Can an ICT CPD programme have an impact on EFL teachers in Saudi Arabia: A case study

by

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Declaration

I certify that the material included in this thesis is my own work.

I confirm that no part of this thesis has been either published in another form or submitted for a degree at another university.

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Abstract

This study describes the design and evaluation of an in-service professional development program (CPD) to enable teachers of English as a foreign language (EFL) in Saudi Arabia (SA) to develop their use of information communication technology (ICT) in their teaching. The study covered two interventions, one in an English language teaching department in a higher education (HE) institute in SA, the other a secondary school in which English is taught as a compulsory subject in SA. The overarching aim of this study is to evaluate how ICT CPD could have an impact on university and school EFL teachers' attitudes, knowledge, and behaviour towards the use of ICT in their teaching.

The thesis reports on the two rounds of ICT CPD design, implementation, and evaluation. The design phase includes needs analysis questionnaires (n=28) and pre-course interviews (n=14), leading to an online intervention in which a four-level reflective model was adapted to introduce a triggering event that leads to a reflection on practise, which leads to construction of meaning through an integration process and finally the ability of making resolutions of the knowledge constructed. Evaluation of both cases was carried out through during and post course interviews (n=26), online observations (n=5), and post course group discussions (n=12).

The thesis describes a bottom-up design of ICT CPD, in which the idea of teachers' technological pedagogical content knowledge (TPACK) was influential. The ICT CPD was largely well perceived, but its impact was mixed in both contexts. As regards to take up of ICT, three user patterns emerged. Optimistic users tended to value the use of ICT in their teaching and experimented with almost all of the tools/applications presented in the training and were able to adapt some of the tools/applications in their teaching. Cautiously optimistic users saw the value of using technology in their teaching but were tentatively cautious and

adopted a relatively smaller number of tools/applications. Sceptical users tended to be reluctant about using technology in their teaching and experimented with only a few of the tools/applications presented.

In terms of the overall evaluation of the initiative, it was found that almost all of the participants had reported positively on the general design, online delivery, and content presented. Working hours and commitment were seen as barriers to face-to-face CPD in both contexts. Contextual barriers to ICT use covered class size, students' language levels, and access in the university context; whereas class time, facilities, and support were seen as barriers in the school context. Also, casual, intervening and contextual conditions shaped teachers' use of ICT.

This research contributes to the field of ICT CPD studies in that it addresses the issue of whether ICT CPD interventions can have an impact on teaching practice. It sheds light on the under researched area of ICT use in SA. It covers a context where access to facilities and teachers' competence are taken for granted and teachers are expected to use technology in their teaching. It further contributes to an understanding of the design of ICT CPD.

Table of Contents

List of Tables and Figures

Figures

Tables

List of Abbreviations

Abbreviations	Meaning
SA	Saudi Arabia
ICT	Information Communication Technology
CPD	Continuous Professional Development
VLE	Virtual learning environment
MoHE	Ministry of Higher Education
MoE	Ministry of Education
COI	Community of Inquiry
TAM	Technology Acceptance Model
MOOCS	Massively open online courses

CHAPTER 1: INTRODUCTION

New technologies have not only changed the way we live but also the ways we can teach. Technology holds many promises for teaching and learning. For example using computers in classrooms may allow different and more varied modes of interaction. Networked technology can shift learning beyond traditional boundaries or settings and can support a shift to more learner centred or social approaches to learning. In the EFL context, using computers and online communication can better allow learners to access and even to participate within target language communities. Using learning environments learners can better decide what, when, and how they would like to learn. However, with the development of technology progressing rapidly, policy makers and teachers face a number of decisions when planning the use of ICT. There have been many well-reported constraints on teachers in teaching and learning contexts. One of these is teachers' technical competence and knowledge base, often referred to as teachers' technological pedagogical content knowledge (TPACK). While teachers' TPACK has developed through the commitment of individual or small teams of enthusiasts, there have also been more formal in-service or CPD programs and initiatives to help equip teachers with the knowledge and competence to start using technology in their teaching. However, such programmes have often had limited impact due to problems of design, delivery, and transferability. In the specific case of ICT, the impact of CPD has been curtailed by the lack of institutional support, mismatch between practice and ICT training offered. Here one major challenge for those designing formal ICT CPD is ensuring that their programmes are relevant to teachers by offering interventions that are based on teachers' everyday classroom practice. ICT CPD is, however, a problematic concept both in its definition and in practice. In light of the opportunities that ICT offers teachers of EFL and of the difficulties that beset ICT CPD, this thesis attempts to evaluate a training course in an English department in a university and a secondary school in Saudi Arabia. It offers insight

