educational Marketing*, 1(3), 65-76.
- Al-Madani, F. & Allafaijiy, I. (2014). Teachers' Professional Development on ICT Use: A Saudi Sustainable Development Model. *Journal of Modern Educational Review*, 4(6), 448–456.
- Alamri, J. (2016). *The Perception of Interpersonal Relations between Instructors and Students as Experienced within Classroom and Online Communication: A Mixed Method Case Study of Undergraduate Women in a Saudi Institution*. University of Nottingham.
- Alamri, M. (2011). Higher Education in Saudi Arabia. *Journal of Higher Education Theory and Practice*, 11(4), 88–91.

- Alasmari, I. (2014). *Improving Teaching and Learning in Higher Education through the Use of E-learning: Mixed methods research in one of the southern universities in Saudi Arabia*. PhD thesis, University of Southampton.
- Albahiri, M. (2010). *online cpd for teachers in saudi arabia: aptitude, attitudes and barriers*. PhD thesis, University of Strathclyde, Glasgow.
- Alebaikan, R. (2010). *Perceptions of blended learning in Saudi universities*. PhD thesis, University of Exeter.
- Alexandrou, A., Field, K., & Mitchell, H. (2005). *The continuing professional development of educators : Emerging european issues*. Didcot: Symposium Books.
- Algahtani, A. (2011). *Evaluating the effectiveness of the e-learning experience in some universities in Saudi Arabia from male students perceptions*. University of Durham.
- Al Ghamdi, K. (2015). *Can an ICT CPD programme have an impact on EFL teachers in Saudi Arabia: A case study*. PhD thesis, University of Warwick.
- Alhamid, M., Zeyada, M., Alotaibi, B., & Motwalli, N. (2007). *Education in The Kingdom of Saudi Arabia* (4th ed.) Riyadh: Maktabat al-Rushd.
- Alhazzani, N. (2013). Information technology challenges faces higher education institutions from the point of view of academic and administrative leadership at King Saud University. In *3rd international conference for E-learning and Distance Education*. Riyadh, Saudi Arabia. [In Arabic].
- Alhbabi, M. (2013). E-training for academic staff on learning management systems and its different tools: The experience of the course of E-learning Skills at King Khalid University. In *3rd international conference for E-learning and Distance Education*. Riyadh, Saudi Arabia. [In Arabic].
- Alkalai, Y. (2004). Digital Literacy: A Conceptual Framework for Survival Skills in the Digital era. *Journal of Educational Multimedia and Hypermedia*. 13 (1) 93 -106.
- Allamnakhrah, A. (2013). Learning Critical Thinking in Saudi Arabia: Student Perceptions of Secondary Pre-Service Teacher Education Programs. *Journal of Education and Learning*, 2(1), 197–210.

- Al mulhem, A. (2013). *Developing An E-Learning Training Package For Academic Staff In One University In Saudi Arabia*. PhD thesis, University of Plymouth.
- Almuqayteeb, A. (2009). *Attitudes of female faculty toward the use of computer technologies and the barriers that limit their use of technologies in girls' colleges in Saudi Arabia*. Mississippi State University.
- Alnassar, A. & Dow, L. (2013). Delivering high-quality teaching and learning for university students in Saudi Arabia. In A. Smith, L. & Abouammoh (Ed.), *Higher education in Saudi Arabia: achievements, challenges and opportunities* (pp. 49–60). London: Springer.
- Alqahtani, S. (2016). Effects of Social Networking on Higher Education in Saudi Arabia. In T. Issa, P. Isaias, & P. Kommers (Eds.), *Social Networking and Education: Global Perspectives*, 291- 304.
- Alrubian, Ali. (2014) *Using A Community of Practice via a New Technology (Moodle) for Continuing Professional Development in Saudi Arabia*. The University of Manchester.
- Alshmrany, S. & Wilkinson, B. (2014). Evaluating ICT use in Saudi Arabian secondary schools. In *International Conference on Advanced Information and Communication Technology for Education* (pp. 70–75).
- Alvarez, I., Guasch, T., & Espasa, a. (2009). University teacher roles and competencies in online learning environments: a theoretical analysis of teaching and learning practices. *European Journal of Teacher Education*, 32, 321–336.
- Aminudin, N. (2012). *Teachers' Perceptions of the Impact of Professional Development on Teaching Practice: The Case Of One Primary School*. Unitec Institute of Technology.
- Angeli, C., & Valanides, N. (2009). Epistemological and methodological issues for the conceptualization, development, and assessment of ICT-TPCK: Advances in technological pedagogical content knowledge (TPCK). *Computers and Education*, 52(1), 154–168.

- Arokiasamy, A., bin Abdullah, K., & Ismail, B. (2014). Correlation between cultural perceptions, leadership style and ICT usage by school principals in Malaysia. *Turkish Online Journal of Educational Technology*, 13(3), 27–40.
- Asch, D., Jedrzejewski, M. & Christakis, N. (1997). Response Rates to Mail Surveys. *Journal of Clinical Epidemiology*, 50(10), 1129–1136.
- Asiri, M. Rosnaini, M. & Ahmad, F.(2012). Factors Influencing the Use of Learning Management System in Saudi Arabian Higher Education: A Theoretical Framework. *Higher Education Studies*, 2(2), 125–137.
- Attwell, G. & Hughes, J. (2010). Pedagogic approaches to using technology for learning: Literature review. Lifelong Learning UK.
- Austin, A. (2010). Supporting faculty members across their careers. In K. J. Gillespie, & D. L. Robertson (Eds.), *A guide to faculty development*. 363-378.
- Avalos, B. (2011). Teacher professional development in Teaching and Teacher Education over ten years. *Teaching and Teacher Education*, 27, 10–20.
- Baatard, G. (2012). A technical guide to effective and accessible web surveys. *Electronic Journal of Business Research Methods*, 10(2), 101–109.
- Babbie, R. (2015). *The practice of social research* (Fourteenth). Belmont, CA: Wadsworth Thomson Learning.
- Badge, L., Cann, J., & Scott, J. (2005). e-Learning versus e-Teaching : Seeing the Pedagogic Wood for the Technological Trees. *Bioscience Education*, 5(May).
- Banister, S., & Reinhart, R. (2011). TPCK for impact: Classroom teaching practices that promote social justice and narrow the digital divide in an urban middle school. *Computers in the Schools*, 28(1), 5–26.
- Banks, S., Denis, B., Fors, U. & Pirotte, S. (2004). Staff development and e-tutors training. In *Networked Learning Conference Proceedings*.
- Bassey, M. (2000). Case Study Research in Educational Settings. *Journal of Education for Teaching* 26 (1).

- Bayne, S. (2015). What's the matter with "technology-enhanced learning"? *Learning, Media and Technology*, 40(1), 5–20.
- Beckton, J. (2009) 'Educational Development Units: The Challenge of Quality Enhancement in a Changing Environment' in L. Bell, H. Stevenson and M. Neary (eds) *The Future of Higher Education: Policy, Pedagogy and Student Experience*, London: Continuum 57- 69.
- Becta. (2008). Review of the Research Literature on Barriers to the Uptake of ICT by Teacher. Becta, Coventry. Retrieved July 18, 2014, from <http://www.elearningcentre.co.uk>
- Bell, B. & Gilbert, J. (1996). *Teacher development: a model from science education*. London: Falmer Press.
- Bell, J. (1999). *Doing Your Research Project*. Buckingham: Open University Press.
- Bennett, J., Braund, M., & Lubben, F. (2010). *The Impact of Targeted Continuing Professional Development (CPD) On Teachers' Professional Practice in Science. Main Report*. York: University of York, Department of Educational Studies: DFCS
- Bennett, R., & Leduchowicz, T. (2007). What makes for an effective trainer? *Journal of European Industrial Training*, 7(2), 3–46.
- BERA. (2011). Ethical Guidelines For Educational Research. Retrieved January 5, 2015, from <https://www.bera.ac.uk/wp-content/uploads/2014/02/BERA-Ethical-Guidelines-2011.pdf>
- Berg, L. (2009). *Qualitative Research Methods for the Social Sciences* (seventh Ed). Pearson International Edition.
- Bhatti, A., Battour, M., Sundram, K., & Othman, A. (2013). Transfer of training: does it truly happen?: An examination of support, instrumentality, retention and learner readiness on the transfer motivation and transfer of training. *European Journal of Training and Development*, 37(3), 273–297.
- Birch, D. & Burnett, B. (2009). Bringing academics on board: Encouraging institution wide diffusion of e-learning environments. *Australasian Journal of Educational Technology*, 25(1), 117–134.

- Blanchard, N., & Thacker, J. (2013). *Effective Training: Systems, Strategies, and Practices* (5th ed.). Harlow: Pearson Education Limited.
- Bonk, J., Graham, R., Cross, J., & Moore, G. (2012). The Handbook of Blended Learning: Global Perspectives, Local Designs. *Higher Education*, 624.
- Boud, D., Keogh, R., & Walker, D. (2013). Reflection: turning experience into learning. *Learning*. London: Kogan Page.
- Bowe, R., & Pierson, M. (2008). Professional development in educational technology: What have we learned so far? *Transforming Classroom Practice: Professional Development Strategies in Educational Technology*, 37(77), 3–21.
- Boyd, B. (2005). *CPD : Improving Professional Practice : An Introduction to CPD for Teachers*. Paisley: Hodder Gibson.
- Boyle, B., Lamprianou, I., & Boyle, T. (2005). A Longitudinal Study of Teacher Change: What makes professional development effective? Report of the second year of the study. *School Effectiveness and School Improvement*, 16(1), 1–27.
- Bradburn, N., Sudman, S., & Wansink, B. (2005). Asking questions FAQs. In *Asking questions the definitive guide to questionnaire design--For market research, political polls, and social and health questionnaires*. Jossey-Bass.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(May 2015), 77–101.
- Bredeson, V. (2002). The architecture of professional development: Materials, messages and meaning. *International Journal of Educational Research*, 37(8), 661–675.
- Briggs, A., & Coleman, M. (2007). *Research methods in educational leadership and management* (2nd ed.). os Angeles: SAGE Publications.
- Brinkerhoff, J. (2006). Effects of a Long-Duration, Professional Development Academy on Technology Skills, Computer Self-Efficacy, and Technology Integration Beliefs and Practices. *Journal of Research on Technology in Education*, 39(1), 22–43.
- Brislin, W. (1970). Back-Translation for Cross-Cultural Research. *Journal of Cross-Cultural Psychology*, 1(3), 185–216.

- Bromley, B. (1986). *The case-study method in psychology and related-disciplines*. Chichester: John Wiley & Sons.
- Bruner, S. (1966). *Toward a Theory of Instruction*. Cambridge: Harvard University Press.
- Bryman, A. (2004) *Multimethod Research*. In: The SAGE Encyclopedia of Social Science Research Methods.
- Bryman, A. (2012). *Social Research Methods* (4th ed). London:SAGE Publications Ltd.
- Buabeng-Andoh, C. (2012). Factors influencing teachers ' adoption and integration of information and communication technology into teaching : A review of the literature Charles Buabeng-Andoh. *International Journal of Education and Development Using Information and Communication Technology*, 8(1), 136–155.
- Bubb, S., & Earley, P. (2007). *Leading and Managing Continuing Professional Development*. London: Paul Chapman Publishing.
- Burgess, F. (2001). A general introduction to the design of questionnaires for survey research. In *Information Systems Services*.
- Bush, T. (2007). Authenticity in research—reliability, validity and triangulation. In *Research Methods in Educational Leadership and Management* (2nd editio, pp. 91–105). London: SAGE.
- Butcher, J., & Stoncel, D. (2012) The impact of a Postgraduate Certificate in Teaching in Higher Education on university lecturers appointed for their professional expertise at a teaching-led university: “It”’s made me braver’. *International Journal for Academic Development*, 17(2), 149–162.
- Can, T. (2009). Learning and teaching languages online: A Constructivist approach. *Research on Youth and Language*, 3(1), 60–74.
- Cavas, B., Cavas, P. & Karaoglan, B. (2009). A study on science teachers' attitudes toward information and communication technologies in education. *The Turkish Online Journal of Educational Technology*, 8(2), 20–32.

- Cavaye, M. (1996). Case study research: a multi-faceted research approach for IS. *Information Systems Journal*, 6(1 996), 227–242.
- Çelik, S. (2011). Technology integration levels of teacher education faculty. *Journal of Faculty of Educational Sciences*, 44(2), 141–163.
- Chan, C., & Lee, K. (2009). Teachers' continuing professional development in Hong Kong.: Are we on the right track? In *Developing teachers and developing schools in changing contexts* (pp. 71–99). Oxford University Press.
- Cheawjindakarn, B., Suwannatthachote, P., & Theeraroungchaisri, A. (2012). Critical Success Factors for Online Distance Learning in Higher Education: A Review of the Literature. *Creative Education*, 3(8), 61–66.
- Chitanana, L., Makaza, D., & Madzima, K. (2008). The current state of e-learning at universities in Zimbabwe: Opportunities and challenges. *International Journal of Education and Development Using Information and Communication Technology*, 4(2), 5–15.
- Cimer, S. Cakir, I. & Cimer A. (2010) Teachers' views on the effectiveness of in-service courses on the new curriculum in Turkey. *European Journal of Teacher Education*. 33, 31-41.
- Clegg, S. (2003). Problematising ourselves: continuing professional development in higher education. *International Journal for Academic Development*, 8(1–2), 37–50.
- Cohen, L., Manion, L. & Morrison, K. (2011). *Research Methods in Education* (7th ed.). London: Routledge Falmer.
- Colbran, S., & Al-Ghreimil, N. (2013). The role of information technology in supporting quality teaching and learning. In I. L. S. & A. Abouammoh (Ed.), *Higher Education in Saudi Arabia* (pp. 151–158). Netherlands: Springer.
- Collis, J., & Hussey, R. (2009). *Business research: a practical guide for undergraduate and postgraduate students*. (3rd Ed, Ed.). New York: Palgrave Macmillan.

- Communication and Information Technology Commission (CITC) (2008). The final draft investigation of Internet usage in the education sector in Saudi Arabia. Retrieved April 13, 2015, from <http://www.citc.gov.sa/arabic/Reportsandstudies/Studies/Documents IT 011 A - EducationReport2008.pdf>
- Communication and Information Technology Commission (CITC) (2015). ICT Report Mobility in Saudi Arabia. Retrieved November 2, 2016, from www.CITC.gov.sa
- Conole, G. & Oliver, M. (2007). *Contemporary Perspective in E-Learning Research: Themes, methods and impact on practice*. London, Routledge.
- Cook, G., Ley, K., Crawford, C., & Warner, A. (2009). Motivators and Inhibitors for University Faculty in Distance and e-learning. *British Journal of Educational Technology*, 40(1), 149–163.
- Couper, M. (2000). Web surveys: a review of issues and approaches. *Public Opinion Quarterly*, 64(4), 464–494.
- Couros, A. (2006). *Examining the open movement: possibilities and implications for education*. University of Regina, Saskatchewan.
- Craft, A. (2002). *Continuing Professional Development: A Practical Guide for Teachers and Schools* (2nd editio). London: RoutledgeFalmer.
- Creswell, W. (2013). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed). SAGE Publications Ltd.
- Crotty, M. (2003). *The foundations of social research: Meaning and perspective in the research process*. Thousand Oaks, CA: SAGE Publications Inc.
- Crowe, S., Cresswell, K., Robertson, A., Huby, G., Avery, A., & Sheikh, A. (2011). The case study approach. *BMC medical research methodology*, 11, 100.
- Czaja, R. & Blair, J. (2005). *Designing surveys: a guide to decisions and procedures* (2nd Editio). London SAGE Publications Ltd.
- Daly, C. Pachler, N. & Pelletier, L. (2009). *Continuing Professional Development in ICT for teachers: A literature review*.

- Darus, Z., Hassan, F., Saruwono, M., Omar, Z., Samad, Z., Muhamad, F. and, & Mohammad, N. (2009). Continuing Professional Development (CPD), Education and Training as Part of Technology for the Learning Process in Malaysian Built Environment. *WSEAS Transactions on Environment and Development*, 5(3), 283–294.
- Dash, S., Magidin De Kramer, R., O'Dwyer, L., Masters, J., & Russell, M. (2012). Impact of Online Professional Development on Teacher Quality and Student Achievement in Fifth Grade Mathematics. *Journal of Research on Technology in Education*, 45(1), 1–26.
- David, M., & Sutton, C. (2011). *Social Research An Introduction* (2ed). London SAGE Publications Ltd.
- Dean, J. (1991). *Professional development in school*. Milton Keynes: Open University.
- Denscombe, M. (2010). *The Good Reseach Guide For Small-Scale social reseach* (4 ed). Maidenhead: open University Press.
- Denzin, N., & Lincoln, S. (2008). *Collecting and interpreting qualitative materials* (3 ed). London: Sage Publications.
- Economist (2014). Social Media in Saudi Arabia: A virtual revolution. Retrieved June 27, 2016, from <http://www.economist.com/news/middle-east-andafrica/>.
- Efaw, J. (2005). No Teacher Left Behind : How to Teach with Technology. *EDUCAUSE Quarterly*, 28(4), 26–32.
- Elferjani, M. (2015). *Development Of Training Programmes Provided For Academic Staff Of Libyan Universities*. University of Salford, UK.
- Elyas, T., & Picard, Y. (2010). Saudi Arabian educational history: Impacts on English language teaching. *Education Business and Society Contemporary Middle Eastern Issues*, 3(2), 136–145.
- EPSRC (2012) System upgrade. Realising the Vision for UK Education. A report from the ESRC/EPSRC technology enhanced learning research programme. <http://tel.ioe.ac.uk/wpcontent/uploads/2012/06/TELreport.pdf>.

- Eraut, M. (2009). Transfer of knowledge between education and workplace settings. *Knowledge, values and educational policy: A critical perspective*, 65.
- Ertmer, A., & Ottenbreit-Leftwich, T. (2010). Teacher Technology Change: How Knowledge, Confidence, Beliefs, and Culture Intersect. *Journal of Research on Technology in Education*, 423(3), 1539–1523.
- Farid, S. (2015). The Impact of Information and Communication Technology (ICT) on Education in Egypt. In *the conference of Athens Institute for Education and Research ATINER*.
- Farrant, P., Cohen, N., & Burge, M. (2008). Attributes of an effective trainer: Implications of the views of U.K dermatology trainees. *British Journal of Dermatology*, 158, 544–548.
- Fergany, N. (2000). *Arab higher education and development, an overview*,. Almishkat Center for Research.
- Ferrier-Kerr, J. Keown, P & Hume, A. (2009). The Role of Professional Development and Learning in the Early Adoption of the New Zealand Curriculum by Schools. *Waikato Journal of Education*, 14, 123–137.
- Fitzgibbon, M., & Jones, N. (2004). Jumping the hurdles: challenges of staff development delivered in a blended learning environment. *Journal of Educational Media*, 29(1), 25-35.
- Floyd, A., & Arthur, L. (2012). Researching from within: External and internal ethical engagement. *International Journal of Research & Method in Education*, 35(2), 171–180.
- Foa, J. (1993). Technology and change: Composing a four part harmony. *Educom Review*, 28(2), 27–30.
- Fox-Turnbull, W. (2006). The influences of teacher knowledge and authentic formative assessment on student learning in technology education. *International Journal of Technology and Design Education*, 16(1), 53–77.

- Fraser, C., Kennedy, A. & Reid, L. (2007). Teachers' continuing professional development: contested concepts, understandings and models. *Journal of In-Service Education*, 33(2), 153–69.
- Fry, H., Ketteridge, S., & Marshall, S. (2009). *A handbook for teaching and learning in higher education: enhancing academic practice*. booksgooglecom.
- Fullan, M. (2016). *The New Meaning Of Educational Change* (5th ed). New York: Teachers College Press.
- Galanouli, D., Murphy, C. & Gardner, J. (2004). Teachers' perceptions of the effectiveness of ICT-competence training. *Computers & Education*, 43, 63–79.
- Gamlo, H. (2014). *EFL Teachers Use/Non-use of ICT at a University in Saudi Arabia*. PhD thesis, University of Warwick.
- Gaytan, A., & McEwen, C. (2010). Instructional technology professional development evaluation: Developing a high quality model. *Delta Pi Epsilon Journal*, LII (2), 77–94.
- Georgina, A., & Hosford, C. (2009). Higher education faculty perceptions on technology integration and training. *Teaching and Teacher Education*, 25(5), 690–696.
- Georgina, A., & Olson, R. (2008). Integration of technology in higher education: A review of faculty self-perceptions. *The Internet and Higher Education*, 11(1), 1–8.
- Gibbs, G.R. (2007) *Analyzing Qualitative Data*. London: Sage.
- Global Web Index. (2013). Twitter usage is booming in Saudi Arabia. Retrieved June 13, 2016 from <http://www.globalwebindex.net/blog/twitter-usage-is-booming-saudi-arabia>.
- Golafshani, N. (2003). Understanding Reliability and Validity in Qualitative Research. *The Qualitative Report*. 8(4), 597-606.
- Good, M., & Weaver, A. (2003). Creating Learning Communities to Meet Teachers' Needs in Professional Development. *Journal of In-Service Education*, 29(3), 439–449.

- Goodall, J., Day, C., Lindsay, G., Lindsay, G. & Harris, A. (2005). *Evaluating the Impact of Continuing Professional Development (CPD)*. Department for Education and Skills, G.B.
- Graham, R. (2011). Theoretical considerations for understanding technological pedagogical content knowledge (TPACK). *Computers & Education*, 57(3), 1953–1960.
- Gray, G. (2014). *Doing research in the real world* (Third Edit). SAGE Publications Ltd.
- Greener, S., & Wakefield, C. (2015). Developing Confidence in the Use of Digital Tools in Teaching. *Electronic Journal of E-Learning*, 13(4), 260–267.
- Grix, J. (2002). Introducing students to the generic terminology of social research. *Politics*, 22(2), 175–186.
- Groves, M. (2008). *The Constructivist Approach in Adult Education*.
- Guba, E., & Lincoln, Y. (2004). Competing paradigms in qualitative research: Theories and issues. In *In S. Nagy Hesse-Biber & P. Leavy (Eds), Approaches to qualitative research: A reader on theory and practice* (pp. 17–38). pp. 17-38.
- Guest, G., MacQueen, K., & Namey, E. (2012). *Applied Thematic Analysis*. London. London: SAGE.
- Gulbahar, Y. (2007). Technology planning: A roadmap for successful technology integration in schools. *Computers & Education*, 49, 943-956.
- Gupta, S. (2006) *Longitudinal investigation of collaborative e-learning in an end-user training context*. PhD thesis, University of Georgia.
- Guri-Rosenblit, S., & Gros, B. (2011). E-Learning: Confusing Terminology , Research Gaps and Inherent Challenges. *The Journal of Distance Education / Revue de l'Éducation À Distance*, 25(1), 1–12.
- Guskey, T. (2000). *Evaluating professional development*. Thousand Oaks ; London: Corwin Press.
- Guskey, T. (2002). Professional Development and Teacher Change. *Teachers and Teaching*, 8(3), 381–391.