into the nature of CPD in general and the goals of CPD in relation to the use of new technology and educational change. It considers the literature on how and why teachers up take new technology and makes reference to the value of using new technology in language teaching. A key concern in the thesis is an evaluation of teachers' development through attending ICT CPD courses, and the impact of such courses on their attitude, knowledge, and behaviour.

This is a new study in an under-researched area. There have of course been studies that have explored EFL teachers' attitudes and behaviour toward using ICT in teaching and learning in Saudi Arabia. For example and more recently, Gamlo (2014) examined EFL teachers' use of ICT on the university level; CPD initiatives for teachers in general, for example, AlHarbi (2011), developed and implemented a CPD program for newly qualified teachers; and teachers uptake of ICT for teaching other subjects, for example, Al-Sulaimani (2010), examined teachers' ICT use in science education at the primary level education. However, there has not been a study that has examined EFL teachers' uptake of ICT through CPD programs or offered the kind of action-oriented inquiry as presented here.

1.1 Genesis of the Study

I consider myself fortunate in that I have completed most of my school education in Saudi Arabia and the United Kingdom due to experiencing two different educational systems. Of course, English language was an obstacle for me at the beginning of my schooling in the UK, as I had not been introduced to it in Saudi Arabia schools before moving to the UK. However, I was quickly able to develop competence in the English language spurred by the necessity to communicate with my teachers and other students. For example, I used to compile a list of new vocabulary items and their translation to Arabic, and I would use some of the items when trying to communicate. I also used to imitate responses in similar

situations; for example, during my first days at the school I did not know the word 'present' when we were registered after arriving to school. However after I saw that all students replied 'present,' I did the same. Thus through both informal and directed learning I developed my vocabulary even if my communication skills were very basic. As another example, in an English class, I had to introduce myself in English, and I found it extremely difficult to do although I understood the question. Reflecting on these experiences has allowed me to see at first hand how language can be learnt in natural situations and that learning English as a foreign language must involve students speaking the language in real life situations.

Before making my first visit to the UK, I recall using EFL learning software, a kind of multiple choice drill and practice, that helped introduce me to core vocabulary. I can still remember the joy I felt when I would answer a question correctly and received a feedback message that enforced my right choice. Now as an experienced EFL teacher, I would question whether this behaviouristic approach to EFL learning is that influential, but nonetheless these early experiences with language skills on a computer did awaken an interest in technology and learning, which I have pursued ever since.

As a university student in Saudi Arabia, I was aware of the limited use of technology and could compare the UK and SA systems. In the UK, for example, we were once tasked with designing and editing our own version of a newspaper and were allowed to use computers for that task. This enabled me to develop English writing skills in an authentic context and gave the class a sense of ownership over our learning. However, in SA teaching typically would be bound to the black/white boards and textbooks with drills and practice exercises to follow, though some teachers would use overhead projectors to present the material being introduced. On rare occasions, there would be some visits to the computer lab, where we would have to share computers for searching for different topics or look up novels and plays. Even in a class

named Computer Assisted Language Learning (CALL) we would still be presented with the material traditionally rather than modelled with different CALL tools/applications/ contexts. The final exam for this particular course triggered my interest and determination to start exploring the issue of technology use in EFL teaching. The practical exam of this course, and as the name implies, would assume some kind of mastery of any application or tool that would support language learning. I remember the exam taking place at the computer lab, where my fellow students and I had to take turns and demonstrate our mastery of typing and editing a text on Microsoft Office. My task was to increase the font using the short cut commands on the keyboard. To give some credit to the course instructor, he did start a mailing group for the course but overall the great pedagogic potential of ICT was neglected or underexplored.