- Guskey, T. (2006). Making high school grades meaningful. *Phi Delta Kappan*, 87 (9), 670-675.
- Gustafsson, J. (2017). Single case studies vs. multiple case studies: A comparative study. Dissertation, Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:hh:diva-33017>
- Hamel, J., Dufour, S., & Fortin, D. (1993). *Case Study Methods: Sage Publications*.
- Hamilton, L. (2011). Case studies in educational research. *British Educational Research Association on-Line resources*. Retrieved from [http://www.bera.ac.uk/system/files/Case studies in educational research.pdf](http://www.bera.ac.uk/system/files/Case%20studies%20in%20educational%20research.pdf)
- Hargreaves, A., Liebermann, A., Fullan, M. & Hopkins, D. (2010). *Second International Handbook of Educational Change*. Dordrecht: Springer.
- Harland, T. (2014). Learning about case study methodology to research higher education. *Higher Education Research & Development*, 33, (1113–1122).
- Hayes, S. (2015). *The Political Discourse And Material Practice Of Technology Enhanced Learning*. Aston University.
- Haywood, J., Anderson, C., Coyle, H., Day, K., Haywood, D., & Macleod, H. (2000). Learning technology in Scottish higher education- a survey of the views of senior managers, academic staff and “experts.” *Association for Learning Technology Journal*, 8(2), 5–17.
- Healey, F. (2014). *Statistics: A tool for Social Research* (10 ed). Cengage Learning.
- Heaney, L. (2004). Leading professional development: a case study. *International Journal of Educational Management*, 18(1), 37–48.
- Henn, M., Weinstein, M., Foard, N. and Henn, M. (2010). *A critical introduction to social research*. London: Sage.
- Hernandez, L., Sandoval, C., Collins, D., Fox, S., Deeds, B., & McClure, A. (2009). Andragogy’s Transition Into the Future. *Journal of Adult Education*, 38.

- Higher Education Academy (HEA) (2005). *The Higher Education Academy's Scheme for the Recording and Accreditation of Continuing Professional Development*. Retrieved January 19, 2015, from <https://www.heacademy.ac.uk/>.
- Higher Education Academy (HEA) (2015). *Technology enhanced learning (TEL) toolkit*. Retrieved November 2015 <https://www.heacademy.ac.uk/individuals/strategic-priorities/technology-enhanced-learning>.
- Hoekstra, A., Brekelmans, M., Beijaard, D. & Korthagen, F. (2009). *Experienced teachers' informal learning: Learning activities and changes in behavior and cognition*.
- Hramiak, A., & Boulton, H. (2013). Escalating the use of Web 2.0 technology in secondary schools in the United Kingdom: Barriers and enablers beyond teacher training. *Electronic Journal of E-Learning*, 11(2), 91–100.
- Hruskocy, C., Cennamo, K. S., Ertmer, P. A., & Johnson, T. (2000). Creating a Community of Technology Users: Students Become Technology Experts for Teachers and Peers. *Journal of Technology and Teacher Education*, 8(1), 69–84.
- Hsu, S. (2010). The relationship between teacher's technology integration ability and usage. *Journal of Educational Computing Research*, 43(3), 309–325.
- Hussein, B. (2011). Attitudes of Saudi universities faculty members towards using learning management system (JUSUR). *Turkish Online Journal of Educational Technology*, 10(2), 43–53.
- Hustler, D., Mcnamara, O., Jarvis, J., Londra, M., & Campbell, A. (2003). Teachers' Perceptions of Continuing Professional Development. *Department for Education and Skills*, 1–278.
- Jaipal-Jamani, K., & Figg, C. (2015). A case study of a TPACK-based approach to teacher professional development: Teaching science with blogs. *Contemporary Issues in Technology and Teacher Education*, 15(2), 161–200.
- James K, (2002) Cultural Implications for Translation. *Translation Journal* 6 (4).
- Johnson, B., & Christensen, B. (2004). *Educational research: Quantitative, qualitative and mixed approaches* (2nd ed). Boston, MA: Pearson Education.

- Kalpana, T. (2014). A Constructivist Perspective on Teaching and Learning : A Conceptual Framework. *International Research Journal of Social Sciences*.3(1), 27–29.
- Kanaya, T., Light, D., & Culp, M. (2005). Factors influencing outcomes from a technology-focused professional development program. *Journal of Research on Technology in Education*, 37(3), 313–329.
- Kaplan, B., & Maxwell, J. (2005). Qualitative Research Methods for Evaluating Computer Information Systems. *Evaluating the Organizational Impact of Healthcare Information Systems*, 30–55.
- Karagiorgi, Y. & Symeou, L. (2007). Diagnosing teachers’ in-service training needs in Cyprus. *European Journal of Teacher Education*, 30(2), 75–194.
- Kauffeld, S., & Willenbrock, L. (2010) “Sales training: effect of spaced practice on training transfer”. *Journal of European Industrial Training*, 34(1) 23-37.
- Keengwe, J., Kidd, T., & Kyei-Blankson, L. (2009). Faculty and technology: Implications for faculty training and technology leadership. *Journal of Science Education and Technology*, 18(1), 23–28.
- Kelly, J., Frazee, K., & Hornik, C. (2010). Response rates to a mailed survey of a representative sample of cancer patients randomly drawn from the Pennsylvania Cancer Registry: a randomized trial of incentive and length effects. *BMC Medical Research Methodology*, 10, 65.
- Kelly, J. (2013). Professional learning communities: the emergence of vulnerability. *Professional Development in Education*. 39, 862–864.
- Kennedy, A. (2005). Models of Continuing Professional Development: a framework for analysis. *Journal of In-Service Education*, 31(2) 235-250.
- Kennedy, A., & McKay, J. (2011). Beyond induction: the continuing professional development needs of early-career teachers in Scotland. *Professional Development in Education*, 37(4), 551-569.
- Kettley, N. (2010). *Theory Building in Educational Research*. London, GBR: Continuum International Publishing.

- KFUPM (2015). Academic Development Project. Retrieved February 12, 2015, from <http://www.kfupm.edu.sa/deanships/dad/SitePages/en/ContentDetailsPage.aspx>.
- Kharas, H., & Lombardi, D. (2013). *The Group of Twenty: Origins, Prospects and Challenges for Global Governance*. In: Paganetto L. (eds) *Public Debt, Global Governance and Economic Dynamism*. Springer, Milano.
- King, H. (2004). Continuing Professional Development in Higher Education: what do academics do? *Planet*, 13, 26–29.
- Kirkpatrick, L., & Kirkpatrick, D. (2009). Evaluating Training Programs. *Evaluating Training Programs*, 3–15.
- Kirkwood, A. & Price, L. (2011). *Enhancing learning and teaching through technology: a guide to evidence-based practice for academic developers*. Higher Education Academy, York, UK.
- Kirkwood, A., & Price, L. (2006). Adaptation for a changing environment: Developing learning and teaching with information and communication technologies. *International Review of Research in Open and Distance Learning*, 7(2).
- Kirkwood, A., & Price, L. (2014). Technology-enhanced learning and teaching in higher education: what is “enhanced” and how do we know? A critical literature review. *Learning, Media and Technology*, 39(1), 6–36.
- Knowles, M., Holton, E., & Swanson, R. (2015). *The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development* (8th Ed). Routledge London and New York.
- Knowles, M. (1984). *The Adult Learner: A Neglected Species* (3rd Ed). Houston, TX: Gulf Publishing.
- Koehler, J., & Mishra, P. (2009). What is technological pedagogical content knowledge? *Contemporary Issues in Technology and Teacher Education*, 9(1), 60–70.
- Kreider, H. & Bouffard, S. (2006). Questions and answers: A conversation with Guskey. *The Evaluation Exchange*, 11 (4). Retrieved October 12, 2016, from <http://www.hfrp.org/evaluation/the-evaluation-exchange/issue/professional-development/a-conversation>.

- Kroll, R. & LaBosky, K. (1996). Practicing what we preach: Constructivism in a teacher education. *Action in Teacher Education*, 18(2), 63–72.
- Kuhn, S. (1970). *The structure of scientific revolutions* (2nd Ed). Chicago: University of Chicago Press.
- Kumar, R. (2014). *Research methodology: a step-by-step guide for beginners*. SAGE.
- Kvale, S., & Brinkmann, S. (2009). *Interviews: learning the craft of qualitative research interviewing* (2nd ed). London: Sage.
- Laurillard, D. (2008). Technology enhanced learning as a tool for pedagogical innovation. *Journal of Philosophy of Education*, 42(3–4), 521–533.
- Lawless, K. & Pellegrino, W. (2007). Professional development in integrating technology Into teaching and learning: Knowns, unknowns, and W\ways to pursue better questions and answers. In *Review of Educational Research*. 77, 575–614.
- Lawson, K. (2009). *The trainer's handbook*. USA: Pfeiffer.
- Lee, W., Mitchell, R., & Sablynski, J. (1999). Qualitative research in organisational and vocational psychology. *Journal of Vocational Behaviour*, 55(2), 161–187.
- Lessing, A., & De Witt, M. (2007). The value of continuous professional development: teachers' perceptions. *South African Journal of Education*, 27(1), 53–67.
- Lewin, C. (2005) Elementary Quantitative Methods. In SOMEKH & C. Lewin (Eds.). *Research Methods in the Social Sciences*. London: Sage, pp. 215-225.
- Lingham, T., Richley, B., & Rezanian, D. (2006). An evaluation system for training programs: a case study using a four-phase approach. *Career Development International*, 11(4), 334–351.
- Littlejohn, H. (2002). Improving continuing professional development in the use of ICT. *Journal of Computer Assisted Learning*, 18(2), 166–174.
- Loveless, A. & Ellis, V. (2001). *ICT, pedagogy, and the curriculum: Subject to change*. New York, Routledge.

- Mack, N., Woodsong, C., Kathleen, N., Guest, G., Namey, E. & Macqueen, M. (2011) *Qualitative Research Methods: A Data Collector's Field Guide*. Family Health International.
- Madge, C., & O'Connor, H. (2004). Online methods in geography educational research. *Journal of Geography in Higher Education*, 28(1), 143–152.
- Mann, C. & Stewart, F. (2000). *Internet communication and qualitative research* (4th Ed). London: SAGE Publications Ltd.
- Marshall, C., & Rossman, B. (2011). *Designing Qualitative Research*. (4th Ed.). London: SAGE Publications Ltd.
- Maxcy, J. (2003). Pragmatic threads in mixed methods research in the social sciences: The search for multiple methods of inquiry and the end of the philosophy of formalism. In A. Tashakkori & C. Teddlie (Ed.s). In *Handbook of mixed methods in social and behavioural research* (51-89). Thousand Oaks, CA: Sage.
- McAlpine, L., & Gandell, T. (2003). Teaching improvement grants: What they tell us about professors' instructional choices for the use of technology in higher education. *British Journal of Educational Technology*, 34(3), 281–293.
- McCarney, J. (2004). Effective models of staff development in ICT. *European Journal of Teacher Education*, 27 (1): 61-72.
- McConnell, H. (2003). *How to identify your organization's training needs: A practical guide to needs analysis* (2): PublicAffairs.
- McKinney, S., Carroll, M., Christie, D., Kennedy, A., Reid, L. & Wilson, A. (2005). AERS: learners, learning and teaching network project 2 progress report, paper delivered at the Scottish Educational Research Association Annual Conference, Perth, Scotland, 24-26 November.
- McLean, J. (2005). Addressing Faculty Concerns About Distance Learning. *Online Journal of Distance Learning Administration*, 8(4).
- McLoughlin, C. (2002). Learner support in distance and networked learning environments: Ten dimensions for successful design. *Distance Education*, 23(2), 149-162.

- McQuiggan, A. (2007). The role of faculty development in online teaching's potential to question teaching beliefs and assumptions. *Online Journal of Distance Learning Administration*, 10(3).
- Merriam, S., & Caffarella, R. (2007). *Learning in Adulthood: A Comprehensive Guide* (3rd ed). San Francisco, CA: Jossey-Bass.
- Merrill, B. (2004). Biographies, class and learning: the experiences of adult learners. *Pedagogy, Culture & Society*, 12(1), 73–94.
- Millwood, R., Kamtsiou, V., & Fragkaki, M. (2013). Report on good practice of innovative applications of learning theories in TEL v1. *Hotel-Project.Eu*, 1–48. Retrieved from <http://hotel-project.eu/content/d221-hotel-report-good-practice-innovative-applications-learning-theories-tel>
- Ming, T., Hall, C. & Azman, H.(2010) Supporting Smart School Teachers ' Continuing Professional Development in and through ICT : A model for change, *International Journal of Education and Development using Information and Communication Technology*.6(2), 5–20.
- Ministry of Communication and Information Technology. (2016). *National communications and information technology plan*. Retrieved June 22, 2016, from <http://gov.sa/En/NationalPlan>.
- Ministry of Economy and Planning. (2014) *Brief report on the ninth development plan*. Retrieved January 12, 2015, from <http://www.mep.gov.sa/en/>.
- Ministry of Education. (1970). *The Educational Policy of Saudi Arabia*; Riyadh, KSA.
- Ministry of Higher Education. (2014). *The national report and the plan to achieve excellence in science and technology*. Retrieved June 14, 2014, from <http://he.moe.gov.sa/ar/def.aspx>.
- Ministry of PMR. (2012). The Ministry of Petroleum and Mineral Resources of Saudi Arabia. Retrieved January 23, 2015, from <http://www.mopm.gov.sa/Arabic/pages/>
- Minott, A. (2010). Reflective teaching as self-directed professional development: building practical or work-related knowledge. *Professional development in education*, 36(1-2), 325- 338.

- Mishra, P., & Koehler, J. (2006). Technological Pedagogical Content Knowledge: A new framework for teacher knowledge. *Teachers College Record*. 108(6), 1017–1054.
- Mitchell, R. (2013). What is professional development, how does it occur in individuals, and how may it be used by educational leaders and managers for the purpose of school improvement? *Professional Development in Education*, 39(3), 387-400.
- Monroe, K. (2008). *Evaluation of an online professional development program for Part-time Faculty*. Saarbruchen: VDM Verlag Dr. Mueller e.K & Co. KG, Dudweiler Landstr.
- Morris, D. (2010). Are teachers technophobes? Investigating professional competency in the use of ICT to support teaching and learning. In *Procedia - Social and Behavioral Sciences*. (2) 4010–4015.
- Mouza, C. (2007). Linking professional development to teacher learning and practice: A multi-case study analysis of urban teachers. *Journal of Educational Computing Research*, 34(4), 405–440.
- Muijs, D. (2011) *Doing quantitative research in education with SPSS (2nd Ed)*. London: Sage.
- Myers, M. (2013). *Qualitative Research in Business and Management (2nd ed)*. SAGE Publications Ltd.
- Nachmias, R., Mioduser, D., Cohen, A., & Tubin, D. (2004). Factors Involved in the Implementation of Pedagogical Innovations Using Technology. *Education and Information Technologies*, 9(3), 291–308.
- NCel. (2014). The Web Page of National Centre for E-learning and Distance Learning: Our Project. Retrieved November 22, 2014, from <http://elc.edu.sa/>
- NCITP. (2014). The National Communication and Information Technology Plan. Available from: <http://www.mcit.gov.sa/NR/rdonlyres/E8C255A7E423B9B3.pdf>.
- Nicolaidou, M., & Petridou, A. (2011). Evaluation of CPD programmes: challenges and implications for leader and leadership development. *School Effectiveness and School Improvement*, 22(1), 51–85.

- Noe, R. (2012). *Employee training and development* (6th ed). Boston: Irwin, McGraw-Hill.
- Noor, K. (2008). Case Study : A Strategic Research Methodology Khairul Baharein Mohd Noor. *American Journal of Applied Sciences*, 5(11), 1602–1604.
- Ofsted. (2008). The initial training of further education teachers: findings from 2006/07 inspections of courses leading to national awarding body qualifications.
- Olsen, R. (2012). The TPACK Framework is fundamentally flawed. Retrieved June 20, 2016, from www.richardolsen.me/b/2012/01/the-tpack-framework-is-fundamentally-flawed/
- Osika, E., Johnson, R., & Butea, R. (2009). Factors influencing faculty use of technology in online instruction: A case study. *Online Journal of Distance Learning* 12, 1–12.
- Oyaid, A. (2009). *Education policy in Saudi Arabia and its relation to secondary school teachers' ICT use, perceptions, and views of the future of ICT in education*. University of Exeter.
- Pachler, N., Preston, C., Cuthell, J., Allen, A. & Pinheiro-Torres, C. (2009) *ICT CPD Landscape: Final Report*. Becta ICT CPD Research Reports. Retrieved June 2015 from <http://www.wlecentre.ac.uk/cms/files/becta/becta-ict-cpd-landscapereport.pdf>.
- Panda, S., & Mishra, S. (2007). E-Learning in a Mega Open University: Faculty attitude, barriers and motivators. *Educational Media International*, 44(4), 323–338.
- Passey, D. (2008) *Development of questionnaires for teachers to assess ICT skills*. Retrieved February 19, 2015, from www.bteducation.com/sacbteducation/ict.htm
- Pelgrum, J. (2001). Obstacles to integration of ICT in education: Results from world educational assessment. *Computers & Education*, 37, pp. 163-175.
- Perkins, D. (1991). Technology meets constructivism: Do they make a marriage?. *Educational Technology*, 31(5), 18–23.
- Piaget, J. (1973). *To Understand is to Invent: The Future of Education*. New York: Grossman Publishers.

- Pierson, M. & Borthwick, A. (2010). Framing the Assessment of Educational Technology Professional Development in a Culture of Learning. *Journal of Digital Learning in Teacher Education*, 26(4), 126–131.
- Pring, R. (2014). *Philosophy of educational research* (3th ed). London: Bloomsbury.
- Qureshi, A. (2006). *Improving teaching effectiveness: The influence of workshops at King Abdulaziz University in Saudi Arabia*. University of Denver.
- Rafeeq, A. (2016). The Effectiveness of E-Learning Coordinators' Performance: Faculty Members' Perspective. *International Journal of Asian Social Science*, 6(1), 35–48.
- Ranjit, K. (2014). *Research methodology a step-by-step guide for beginners*. Sage.
- Reagan, T. (2005). *Non-Western Educational Traditions Local Approaches to Thought and Practice* (3th ed.). Routledge London and New York.
- Richardson, V. (1997). *Constructivist Teacher Education: Building New Understandings*. Washington: Falmer Press.
- Ridenour, S., & Newman, I. (2008). *Mixed methods research: Exploring the interactive continuum*. Carbondale, IL: Southern Illinois University Press.
- Rienties, B., Brouwer, N., & Lygo-Baker, S. (2013). The effects of online professional development on higher education teachers' beliefs and intentions towards learning facilitation and technology. *Teaching and Teacher Education*, 29(1), 122–131.
- Rienties, B., & Townsend, D. (2011). Integrating ICT in business education: using TPACK to reflect on two course redesigns. *Learning at the Crossroads of Theory and Practice*. 4, 141-156
- Robson, C. (2002). *Real World Research*. Blackwell. Oxford: Blackwell.
- Roscoe, J. (2002). Continuing professional development in higher education. *Human Resource Development International*, 5(1), 3–9.
- Rovai, P. (2004). A constructivist approach to online college learning. *Internet and Higher Education*, 7, 79–93.
- Ruane, J. (2005). *Essentials of Research Methods*. Oxford: Blackwell Publishing.

- Sait, S. , Al-Tawil, K., Sanaullah, S., & Faheemuddin, M. (2007). Impact of Internet Usage in Saudi Arabia : A Social Perspective. *Journal of Information Technology and Web Engineering*, 2(2), 81–115.
- Sale, J M., Lohfeld, LH., & Brazil, K. (2002). Revisiting the quantitative-qualitative debate: Implications for mixed-methods research. *Quality & Quantity*, 36, 43-53.
- Saldaña, J. (2015). The coding manual for qualitative researchers. Thousand Oaks, CA: Sage.
- Sandholtz, H., & Reilly, B. (2004). Teachers, Not Technicians: Rethinking Technical Expectations for Teachers. *Teachers College Record*, 106(3), 487–512.
- Sarantakos, S. (2013). *Social Research* (4rd Ed). Palgrave Macmillan.
- Schraeder, M. (2009). Leveraging potential benefits of augmentation in employee training. *Industrial and Commercial Training*, 41(3), 133–138.
- Scott, P., & Mouza, C. (2007). The Impact of Professional Development on Teacher Learning, Practice and Leadership Skills: A Study on the Integration of Technology in the Teaching of Writing. *Journal of Educational Computing Research*, 37(3), 229–266.
- SEED. (2001). A teaching profession for the 21st century. *Agreement reached following recommendations made in the McCrone Report*.
- Shaikh, A., & Khoja, A. (2012). Role of teacher in personal learning environments. *Digital Education Review*, 21, 23–32.
- Sharpe, R., Benfield, G., Roberts, G., & Francis, R. (2006). The Undergraduate Experience of Blended E-learning: A Review of UK Literature and Practice. The Higher Education Academy.
- Silverman, D. (2010). *Doing qualitative research* (3rd ed). London: Sage.
- Singleton, A., & Straits, B. (2005). *Approaches to Social Research* (4th ed). Oxford University Press.

- Skidmore, T., Zientek, L., Saxon, D. , & Edmonson, L. (2014). The impact of generational status on instructors' reported technology usage. *Contemporary Educational Technology*, 5(3), 179–197.
- Smith, L., & Abouammoh, A. (2013). *Higher Education in Saudi Arabia: Achievements, Challenges and Opportunities*. The Netherlands: Springer.
- Smith, E. (2015). Professional development and the impact of teacher relationships. *Journal of Initial Teacher Inquiry*, 1, 42–44.
- Smolin, L.& Lawless, K. (2011). Evaluation Across Contexts: Evaluating the Impact of Technology Integration Professional Development Partnerships. *Journal of Digital Learning in Teacher Education*, 27(3), 92–98.
- Sorcinelli, D., Austin, E., Eddy, L., & Beach, L. (2006). *Creating the future of faculty development: Learning from the past, understanding the present*. San Francisco, CA: Anker Publishing.
- Strauss, L., & Corbin, M. (2008). *Your search - Basics of qualitative research techniques and procedures for developing grounded theory* (3th ed). SAGE Publications Ltd.
- Swan, K. (2005). A Constructivist Model for Thinking About Learning Online. *Elements of Quality Online Education: Engaging Communities*, 13–31.
- Sydow, D. (2000). Long-Term Investment In Professional Development: Real Dividends In Teaching And Learning. *Community College Journal of Research and Practice*, 24, 383–397.
- Tabata, N.& Johnsrud, K. (2008). The impact of faculty attitudes toward technology, distance education, and innovation. *Research in Higher Education*, 49(7), 625–646.
- Tashakkori, A. & Teddlie, C. (2010). *Sage Handbook of Mixed Methods in Social and Behavioural Research*. (2nd Ed). Thousand Oaks, CA: Sage.
- The Arab Social Media Report. (2015). Arab Social Media Influnecers Summit. Retrieved June 13, 2016 from <http://dmc.ae/img/pdf/white papers/ Arab Social Media Report 2015.pdf>

- Thompson, J. (2005). *Cooperative learning in computer-supported classes*. University of Melbourne, Australia.
- Treiber, J., Kipke, R., Dizon, C., Andrews, J., Cassady, D. (2012). Center for Program Evaluation and Research: Evaluation Tools Tip #18 Coding Qualitative Data. Retrieved 1 December 2017, from http://www.tobaccoeval.ucdavis.edu/documents/Tips_Tools_18_2012.pdf.
- Tschannen-Moran, M., & Hoy, W. (2007). The differential antecedents of self-efficacy belief of novice and experienced teachers. *Teaching and Teacher Education*, 23(6), 944-956.
- Vygotsky, L. (1978). *Mind in Society*. Harvard University Press.
- Wachira, P., & Keengwe, J. (2011). Technology integration barriers: Urban school mathematics teachers' perspectives. *Journal of Science Education and Technology*, 20(1), 17-25.
- Watson, G. (2001). Models of information technology teacher professional development that engage with teachers' hearts and minds. *Journal of Information Technology for Teacher Education*, 10(1-2), 179-190.
- Walker, R., Voce, J. & Ahmed, J. (2012) *2012 Survey of technology enhanced learning for higher education in the UK*. Oxford: Universities and Colleges Information Systems Association.
- Waycott, J., Bennett, S., Kennedy, G., Dalgarno, B., & Gray, K. (2010). Digital divides? Student and staff perceptions of information and communication technologies. *Computers and Education*, 54(4), 1202-1211.
- Wellington, J. (2000). *Educational research: contemporary issues and practical approaches*. London: Continuum.
- Wheeler, S. (2011). Learning is learning. Retrieved 12 December 2016, from <https://steve-wheeler.net/publications/>
- Whipp, L., Eckman, W., & Kieboom, L. (2006). Using sociocultural theory to guide teacher use and integration of instructional technology in two professional development schools. *Journal of Computing in Teacher Education*, 22, 37-43.