After graduation I was employed in the English department as a teaching assistant; I could act to address some of the difficulties I had observed but only then did I come to understand the bigger picture. I came to realise the curriculum constraints, the administrational issues with accessing facilities, and even time constraints. With such constraints I nonetheless resolved to use ICT tools/applications to engage my students. I recall using a Facebook page for an English vocabulary module I taught and provided learners with clips from YouTube that show the use of different words in different contexts. My interest in new technology did not go away, and I was fortunate to be given a scholarship to study an MA degree in the University of Essex. This programme helped me to discover the technical and pedagogical value of using technology in EFL teaching and learning. The use of Moodle, Blogs, and virtual classrooms opened my eyes to ideas I could implement in the Saudi context.

On completion of my degree, my scholarship was extended to pursue my PhD degree. I wanted a better understanding of the pedagogical opportunities surrounding ICT use and the practical steps I could take to do something about the uptake of ICT in my department. I wanted to design, implement, and evaluate a course that would support other staff members and develop the use of ICT within my department. I knew that it would not be easy but crucially I needed to know if ICT CPD could make a difference. Such a programme would require an introduction showing how and when ICT can be used in the EFL classroom and the benefits of using ICT in the classroom. However the general view among the department staff members on the use of ICT in the EFL context encouraged me to pursue the introduction of this training programme. It however produced limited findings, as we will see later in this thesis. The impact of the training was evaluated throughout the training and how further development might take place. Many questions were still unanswered and a wider perspective to ICT CPD was needed. Thus I sought out to carry out the study within the school context, as some of the teachers within the university context withdrew prior to the beginning of the training. A colleague suggested the school context. Thus I finished with a study that allowed me the opportunity to compare teachers' uptake across sectors (HE and school). There were distinctive features in these sectors but also similar outcomes. In particular support, learners' language levels, and curriculum constraints were reported in both contexts.

This thesis is driven by an interest in ICT in the teaching of EFL and how to support teachers in using ICT. It has an overarching question that asks: Can an ICT CPD have an impact on EFL teachers' practice? In answering this question the reader needs to know the specific nature of the intervention that I carried out, and I will need to answer the sub-question: How was the ICT CPD designed and implemented? The reader will also want to know about the specific impact of the intervention, and therefore my second sub-question is: What was the impact of the intervention on teachers' attitudes, behaviour, and knowledge?

1.2 Education in SA

Formal education began in the 1930s (Al Saloom, 1995) with four schools in major cities. While the core objective of the educational system was the study of Islam, the modern educational system provides instruction in all fields of arts and science studies. It was only in 1957 that the first university was established in SA, with studies commencing in the college of Arts. Since then higher education has expanded enormously reaching 35 universities in 2014 reflecting both the increasing population of young people in the country, which is estimated by the Central Department of Information and Statistics to be 50% of the Saudi population under the age of 25; and the desire of policy makers to create a more modern outward looking country through developing an internationalized high standards universities (Smith & Abouammoh, 2013). The government has empowered the educational sector with an astonishing $54.4B budget for the development plans of education (Ministry of Finance 2013). In the same vein, Al Nassar and Dow (2013) argue that there is a pedagogical challenge to make learning more learners centred, where they point out that traditional modes of interaction are seen as boring and support one-way interaction. They also point out the need for professional development programs to develop university staff members' knowledge to support the on going reform efforts.

In the latest statistic report by the Ministry of Education, there are approximately 30,000 schools and 35 government-funded universities and 9 private universities in SA for 4 million male and female students. The educational system in Saudi is segregated in all four stages of formal education, which is structured into (1) kindergarten for children aged two to six; (2) primary for children aged seven to 12; (3) intermediate for students aged 13 to 15; and (4) secondary for students aged 15 to 18. After completing formal education, students must sit for an aptitude test (Qudrat) that will determine their future enrolment to colleges or

universities. Students can enrol in government or private universities, colleges, and vocational training colleges.

The academic year is usually 30 to 35 weeks long and divided into two terms, with a half term break and a week break after six weeks into the second term. In schools, there are seven periods a day and classes are usually 45 minutes. As for exams, mid-term and final exams are administrated to evaluate students' progress, where failure in testing in intermediate and secondary schools will result in resitting for the year again. As for primary school, formative evaluation is carried out continuously.