- Whitehead, B., Jensen, N., & Boschee, F. (2003). *Planning for technology: A guide for school administrators, technology coordinators, and curriculum leaders*. Thousand Oaks, CA: Corwin Press.
- Williams, C. (2007). Mixed-Method Evaluation of Continuing Professional Development: Applications in Cultural Competence Training. *Social Work Education*, 26(2), 121–135.
- World Bank. (2000). *Higher education in developing countries*. Washington: World Bank Publications.
- UNESCO – Arab Report. (2009). A decade of higher education in the Arab States: Achievements and challenges, Regional report, Beirut, UNESCO Regional Bureau.
- Yardy, A., & Date-Huxtable, E. (2011). Recommendations for enhancing the quality of flexible online support for online teachers. In *ASCILITE 2011 - The Australasian Society for Computers in Learning in Tertiary Education* (1367–1371).
- Yigit, N. (2008) A study on Evaluation of Effectiveness of an In-Service Training(INSET) Course about the Use of Instructional Technologies and Material Development. *World Applied Science Journal*.4 69-75.
- Yin, R. (1981). The case study crisis: some answers. *Administrative Science Quarterly*, (26), 58–65.
- Yin, R. (2013). *Case study research: design and methods* (5th ed). SAGE Publications Ltd.
- Yiu, L., & Saner, R. (2005). *Does it pay to train? ISO 10015 assures the quality and return on investment of training*. Retrieved 13 November 2016 from <http://www.csend.org/announcements/articles/item>
- Younger, M., & George, P. (2013). Developing communities of practice in practice: overcoming suspicion and establishing dialogue amongst primary school teachers in Antigua and Barbuda. *Professional Development in Education*, 39(3), 312–329.
- Zhen, L. (2009). *Making our Way through the e-World: Chinese Adult e-learners' Learning Experiences*. PhD thesis, University of Southampton.

Appendices

Appendix 1: Kennedy's Nine Models of CPD

1- ***The training model:*** the training model is considered the most popular and universally dominant type of CPD for participants. This type of CPD is set and delivered by an expert and deliverer who decides the training content, and the role of participants is passive. This model is criticised for its lack of connection to the specific classroom context in which the trainees work. However, the training model is appropriate with a standards-based view of participant development where they seek to reveal specific skills.

2- ***The award- bearing model:*** The focus of this model is the completion of a programme of study and the achievement of an awarding body, which is normally validated by universities. A quality assurance can be viewed as a sign of this external validation, but can also be seen as the validating and/ or the funding body exercising control. The absence of connections between the study of professional development and the real classroom practice is one of the criticisms of this model as it seems to be more 'academic' than 'practical'.

3- ***The deficit model:*** This kind of model is designed to redress a perceived deficit in a specific performance of teacher.

4- ***The cascade model:*** This model includes attending training events by some teachers and these teachers disseminating the content and passing their own learning to other colleagues. This group of teachers within the cascade model is employed as a means to share their own experience with their peers. This is often used in organisations where resources are limited. The restriction of this model is that values are neglected, and the focus is on skills and knowledge.

5- ***The standards based model:*** This model of CPD demonstrates a desire to make a system of teaching, and teacher education, that can set practical validation or experiment on the connection between teacher development and students' learning. A behavioural perspective is mainly adopted here which focuses on individual teacher's competence and the resultant rewards of collaborative learning.

6- ***The coaching/mentoring model:*** the feature of this model lies behind the relationship between one person and another, generally where one is a novice learner and the other is an experienced practitioner. The significance here is that professional development can take place in the context of school and can be maximised by the exchange of information with peers.

7- ***The community of practice model:*** The community of practice model generally contains the engagement in the collaborative ways of more than two people. The successful community of practice has developed as a direct and formal relationship among teacher educators and practicing teachers. The individual knowledge existence and the mixtures of different individuals' knowledge are significant stimuli and sources for new knowledge to be created.

8- ***The action research model:*** This CPD model involves the study by teachers themselves as they investigate their own actions to improve the quality of their performance. This quality of action can be realised as the participants' understanding of the situation, as well as the practice within the situation. As this model allows teachers to ask critical questions regarding their practice, it has been acknowledged by Kennedy as successful.

9- ***The transformative model:*** This is the last model in the Kennedy spectrum which includes the combination of several conditions and processes that are drawn from the aforementioned models. The main characteristic of this model is the effective

integration of the variety of other models with a sense of awareness of related issues of power.

Appendix 2: The Questionnaire (English)

A questionnaire about TEL professional development

Dear lecturer,

I am a PhD research student in the Institute of Education at the University of Reading. This questionnaire has been developed to enable me to collect data for my research on TEL CPD. The research is designed to find out about the perceptions of lecturers toward TEL programmes in order to develop the current TEL Continuing Professional Development effectiveness use for lecturers in Saudi universities. Your opinions about these issues are very important for this study. I appreciate your time and effort in answering this questionnaire. It should take around 15 minutes to complete.

Before filling in the questionnaire, I would like you to consider the following:

- Names are not required and all information gained from this questionnaire will be used confidentially and for research purposes only. However, if you would, in principle, be willing to be interviewed as part of my research I would be grateful if you could supply your name and contact details in the end of this questionnaire.
- Your participation is valuable to this study. However, you have the right not to participate if you do not wish to.

Thank you for your cooperation and positive participation in this study.

Abdullah Almutlaq

A.S.A.Almutlaq@pgr.reading.ac.uk

SECTION 1: Demographic Information

The following information will be used only to help the researcher classify your answers and to make statistical comparisons. Please tick or write clearly when appropriate.

Gender	
Male <input type="radio"/>	Female <input type="radio"/>

Which age group do you belong to?			
20-30 <input type="radio"/>	31-40 <input type="radio"/>	41-50 <input type="radio"/>	Over 50 <input type="radio"/>

Which of the following educational qualifications do you have?		
Bachelor <input type="radio"/>	Masters <input type="radio"/>	Doctoral <input type="radio"/>

How many years of working and teaching experience have you had?				
Less than 1 year <input type="radio"/>	1-5 years <input type="radio"/>	6-10 years <input type="radio"/>	11-15 Years <input type="radio"/>	More than 15 years <input type="radio"/>

Main Teaching Subject	Religious Studies <input type="radio"/>
	Social science and humanities <input type="radio"/>
	Sciences <input type="radio"/>
	Computer Studies <input type="radio"/>

How much TEL professional development have you received			
A great deal (7 or more) <input type="radio"/>	A moderate amount (4-6) <input type="radio"/>	A little (1-3) <input type="radio"/>	None <input type="radio"/>

SECTION 2: Types of CPD in TEL

According to your past experience in TEL professional development, please answer the following questions by ticking in each appropriate box.

Activities	Experienced any of the following	Evaluated as effective
Attending short term course (face-to-face)		
Attending long term course (face-to-face)		
Online learning		
Conferences		
Participating in group discussion (collaborative learning)		
Peer observation		
Publications (reading subject literature)		
Specialist subject meeting		

If you wish to add any comment regarding these activities, please write it here:

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SECTION 3: The evaluation of TEL CPD opportunities.

Please tick the best answer to describe your response to each statement.

Items		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
PARTICIPATION	I am interested in learning more and continually about using TEL.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	I need to develop my TEL skills and knowledge for professional development.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	I feel I should develop my TEL skills to keep up to date with developments in teaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	TEL professional development is not a priority for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	I am interested in TEL courses but do not have the time.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IMPLEMENTATION	TEL professional development is provided on the basis of my curriculum needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	TEL courses meet and cover lecturers' development needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Lecturers are consulted in advance on the content of TEL courses before their provision.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Professional developments in TEL are comprehensive enough in designing and efficiency.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Lecturers are involved in the provision, format and designing of TEL professional development.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	TEL programmes keep pace with improvement in the educational field and support them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	TEL professional development provides only the theoretical knowledge, and did not provide the practice of it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	TEL courses did not contain many opportunities to practice the use of TEL in the classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	The TEL applications used in TEL professional development are available in my classroom.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Technical support is available in TEL professional development when needed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Time is made available to practise and develop new TEL aspects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	The quality of trainers is satisfactory.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Most TEL trainers are knowledgeable in my subject	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Most TEL trainers are well qualified in TEL.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IMPACT	I greatly benefited in knowledge from participation in TEL professional development.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	I became more effective and capable in teaching practice with TEL, after participation in TEL professional development.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Participation in TEL courses encourages me to attend other TEL programmes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Attendance at TEL professional development has provided me the opportunity to exchange knowledge and experiences with peers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
	Follow-up and support in TEL are available in the organisation, after participation in TEL development.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Access to TEL resources is made available to practise and develop new TEL skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SECTION 4: If you wish to add any comment please write it here:

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Note:

- If you would be interviewed regarding the professional development of TEL, please leave your name and preferred contact details below.

Name: _____ (Optional)

Contact telephone number : _____ (Optional)

E-mail: _____

End of questionnaire

Thank you for your co-operation

Appendix 2: The Questionnaire (Arabic Version)

التطوير المهني المستمر في تقنية المعلومات والاتصالات

عزيزي المشارك

يقوم الباحث بدراسة بعنوان " تقييم فرص التطوير المهني المقّمة في التقنيات التعليمية لأعضاء هيئة التدريس في المملكة العربية السعودية". تهدف هذه الاستبانة إلى تقييم الدورات والتطوير المهني المقّمة لأعضاء هيئة التدريس في مجال التقنيات التعليمية ورأيهم في ذلك. علماً بأن جميع المشاركين لهم حرية الانسحاب من المشاركة متى ما أرادوا، وستعامل بياناتهم وإجاباتهم بشكل سري ووفقاً لأغراض وأخلاقيات البحث العلمي. المعلومات في هذه الاستبانة ستكون محدّدة لهذه الدراسة ورأيكم سيكون له أكبر الأثر للخروج بنتائج وتوصيات جيدة لهذا البحث والتي تفيد مجال التطوير المهني المقّمة لأعضاء هيئة التدريس. لذا آمل منكم قراءة الاستبانة واختيار الإجابة الصحيحة بكل صدق وموضوعية، والذي سيوفر الكثير من المعلومات القيّمة من خلال تعبئة الاستبانة.

ولكم الشكر من أخيكم لدعمكم هذه الدراسة ولكل من استقطع من وقته لتعبئة الاستبانة.

عبد الله سليمان المطلق

جامعة ريدنق – المملكة المتحدة

القسم الأول: معلومات عامة

المعلومات التالية سوف تساعد الباحث على تصنيف الاجابات وعمل المقارنات الاحصائية اللازمة, لذلك آمل التكرم بالاختيار في المكان المناسب.

الجنس	
<input type="radio"/> ذكر	<input type="radio"/> انثى

الفئة العمرية			
<input type="radio"/> ٣٠-٢٢	<input type="radio"/> ٤٠-٣١	<input type="radio"/> ٥٠-٤١	<input type="radio"/> اكثر من خمسين

الخدمة في الوظيفة بعد اخر مؤهل				
<input type="radio"/> أقل من سنة	<input type="radio"/> 5-1 سنوات	<input type="radio"/> 10-6 سنوات	<input type="radio"/> 15-11 سنوات	<input type="radio"/> أكثر من 15 سنة

آخر مؤهل حصلت عليه		
<input type="radio"/> بكالوريوس	<input type="radio"/> ماجستير	<input type="radio"/> دكتوراه

التخصص
<input type="radio"/> العلوم الشرعيّة والدينية <input type="radio"/> الدراسات الإنسانية والعلوم الاجتماعية <input type="radio"/> علوم الحاسب <input type="radio"/> العلوم الطبيعية

كيف تصف التدريب الذي حصلت عليه في مجال تقنية المعلومات والاتصالات بشكل عام			
<input type="radio"/> تدريب مكثف (٧ أو أكثر)	<input type="radio"/> تدريب متوسط (٤-٦ دورات)	<input type="radio"/> قليل من التدريب (٣-١ من)	<input type="radio"/> لم أتلّق أي تدريب

القسم الثاني:

معلومات عامة عن التطوير المهني في تقنيات التعليم:

من خلال خبراتك السابقة في التطوير في مجال تقنيات التعليم، أرجو اختيار أكثر نوع خضعت له ثم أكثر نوع من ناحية الأهمية والفاعلية من وجهة نظرك:

نوع الأنشطة	خضعت له كثيرا	أكثر فاعلية
دورات قصيرة		
دورات طويلة		
عن طريق الانترنت		
مؤتمرات/ محاضرات		
المشاركة عن طريق التعلم التعاوني مع الزملاء		
الملاحظة ومتابعة الآخرين		
قراءة البحوث المتخصصة في نفس المجال		
مقابلة المختصين بالمجال		

إذا لديك أي تعليق حول هذه الأنواع:

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القسم الثالث: اتجاهات أعضاء هيئة التدريس حول التطوير المهني المستمر في تقنية المعلومات والاتصالات.

الرجاء الإشارة إلى أي مدى تتفق مع العبارات التالية من خلال اختيار الخيار الأنسب من وجهة نظرك:

العبارَة	أَتَّفَقَ تَماماً	أَتَّفَقَ	مُجَدٍ	مُتَّفَقٌ	تَماماً
المش اركة					أرغب في أن أتعلم أكثر وباستمرار حول استخدام تقنيات التعليم
					أحتاج إلى تطوير معرفتي باستمرار فيما يتعلق بتقنيات التعليم بغرض تطوير مهنتي أكاديميا
					أشعر بالحاجة لتطوير مهاراتي في تقنيات التعليم لأكون على معرفة بالتطورات الحديثة في التعليم
					التطوير المهني في مجال تقنيات التعليم ليس أولوية بالنسبة لي
					أنا مهتم للتعلم أكثر حول التقنيات التعليمية ولكن لا أملك الوقت
تت فق					التطوير المهني والتدريب في تقنيات التعليم تقدّم على حسب احتياجاتي المنهجية
					الدورات المقامة في تقنيات التعليم تشمل وتغطي احتياجات أعضاء هيئة التدريس
					يتم التشاور والاتصال مع أعضاء هيئة التدريس حول محتوى وأشكال دورات التقنيات التعليمية قبل تنفيذها
					أعضاء هيئة التدريس يشاركون في تصميم البرامج التدريبية في تقنيات التعليم وأنشطتها
					البرامج التدريبية في تقنيات التعليم تعتبر جيدة في التصميم والكفاءة
					فريق الدعم الفني المتخصص في تقنيات التعليم متواجدون دائما عند الضرورة
					البرامج التدريبية في تقنيات التعليم تتابع كل التطورات في مجال التربية وتدعمها
					الوقت متاح خلال التدريب لممارسة وتطوير المهارات الجديدة في التقنيات التعليمية
					التطوير المهني في مجال تقنيات التعليم قدّم المعرفة النظرية فقط ولم يقدم الممارسات العملية في الفصل التعليمي

					حضور برامج التطوير في تقنيات التعليم قدمت لي الفرصة لتبادل الخبرات مع أناس آخرين	
					تعتبر جودة المدربين في الدورات التدريبية في تقنيات التعليم مرضية	
					المدربون غالبا في تقنيات التعليم ملمون معرفيا في تخصصي ومنهجي	
					أغلب المدربين في دورات تقنيات التعليم متمكنون وذو خبرة عالية	
					التدريب في تقنية المعلومات والاتصال لا يقدم الفرص العديدة لممارسة واستخدام التقنية في الفصل التعليمي	
					استفدت كثيرا من المشاركة في برامج التطوير المهني في تقنيات التعليم	
					أصبحت أكثر كفاءة وفاعلية بعد المشاركة بالبرامج التطويرية بمجال تقنيات التعليم	
					هناك دعم بعد الانتهاء من الدورات لتدعيم التعلم والتطوير في التقنيات ولضمان الممارسات الصحيحة في الفصل التعليمي	
					المشاركة في البرامج التدريبية شجعتني للاستمرار في المشاركة في برامج أخرى في تقنيات التعليم	
					التطبيقات المستخدمة في تدريب التقنيات التعليمية غالباً تكون متوفرة في الفصل التعليمي	

القسم الأخير:

إذا ترغب بإضافة أي تعليق حول الحالات السابقة أو حول الموضوع، أرجو كتابته هنا.

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شكرا جزيلا لإكمالك هذه الاستبانة

ملاحظة: سيقوم الباحث ببعض المقابلات لأجل هذه الدراسة، إذا كانت لديك الرغبة في المشاركة في المقابلات من فضلك اترك معلومات الاتصال بك (الاسم ورقم الجوال أو الايميل)

Appendix 3: Interview Schedule (English)

Interviewee: Date: / /

	Interview Items
Introduction	<p>Study background and objectives</p> <p>Confirming Participant's Background</p>
Involvement towards CPD in TEL	<p>What do you think of involving and participating in TEL professional development?</p> <p>What are the reasons behind your participation in TEL CPD?</p> <p>Do you think that participating in TEL CPD is a challenge?</p> <p>If so what are those challenges of participating in TEL CPD?</p>
Implementation of TEL CPD	<p>What do you think of the quality of TEL courses, are they well prepared?</p> <p>Were the programmes relevant to your needs as far as it concerns TEL skills and subjects' examples?</p> <p>How good TEL professional development be tailored to meet your needs or your institution needs?</p> <p>What do you think the design of the content and format of TEL courses?</p> <p>Are there balances in the content provision to support your learning?</p> <p>What do you think of TEL CPD trainers who provided the courses?</p> <p>Can you think of a very good or a very bad TEL courses? Why was it very good/ very bad?</p>
Impact	<p>What did you get from the TEL professional development?</p> <p>Do TEL programmes improve lecturers' practices in the classroom? Yes/No, Why/Why not?</p> <p>How do you see the experience of attended TEL CPD contributing to your future practices?</p>

	Is your institution providing the needed support after participation?
Conclusion	<p>Any other comments?</p> <p>What will happen to data</p> <p>Managing next meeting to read all words of this interview</p> <p>Thank interviewees</p>

Appendix 3: The Interview – (Arabic Version)

المقابلة

الهدف	السؤال
المقدمة	<ul style="list-style-type: none"> - شكر المشاركون - توضيح طبيعة وأهمية الدراسة - التأكد من تطابق البيانات
المشاركة	<ul style="list-style-type: none"> - كيف تعتقد عن المشاركة في التدريب المتخصص بتقنيات التعليم - ما هو برأيك الأسباب وراء مشاركتك في مجال الدورات المقدمة في تقنيات التعليم - هل تعتقد أن هناك تحديات في المشاركة في التدريب في هذا المجال - ماهي التحديات الأكاديمية التي تواجهها
التصميم	<ul style="list-style-type: none"> - ما هو تقييمك لجودة الدورات المقدمة - هل المحتوى مناسب لاحتياجاتك وتخصصك - كيف ترى المحتوى والتصميم ملائم للمشاركين - كيف ترى شكل التصميم لهذه الدورات المقدمة - ما هو رأيك للمدربين القائمين على هذه الدورات - ممكن تتصور تدريب جيد وتدريب سي من وجهة نظرك وما هو سبب ذلك
النتيجة	<ul style="list-style-type: none"> - ماهي الحصيلة التي خرجت منها من حضورك للدورات في تقنيات التعليم - هل تعتقد حضورك للدورات طور الجانب العملي للتدريس مع استخدام التقنيات التعليمية - كيف ترى هذه الدورات نمت الجانب النظري

<p>والعملي لك</p> <p>- هل المؤسسة التعليمية قدمت المساعدة لتنمية التطورات في التقنية بعد الانتهاء منها</p>	
<p>-هل لديك أي اضافة او تعليق</p> <p>- ماذا سيحدث للبيانات</p> <p>- ترتيب لقاء لعرض بيانات المقابلة مع الشخص</p>	<p>الخاتمة</p>

Appendix4: Participation Information Sheet

Academic lecturer information sheet

The project:

Evaluation the Continuing Professional Development opportunities offered in TEL for lecturers in Saudi Arabia

Dear Participant,

I am a PhD research student in the Institute of Education in University of Reading. I would like to invite you to participate in this important research thesis about academic lecturers' views and experience of their professional development in TEL. I am interested in exploring TEL professional development experiences in order to develop the current TEL effectiveness use in Saudi universities. This is a very important study as it will seek to provide TEL professional development providers and designers the information needed to develop TEL courses. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully.

What is the purpose of the study?

This research study aims to explore factors that enhance and prevent the success of TEL professional development in the higher education practice. It is an attempt to understand the current TEL courses situation and whether they are suitable for academic lecturer's needs or whether they need revision to be improved in the light of their views and experiences. The overall aim is to contribute to the understanding and improvement of TEL courses in the context of university lecturing.

In order to achieve these goals the researcher chose a mixed methods approach using questionnaire and interviews since these are the most suitable instruments to examine the research questions. The questionnaires and interviews will focus on academic staff at the Educational Faculty of ... University.

Why have I been chosen to take part?

You have been invited to take part in this project because you have been identified as a member of academic staff in the educational faculty at .. University: your views would be invaluable to the proposed research as a target for this study.

What will happen when you take part of it?

You will be invited to complete a short questionnaire and also to perhaps take part in a one-to-one interview focused on your experience of TEL professional development. The questionnaire will take a maximum of 15 minutes to finish at your own convenience. Regarding the interview, it will take place face to face at a mutually convenient date and time. With your agreement, the interview will be audio recorded and transcribed. This transcription will then be shown to you for you to check for accuracy and for you to confirm that you are still happy for it to be used in the research.

Do I have to take part?

You should understand that your participation is voluntary: it is up to you to decide whether or not to take part. If you do decide to take part you will be given this information sheet to keep and asked to sign a consent form. If you decide to take part you are still free to withdraw at any time and without giving any reason by contacting me via email on: A.S.A.Almutlaq@pgr.reading.ac.uk

What are the possible advantages and disadvantages of taking part?

Participants will benefit from the opportunity to reflect on their experience of being a member of the academic staff, which in turn could benefit their institutional practices. The information you give will remain confidential and will only be seen by the research team listed at the start of this letter.

Will what I say be kept confidential and what will happen to the results of the research?

Any data collected will be held in strict confidence and no real names will be used in this study or in any subsequent publications. The completed questionnaires and the interview records of this study will be kept private. The data collected in the study will provide the basis of my PhD thesis. The thesis will be published in hard copy and electronic format which will be housed at the Institute of Education in university of Reading. The data and the analysis of the data will also be used to produce articles, books, conference papers, as well as presented in conferences and lectures. In any of these formats I reassure you that your identity and anonymity will be protected. All information collected will be kept strictly confidential (subject to legal limitations). In order to protect the anonymity of each participant, pseudonyms will be used to ensure participants cannot be identified. All electronic data will be held securely in password protected files on a non-shared PC and all paper documentation will be held in locked cabinets in a locked office.

In line with University policy, data generated by the study will be kept securely in paper or electronic form for a period of five years after the completion of the research project.

Who has reviewed the study?

This application has been reviewed by the University of Reading Research Ethics Committee and has been given a favourable ethical opinion for conduct. The University has the appropriate insurances in place. Full details are available on request.

What happens if I change my mind?

You can change your mind at any time without any repercussions. During the research, you can stop completing the activities at any time. If you change your mind after data collection has ended, we will discard your data.

What happens if something goes wrong?

In the unlikely case of concern or complaint, you can contact the supervisor of the researcher: Dr Yota Dimitriadi, University of Reading; Tel: +44(0)1183782688, email: y.dimitriadi@reading.ac.uk

I do hope that you will agree to your participation in the study. If you do, please complete the attached consent form and return it.

* This project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct.

Thank you for your time.

Appendix 5: Consent Form

Research Project: *Evaluation the Continuing Professional Development opportunities offered in TEL for lecturers in Saudi Arabia*

I have read the Information Sheet about the project and received a copy of it. I understand what the purpose of the project is and what is required of me. All my questions have been answered.