As with other educational systems around the world, SA encounters a number of challenges and obstacles, for example Al Aqel (2008) reported that:

- Educational institutes are not able to accommodate all applicants and more than 30 % of secondary school graduates will not be able to enrol in higher education.
- The number of secondary school graduates will triple in the next five years, ultimately increasing the challenges for higher education institutes.
- Compared to industrial countries, the number of graduates enrolled to high education is only 18% of the age group 19 to 23, which in SA is the age of higher education studies.
- Almost 79% of the higher education outcomes are theoretical or educational, whereas there is a demand on the scientific and technical outcomes.
- The government sector, which is the most desirable sector for graduates, has almost no job opportunities for new graduates.
- It is estimated that 60% of the man power in SA is administrated by foreign workers, indicating that the outcomes of the high educational institutes are not parallel with the employment market demands and needs.

1.2.1 Teaching as a Profession

Teaching is regarded as one of the most secure jobs in SA, financially and efficiently. Economic studies by City Bank group estimate the average income in SA around $24,200/year, and novice teachers will be paid almost $2500 a month in public schools; whereas university teachers' starting salary is around $3500. As for private schools, the salary is almost halved, since the private sector is more profit driven. Public school teaching job opportunities are preferred, because teaching is characterized by routine and order. At the university level, lectures are 1-2 hours and vary in number per day. In the school context, lessons are 45-minutes and teachers follow the materials within the national textbooks, so planning is not demanding. Teachers are required to keep a teaching logbook that shows what methods are used and how lessons are planned. While most of these logbooks are available online, inspectors from the Ministry of Education do not see the "ready-made" lesson plans as an issue as long as they are available. Generally, school teachers teach 4 to 6 classes a day, 5 days a week, while university teachers' teaching schedule is based on their qualification. For example, PhD holders teach 12 hours per week, MA holders teach 14 hours per week, and language teachers and teaching assistants teach 16-18 hours per week. Schoolteachers may be assigned to other administration duties, such as organizing the students' entry and evacuation of the school, maintaining authority presence on the playgrounds during breaks, and final exam invigilators duties. Nevertheless, teaching is considered by many people as a desirable occupation. In contrast teaching at a private school is often seen as more demanding, as pupils are seen as more likely to disrupt teaching routines and teachers are more likely to have to tolerate students' behaviour issues, given the financial incentive for schools to keep students in school.

1.2.2 English Language Teaching in Saudi Arabia

As far as English is concerned, interest in English as a second language in SA began in 1950's (Al Hajailan 2003) with the introduction of the first text book for Saudi students. It was not until the year 2000 that the ministry of education stated that all school students should be taught at least one foreign language besides their mother tongue (Al Hajailan 2003). Following that decreed article, the content of the curriculum was set to achieve certain goals at the end of each stage of school. In the elementary stage, students should learn the basics of English language that would form the foundation for its mastery in the future and encourage the use basic sentence structures. At an intermediate level, students are prepared to speak, read, write, and listen with an understanding of English. In the secondary level, students should be able to listen, read, and understand a wider range of English, for example, to read for information, pleasure, and enlightenment. At the university level, English is taught as a major in two different departments, namely colleges of languages and translation or colleges of arts. It is also taught as a foundation subject in all other fields, were one or two courses are mandatory.

As far as teacher education is concerned, there were 13 separate colleges for preparing EFL teachers along with other majors. However, in 2012, all of these colleges were merged to the university's educational studies departments. Although this study started at a teachers' college, the restructuring of the department meant that the study would take place within an English department rather than at a college. The general view of teaching/learning English is divided. The majority acknowledge the importance of English as a medium of communication to the non-Arabic speaking world; they also consider the ability to speak proficient English as being beneficial for their future. With this view, people will allow their children to take extra English classes, attend institutes, or even travel abroad to an English-speaking country to learn English. However, a minority see English as the language of the Western-colonization countries and

avoids learning it and questions others who learn it. This view is based on religious reasons. Nevertheless, English is currently taught in grades 5 and 6 in elementary schools, and in intermediate and secondary public schools; in private schools students could choose to receive their learning throughout the three stages in Arabic or English; other private schools offer an intensive 14 hours a week of English courses. The curriculum for all stages is set by the Ministry of Education, and in the case of private schools that use intensive English programs, their course books have to be agreed upon by the Ministry.

1.2.3 ICT and Education in Saudi

The Ministry of Higher Education and the Ministry of Education aim to offer a modern education to Saudi students and the appropriate employment of such technology in Saudi schools and universities. To achieve this, a working group of specialists, experts, and academics was set up to work on a practical vision for the introduction of e-learning, distance education, and learning in higher education. The group had drafted a proposed model for e-learning and distance education in Saudi universities. The result of this group of experts was a definition of e-learning and distance learning and the establishment of the National Centre for e-learning and distance education (NCEL).