Name of lecturer: _____

Please tick as appropriate:

- 1- I confirm that I have read and understand the information sheet for (Yes / NO)
the above study and have had the opportunity to ask questions.
- 2- I understand that my participation is voluntary and that I am free to withdraw at
any time without giving a reason. (Yes / NO)
- 3- I consent to completing a questionnaire. (Yes / NO)
- 4- I consent to be to take part in a follow-up interview. (Yes / NO)
- 5- I agree to this interview being recorded. (Yes / NO)

Name of participant:

Date: / /

Signature:

Appendix 6: Ethical Approval Form



University of Reading
Institute of Education
Ethical Approval Form A

Tick one:

Staff project: ____

Postgraduate project: PhD ____ ☒ ____ EdD ____

Name of applicant: Abdullah Almutlaq

Title of project: *Evaluation the Continuing Professional Development opportunities offered in TEL for lecturers in Saudi Arabia*

Name of supervisor (for student projects): Dr Yota Dimitriadi & Professor Rachel McCrindle

Please complete the form below including relevant sections overleaf.

	YES	NO
Have you prepared an Information Sheet for participants and/or their parents/carers that:		
a) explains the purpose(s) of the project	<input checked="" type="checkbox"/>	
b) explains how they have been selected as potential participants	<input checked="" type="checkbox"/>	
c) gives a full, fair and clear account of what will be asked of them and how the information that they provide will be used	<input checked="" type="checkbox"/>	
d) makes clear that participation in the project is voluntary	<input checked="" type="checkbox"/>	
e) explains the arrangements to allow participants to withdraw at any stage if they wish	<input checked="" type="checkbox"/>	
f) explains the arrangements to ensure the confidentiality of any material collected during the project, including secure arrangements for its storage, retention and disposal	<input checked="" type="checkbox"/>	
g) explains the arrangements for publishing the research results and, if confidentiality might be affected, for obtaining written consent for this	<input checked="" type="checkbox"/>	
h) explains the arrangements for providing participants with the research results if they wish to have them	<input checked="" type="checkbox"/>	
i) gives the name and designation of the member of staff with responsibility for the project together with contact details, including email . If any of the project investigators are students at the IoE, then this information must be included and their name provided	<input checked="" type="checkbox"/>	
k) explains, where applicable, the arrangements for expenses and other payments to be made to the participants	<input checked="" type="checkbox"/>	
j) includes a standard statement indicating the process of ethical review at the University undergone by the project, as follows: 'This project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct'.	<input checked="" type="checkbox"/>	
k) includes a standard statement regarding insurance: "The University has the appropriate insurances in place. Full details are available on request".	<input checked="" type="checkbox"/>	
Please answer the following questions		
1) Will you provide participants involved in your research with all the information necessary to ensure that they are fully informed and not in any way deceived or misled as to the purpose(s) and nature of the research? (Please use the subheadings used in the example information sheets on blackboard to ensure this).	<input checked="" type="checkbox"/>	
2) Will you seek written or other formal consent from all participants, if they are able to provide it, in addition to (1)?	<input checked="" type="checkbox"/>	
3) Is there any risk that participants may experience physical or psychological distress in taking part in your research?		<input checked="" type="checkbox"/>

4) Have you taken the online training modules in data protection and information security which can be found here: http://www.reading.ac.uk/internal/imps/InformationComplianceTraining/imps-information-compliance-training.aspx	✓		
5) Have you read the Health and Safety booklet (available on Blackboard) and completed a Risk Assessment Form to be included with this ethics application?	✓		
6) Does your research comply with the University's Code of Good Practice in Research?	✓		
	YES	NO	N.A.
7) If your research is taking place in a school, have you prepared an information sheet and consent form to gain the permission in writing of the head teacher or other relevant supervisory professional?	✓		
8) Has the data collector obtained satisfactory DBS clearance?	✓		
9) If your research involves working with children under the age of 16 (or those whose special educational needs mean they are unable to give informed consent), have you prepared an information sheet and consent form for parents/carers to seek permission in writing, or to give parents/carers the opportunity to decline consent?			✓
10) If your research involves processing sensitive personal data ¹ , or if it involves audio/video recordings, will you obtain the explicit consent of participants/parents?	✓		
11) If you are using a data processor to subcontract any part of your research, have you got a written contract with that contractor which (a) specifies that the contractor is required to act only on your instructions, and (b) provides for appropriate technical and organisational security measures to protect the data?			✓
12a) Does your research involve data collection outside the UK?	✓		
12b) If the answer to question 11a is "yes", does your research comply with the legal and ethical requirements for doing research in that country?	✓		
13a. Does the proposed research involve children under the age of 5?			✓
13b. If the answer to question 12a is "yes": My Head of School (or authorised Head of Department) has given details of the proposed research to the University's insurance officer, and the research will not proceed until I have confirmation that insurance cover is in place.			
If you have answered YES to Question 3, please complete Section B below			

PLEASE COMPLETE **EITHER SECTION A OR B** AND PROVIDE THE DETAILS REQUIRED IN
SUPPORT OF YOUR APPLICATION, THEN SIGN THE FORM (SECTION C)

A: My research goes beyond the 'accepted custom and practice of teaching' but I consider that this project has no significant ethical implications.	✓
<p>Give a brief description of the aims and the methods (participants, instruments and procedures) of the project in up to 200 words. Attach any consent form, information sheet and research instruments to be used in the project (e.g. tests, questionnaires, interview schedules).</p> <p>Please state how many participants will be involved in the project: 100 (questionnaires), 10 (10% from questionnaire sample for interviews)</p> <p><i>This form and any attachments should now be submitted to the Institute's Ethics Committee for consideration. Any missing information will result in the form being returned to you.</i></p>	
<p>This research aims to investigate opportunities and factors that facilitate or inhibit TEL professional development among lecturers in a Saudi Arabia higher education institution.</p> <p>In order to achieve the study goals, the researcher has chosen a mixed methods approach by using questionnaires and semi structured individual interviews. The questionnaires and interviews will include participants from the selected case study (Educational Faculty). The questionnaires will be distributed to lecturers in the Educational Faculty (about 150) while the anticipated total number of targeted interviewees is 15. It is expected that the interviewees will be participants who have completed the questionnaire and are happy to be contacted further for a 1:1 interview. On the questionnaire form the participants are given the option to share their contact details if they are willing to support the study further and be interviewed. It is not expected that all participants will opt in for interviews. If there are more than 10 volunteers for</p>	

¹ Sensitive personal data consists of information relating to the racial or ethnic origin of a data subject, their political opinions, religious beliefs, trade union membership, sexual life, physical or mental health or condition, or criminal offences or record.

interviews, then the researcher will apply a range of criteria for selecting the interviewees. He will select participants who have overall positive TEL CPD experiences, those with mainly negative TEL CPD experiences and cross reference those professional experiences to participants who feel confident or not confident in their ICT skills.

All the participants are academic lecturers who work at this faculty. The study will adopt a case study approach to allow the researcher to examine in depth the phenomena and facilitate a 'thick description'. Questionnaire and interview documentations will be translated into the Arabic language as it is the participants' main spoken language. After completing the data collection process, transcripts will be translated into English and verified by a bilingual speaker for consequent analysis. As per Saudi Arabian research protocol, access to the Qassim University will be facilitated by the Saudi Government Education System. The researcher has already sent and received relevant essential documentation. He will also use the university email and phone to contact them. The two supervisors will also see the collected data.

B: I consider that this project **may have ethical implications that should be brought before the Institute's Ethics Committee.**

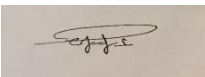
Please provide all the further information listed below in a separate attachment.

1. title of project
2. purpose of project and its academic rationale
3. brief description of methods and measurements
4. participants: recruitment methods, number, age, gender, exclusion/inclusion criteria
5. consent and participant information arrangements, debriefing (attach forms where necessary)
6. a clear and concise statement of the ethical considerations raised by the project and how you intend to deal with them.
7. estimated start date and duration of project

This form and any attachments should now be submitted to the Institute's Ethics Committee for consideration. Any missing information will result in the form being returned to you.

C: SIGNATURE OF APPLICANT:

I have declared all relevant information regarding my proposed project and confirm that ethical good practice will be followed within the project.


Signed: 

Print Name: Abdullah Almutlaq

Date: 28/01/15

STATEMENT OF ETHICAL APPROVAL FOR PROPOSALS SUBMITTED TO THE INSTITUTE ETHICS COMMITTEE

This project has been considered using agreed Institute procedures and is now approved.

Signed: 
(IoE Research Ethics Committee representative)*

Print Name Andy Kempe

Date 28.5.15

* A decision to allow a project to proceed is not an expert assessment of its content or of the possible risks involved in the investigation, nor does it detract in any way from the ultimate responsibility which students/investigators must themselves have for these matters. Approval is granted on the basis of the information declared by the applicant.

Appendix 7: An example of the coding and colouring process from some pieces of the original interviews.

مقابلة رقم ٥

- كيف تعتقد عن المشاركة في التطوير المستمر المتخصص في تقنيات التعليم؟

أداة مهمة للتطوير والتطبيق المستمر

- أستطيع القول ان الدورات المقدمة في مجال تكنولوجيا التعليم هي الوسيلة المثلى لتزويد أعضاء هيئة التدريس بما

يجتاحونه لتطبيق مثل هذه الأدوات المهمة في الفصل التعليمي او مجال العمل. بدون هذه الدورات أستطيع ان أقول

الاندماج بها يسعد الحاجات لتطبيقها للتعليم

لك التطبيق السليم لمثل هذه الممارسات في التربية الحديثة ومتطلبات هذا العصر لا توصل. لذلك يجب الانغماس بمثل

هذه الدورات والتطورات التكنولوجية لملازمة سد الاحتياجات والأساسيات للممارسات التعليمية.

- ما هو برأيك الأسباب وراء مشاركتك في مجال الدورات المقدمة في تقنيات التعليم؟

ضرورة ملحة للتعليم

- أستطيع القول لك أنى مهتم بالتقنيات التعليمية والتطوير بها لأنى مؤمن ايمانا كاملا انها متطلب هام جدا في الآونة

الأخيرة بما نجده من توصيات تربوية حديثة وأيضا بضرورة تزويد جميع الفصول الدراسية الحديثة بالمقتنيات

للاستخدام في التدريس من أجل إلقاء

التكنولوجية لاستخدامها في التدريس وأيضا للتعامل مع الطلاب من خلالها. وأيضا لأنها أصبحت حاجة ملحة لوجود

استخدام يومي للتقنيات للتواصل

هذه التقنيات مع الجميع في ممارساتهم اليومية لتواصلهم مع بعض وأصبحت أداة مهمة في يد الجميع الآن. لذلك لا

أهمية تطبيقها في التعليم

يوجد سبب لعدم استغلال مثل هذه الأداة في التعليم. ومن خلال اهتمامي الشخصي بها وأيضا ايماني بالحاجة للتطوير

استغلال لفرصة التقنية الشخصية سواء أكانت فردية

المستمر فيها أستطيع اخبرك أنى دائما استغل هذه الفرص المقدمة في هذا المجال وبقدر المستطاع اشارك فيها سواء

المعروضة عند طريق العمل او ما تقدمه بعض مراكز التدريب الخاصة في تقنية المعلومات والاتصالات. في هذا

استغلال لفرصة لخاصة بها

الصدد وفي كثير من الاحيان ادفع من حسابي الخاص للمشاركة في هذه الدورات التعليمية والتطويرية. اعتقد ان

تعدد المحاور للمشاركة

الدوافع كثيرة في هذا المجال والجوائز المؤثرة للدخول في تلك الدورات قد تكون واضحة او فقط لاستشعار هذه

الأهمية في هذا المجال المرتبط بالتقدم التكنولوجي. أحيانا تجتمع أكثر من ميزة للاشتراك بهذه الدورات على الصعيد

دوافع خارجية

الشخصي والذي يؤمن بمثل هذه التطورات وأيضا على الصعيد الخارجي مثل تشجيع الجامعة والممارسات التربوية

المعاصرة على استخدام التكنولوجيا بالتعليم او لحضور مؤتمرات حول هذا المجال.

- هل تعتقد أن هناك تحديات في المشاركة في التطوير المستمر في هذا المجال؟

كثير من المشاكل

كثرة المتطلبات

- بكل تأكيد هناك الكثير من المشاكل التي اراها قد تحول حول المشاركة الفعالة في الحضور والتطوير المستمر في

الوقت

هذا المجال التقني للتعليم. من وجهة نظري هو الوقت الذي يلعب دور العامل الاكبر للحد من الانخراط في مثل هذه

كثرة المتطلبات

الدورات وايضا كثرة المتطلبات في العمل او خارجه هو الحاجز الاكبر للتزود بهذه الدورات. كما تعرف ان عملنا

مسألة من المتطلبات

اكاديميا قد يتطلب بعض الأعمال الإدارية لإنهائها مثل اجتماعات القسم او التكليف بعمل لإنهائه من قبل القسم او

اعمال من الاعمال

الكلية. أيضا لا تنسى اننا مرتبطون بالطلاب كدور أساسي في الجامعة لتدريسهم والتحضير لهم والتصحيح لموادهم

ناهيك ايضا عن الساعات المكتبية او مناقشة البحوث واستئنتهم. كل هذا فقط في مجال العمل، فما بالك بالارتباطات

الظروف العائلية والاجتماعية

الخارجية كالعائلية او الشخصية او التجارية. كل هذه الأشياء تتطلب وقت لإتمامها وهي في صميم العمل اللازم

الدورات دور ثانوي

المتوجب عليك انهاءه فكيف بالأشياء الأخرى التي لا يوجد سؤال لماذا لم تنتهي بعد كحضور هذه الدورات في تقنيات

التعليم.

- ماهي التحديات الأكاديمية التي تواجهها؟

الدعم الإداري

- أستطيع ان أقول في الدعم الإداري والثقافة حولة آلية الحضور لمثل هذه الدورات الموجودة سواء الدعم من الكلية

عدم وجود الوسائل الحديثة

لحضور مثل هذه الدورات او أيضا بعد الحضور لنتمكن من التطبيق العملي لما تم تعلمه. وأيضا ازيد وأقول وجود

مثل التطبيقات التكنولوجية الحديثة في الفصول التعليمية لنمارسها في التدريس ونشعر بان لا عذر لنا بترك استخدامها.

النظام الموجود

أيضا تذكرت عدم تزويدنا بمثل هذه الدورات بشكل منظم بل يجب ان نركز نحن كأعضاء هيئة تدريس اين توجد مثل

هذه الدورات.

- ما هو تقييمك لجودة الدورات المقدمة؟

منع الجودة

- لا اريد ان أكون سلبي ولكن من خلال تجربتي المتواضعة قليل جدا ان اخرج من غالبية هذه الدورات وأنا اشعر

كثرة التقييم

بالفائدة التي كنت أتمنى الحصول عليها قبل مجيئي لها. شعوري بالجودة بهذه الدورات هي عندما اخرج منها واحساسني

اني تعلمت الجديد لمعلوماتي السابقة في هذا السياق مع حرصني الشديد للتعلم الفعال في هذا المجال وخاصة لامتلاك

المهارات اللازمة في التعامل مع الأدوات التكنولوجية. أستطيع ان اخبرك ان هذه الدورات إذا لم تكن مقدمة على

المعرفة

المعرفة بأهمية تأثيرها على العملية التعليمية ومدى أثرها على المتعلمين. أحيانا قد يراودني شكوك على مثل هذه

الاستخدامات وأنها فقط نمط جديد يدعيه بعض التربويين الذين يدعون لاستخدام التكنولوجيا دائما بكل الممارسات

التعليمية وانها قد تكون فقط عبئ جديد لا يختلف الأثر التعليمي على الطلاب باستخدامها أو لا وأيضا قد تكون عبء

على المحاضرين كذلك. ولكن بعد أكثر من حضور لمثل هذه الدورات نستكشف فعليا أهمية تأثيرها وأهميتها وكيفية

استخدامها وتمتلك أيضا الثقة بنفسك أكثر لاستخدامها وذلك بمشاهدة المدرب أو المتدربين عن كيفية التعامل معها

وكيف تستخدم أو ماهية المشاكل التي قد تواجه الكثير فيها. لذلك تكون لديك الجرأة لمثل هذه الممارسات

- هل تعتقد حضورك للدورات طور الجانب العملي للتدريس مع استخدام التقنيات التعليمية؟

- لا أعرف كيف أجيبك على هذا الموضوع لأنه محير. على الجانب النظري وتقييمي لنفسي أستطيع وبكل تأكيد ان

أقول لك نعم أثرت وتعلمت كيفية تقديم مثل هذه الوسائل في العملية التعليمية واحسائي اني امتلك مثل هذه القدرة

سواء هل نجحت ام لا هذا هو شعوري الشخصي الان ولا يوجد تقييم لتلك الممارسات او ما تم تعلمها هل هي بمحلها

السليم ام لا. من الناحية العملية في الفصل الدراسي وتطبيق هذه التقنيات .. فلأسف لا لأنني بعد محاولاتي الشخصية

وتجهيز واحضار بعض الوسائل التعليمية او الاجهزة الالكترونية كجهاز اى ايباد الشخصي ومحاولة تقديمي المحتوى

الدراسي للطلاب عن طريق تلك وجدت نفسي محبطا من ناحية التجهيزات الفنية او قابلية الطلاب للتعامل مع هذه

الأدوات. وأيضا لم اشعر نفسي اني استطيع الاستمرار بالتعامل مع هذه الوسائل لأنه لا يوجد دعم فني متواجد سريعا

لو حصل أي عطل او اذا اردت المساعدة السريعة لاكمال الشرح. أيضا ينتابك أحيانا شعور الطلاب انه لا فائدة من

استخدام هذه التقنيات وانهم لم يتعودوا على ذلك مع المحاضرات الأخرى بسبب تثبيط للاستمرار بهذه الممارسات

لأنها لم تكن ثقافة مشتركة بين الجميع وتجد نفسك ممارسا لها لأنها جزء من العملية التعليمية التي استخدامها يجب

ان يظهر.

- هل المؤسسة التعليمية قدمت المساعدة لتنمية التطورات في التقنية بعد الانتهاء منها؟

- لا اذكر أي شيء من ها لقبيل قد حصل معي. قد لا ابالغ انه ولا حتى سؤال عن مدى الرضى بعد الانتهاء من

Reasons for Participation	دوافع المشاركة	for Participation	دوافع المشاركة
(٤) تطوير الممارسة في التدريس [مقابلة رقم ١٠٠٨٠٦٠٤٠٤]	(١) الحفاظ على التقدم التقني في التقنيات التعليمية [مقابلة رقم ١٠٠٩٠٨٠٦٠٥٠٣٠١]	(٥) أهمية التقنيات في العصر الحديث [مقابلة رقم ١١٠٦٠٥٠٤]	(٢) المحافظة على المعايير المهنية [مقابلة رقم ١٠٠٧٠٤٠٩٠١]
(٦) الحصول على موقع وتلقي أفضل [مقابلة رقم ٩٠٤٠٣]	(٣) تلبية احتياجات المتعلمين [مقابلة رقم ٩٠١٤٠٣٠١]		
Constraints of Participation	مقوقات المشاركة	ints of Participation	مقوقات المشاركة
(٤) جودة الدورات المقدمة [مقابلة رقم ٩٠٧٠٤٠١]	(١) الوقت [مقابلة رقم ١٠٠٨٠٦٠٥٠٣٠١]	(٥) إمكانية الوصول [مقابلة رقم ١٠٠٩٠٧٠٥٠٣]	(٢) عبء العمل والظروف الاجتماعية [مقابلة رقم ١٠٠٩٠٧٠٥٠٣]
(٦) الوعبي [مقابلة رقم ١٠٠٩٠٥]	(٣) الوصول إلى الموارد التقنية الحديثة [مقابلة رقم ١٠٠٩٠٦٠٤٠٤]		
Planning and Design	التخطيط والتصميم	Planning and Design	التخطيط والتصميم
(٤) المستوى وتركيزه [مقابلة رقم ١٠٠٧٠٤٠٤]	(١) التخطيط المنظم قبل الدورة [مقابلة رقم ١٠٠٩٠٧٠٤٠٣]	(٥) مستويات المشاركة للمحتوى [مقابلة رقم ٩٠١٤٠٦٠٥]	(٢) فهم احتياجات المتدربين [مقابلة رقم ١١٠٤٠٧٠٥٠٣٠١]
(٦) المرونة [مقابلة رقم ٧٠٤]	(٣) مشاركة المتدربين حول متطلباتهم ورغباتهم [مقابلة رقم ٩٠٦٠٤٠٣]		
Practicality	التطبيق	Practicality	التطبيق
(٤) المدة [مقابلة رقم ٧٠٥٠٤]	(١) التوازن بين النظري والعملي [مقابلة رقم ١٠٠٩٠٦٠٥]	(٥) كفاءة المدرب بشكل عام [مقابلة رقم ١٠٠٨٠٨٠٦٠٥٠٣]	(٢) التطوير بطرق التدريس [مقابلة رقم ٩٠٣]
(٦) المدرب بالتخصص [مقابلة رقم ١٠٠٧٠٣٠٢٠١]	(٣) التوقيت [مقابلة رقم ١١٠٤٠١]		

Impact at individual level	الأثر على الأشخاص	Impact at individual level	الأثر على الأشخاص
(٤) فهم دور التقنيات في التعليم [مقابلة رقم ٥٠٢]	(١) الدورات بأهمية لتقنيات إنشائية [مقابلة رقم ٨٠٧٠٤]	(٤) فهم دور التقنيات في التعليم [مقابلة رقم ٥٠٢]	(١) الدورات بأهمية لتقنيات إنشائية [مقابلة رقم ٨٠٧٠٤]
(٥) المشاركة والتعلم مع الأقران [مقابلة رقم ١٢٨٠٠٩٧٠٥٠١]	(٢) امتداد لآراء إيجابية حولها [مقابلة رقم ٧٠٦٠٥٠٤]	(٥) المشاركة والتعلم مع الأقران [مقابلة رقم ١٢٨٠٠٩٧٠٥٠١]	(٢) امتداد لآراء إيجابية حولها [مقابلة رقم ٧٠٦٠٥٠٤]
(٦) محاولة الدسليم (رئي التطوير التقني) [مقابلة رقم ٤٠٣]	(٣) زيادة الثقة [مقابلة رقم ١١٠٠٩]	(٦) محاولة الدسليم (رئي التطوير التقني) [مقابلة رقم ٤٠٣]	(٣) زيادة الثقة [مقابلة رقم ١١٠٠٩]
Impact at institutional level	الأثر على المؤسسة التعليمية	Impact at institutional level	الأثر على المؤسسة التعليمية
(٤) الإدارة المؤسسية [مقابلة رقم ٩٠٧٠٥٠٩٠١]	(١) عدم القدرة على التكيف [مقابلة رقم ٨٠٣٠٢]	(٤) الإدارة المؤسسية [مقابلة رقم ٩٠٧٠٥٠٩٠١]	(١) عدم القدرة على التكيف [مقابلة رقم ٨٠٣٠٢]
(٥) تقديم المتابعة والمساعدة بعد التدريب [مقابلة رقم ١٢٨٠٠٩٤٠٣]	(٢) عدم وجود هيكل وثقافة لدعم التغيير [مقابلة رقم ٩٠٦٠٥٠٤]	(٥) تقديم المتابعة والمساعدة بعد التدريب [مقابلة رقم ١٢٨٠٠٩٤٠٣]	(٢) عدم وجود هيكل وثقافة لدعم التغيير [مقابلة رقم ٩٠٦٠٥٠٤]
(٦) مستوى الطلاب التقني [مقابلة رقم ٧٠٥٠٤]	(٣) البنية التحتية المتقدمة [مقابلة رقم ٧٠٣٠١]	(٦) مستوى الطلاب التقني [مقابلة رقم ٧٠٥٠٤]	(٣) البنية التحتية المتقدمة [مقابلة رقم ٧٠٣٠١]