The NCEL seeks to develop a variety of research and development agendas aimed at facilitating the next generation of e-learning. It is considered to be the main sponsor of e-learning in Saudi Arabia. NCEL plans to spread e-learning and its applications in order to become a substantial part of the educational system in Saudi Arabia.

The primary goals of establishing NCEL are:

- Spreading the e-learning and distance learning applications in the educational system using a high quality standards.

- Contributing to an increase in the learning capacity in educational institutes through electronic and distance learning applications.
- Spreading awareness regarding technology as well as the e-learning and distance learning culture as a contribution to building an information society.
- Supporting research conducted in the field of e-learning and distance learning.
- Providing quality standards for designing, producing, and publishing digital educational materials.
- Contributing to evaluating projects and programs of e-learning and distance learning.
- Providing consultation to parties in the field of electronic and distance learning.
- Building and distributing educational software to serve the educational process in the private and public sector.
- Encouraging distinguished projects in the field of e-learning and distance learning.
- Conducting meetings and organizing conferences and workshops that contribute to developing e-learning and distance learning.
- Cooperating with international firms and organizations and related bodies in the field of e-learning and distance learning.

It is NCEL's policy to meet the needs and provide the technical support to relevant education organizations and experts in SA, and it has made several efforts sponsoring and hosting the international conference of e-learning and distance learning. In 2011, the Saudi electronic university was established to offer distance and online degrees for Saudi nationals; in 2014 almost 40,000 students applied to study at 9 different campuses. As for public education, in 2007 King Abduallah initiated a national strategy for school reform, where the budget for this six-year programme exceeded $2.4billion. Within this strategy a number of projects were undertaken to develop the quality of the public schooling sector. As for relevance to this study, one project was Tatweer (meaning: development), which was primarily focused on

teachers' development in their major fields, technology use, administrative support, and educational supervision (*www.tatweer.edu.sa 2013*). As far as ICT use, the programme drew on Intel tech to the future vision of e-learning, and administrated as being the future for Saudi school systems. Intel tech to the future is an international project based on a "train the trainer" provision of professional development, where one teacher would be trained and tasked to train other staff members within his school. However, the programme is still undergoing, and no official evaluation research has been published to date. In a case study to evaluate the impact of education policy development on practice within Tatweer project, Al Yami (2014) interviewed a number of participating teachers, head teachers, and Tatweer official. She pointed out that the project had some positive impact in relation to developing learners' achievements and allowed teachers more freedom in regards to curricula consideration. However, she also pointed out some reported difficulties with the project. One main barrier was that many teachers appeared to resist change and regarded ICT use not essential. She also reported a Tatweer official indicated that some teachers withdrew from the project and asked to be allowed to leave for a normal school environment, while some parents objected to allowing their children to use computers, such as laptops, in their education. Such challenges with this programme have generated a huge debate in the educational field. Most educators criticised its outcomes and the participating teachers' attitudes towards ICT use. The questioned outcomes were in relation to the future of the students that went through the trial phase and how their involvement would affect their university enrolment possibilities. The other issue is related to the Intel tech to the future programme, as there was no preliminary investigation of the involved teachers' ICT abilities, knowledge of ICT use and pedagogy. The results and the project official research findings are anxiously waited for, and may reveal much about the future of education in SA.

1.3 Context of the Study

The research takes place at a time when policy makers and HE institutional leaders in SA are promoting the use of technology in education and see a need to establish a wider and more consistent use of ICT in order to support new pedagogical approaches in the EFL classroom. Socially, SA is mostly seen as a distant high power and avoidance of uncertainty culture, but in reality it is changing both in general and in education. Although in this context there is a sanctioned segregation of gender and official religion, it is also a multinational country with a flexible lifestyle. It can be best described as quite a traditional culture existing alongside a relatively modern one. For example Maddux et al. (2011) report that the Saudi context in general is a mix of traditional and contemporary culture that holds an unprecedented complex mix of characteristics. However, Agarwal et al. (2012) suggest that technology has the power to unsettle traditional culture, also Macfadyen (2011) acknowledge how technology development shape human interaction and societies. In the Saudi context, Eid & Nuhu (2011) examined university students' sharing of information and university learning cultures and reported that students are adopting collaborative approaches supported by ICT. This research is in principle aligned with recent initiatives, but is an opportunistic attempt to develop participating teachers' competence and knowledge to allow them to know when and why they can or cannot use ICT in their EFL teaching. We now look at the context of the implementation of this programme.

1.3.1 The English Department at KSU (formally RTC)

The English department, where this study takes place, is one of thirteen departments of the Teachers' colleges in KSU. The main aim of the college is to prepare qualified teachers in various subjects, one of which is EFL. However, not all student teachers go on to teach, and some (in some years as much a quarter) continue their studies at a higher level or take up a

non-education-related government or private sector occupation. Compared to some other countries, teacher preparation is more academic than practice based; however, the department offers a BEd in English language, a 4-year programme with:

- 4 semesters of pure EFL courses, which include: listening/speaking, reading, writing, vocabulary, dictionary use, debate, and discussion.
- 4 semesters of pedagogy courses, which include: teaching aids, teaching methods, approaches to language teaching, language testing, and CALL.

In this programme, students will also be introduced to some introductory courses in: literature, syntax, semantics, and EFL in Saudi Arabia. Beside all of the above courses, students will have to attend at least 12 compulsory courses that are instructed in Arabic, such as: psychology, research methods, Islamic history, history of Saudi Arabia, Islamic teachings and an introduction to Arabic language. In the last semester before graduation, the student must practise teaching English at a school for 6 months. Based on the students results in the practicum course, they will either be awarded the degree or asked to re-do the practical term. During the practicum, future EFL teachers are visited by their assigned supervisors for assessment. Most of the assessment concerns content and pedagogy knowledge. Weekly meetings are held to discuss future development and improvement.

This 4-year programme of teacher preparation was replaced during the 2011-2012 academic year to be consistent with other academic programmes within KSU administration jurisdiction. As pointed out earlier, in the past two years teacher colleges around Saudi Arabia were merged into the main university campuses in the region. This was a controversial step that was justified by policy makers on the grounds that the educational outcomes of teacher colleges were not adequate enough in terms of qualification and future EFL knowledge. Such remarks were also clear in the Qiyas vocational test results. Qiyas is a

vocational exam administrated by The National Centre for Assessment in Higher Education, which covers pedagogy, Arabic linguistics, numerical skills, and the main major of the teacher trainee. These four aspects are measured to meet the minimum teaching qualification standards that are set by the Ministry of Education, which is described as the basic knowledge and skills necessary to fulfil the teaching profession. One benefit of this test is that it serves as an independent measurement method of the cognitive outcomes and acts as a gatekeeper to the profession. In one hand, it could be seen as if the Ministry of Education is sceptical of the university's outcomes. On the other hand, each year a concerning percentage of the college graduates fail to pass the test indicating a discrepancy between college and ministry judgments and procedures. One possible reason is that teacher trainers are obliged to cover a certain number of units, since the proceeding level depends and builds on prior knowledge obtained in the previous levels. As a result of this, the teachers' main aim is to cover as much as possible of the course book to prepare his or her students for the next level. In other words, teachers concentrate on the amount of knowledge they pass on and not the quality of this knowledge. Failure to complete the assigned curriculum will be regarded as an alteration to it, which is the responsibility of the department committee. Such interference will be questioned and sometimes leads to further investigation.

To compensate for these difficulties, MohE introduced a new 5-year programme in an attempt to raise teacher trainees' abilities and qualifications. The new programme introduced a foundation year, in which students have to pass and which determines the subject specialism. The curriculum had also been altered in line with some overseas universities modules. Examples include courses such as Introduction to Linguistics adapted from Salisbury University, Introduction to Literature adapted from London School of Economics and Political Sciences, Phonetics and Phonology similar to the course offered at the University of Wisconsin, Analytic Reading adapted from the University of North Texas and

Sociolinguistics given as part of the Professional Certificate in Teaching English to Speakers of Other Languages. The new changes to the curriculum were seen, as shown in various contributions of newspaper reports at the time, as an attempt by policy makers to marginalize the role of teacher colleges in order to merge them with the educational studies departments in universities. Changes also were made to the practicum term. Now future EFL teachers will have to pass their assigned 6-month training period and produce a teaching 'portfolio' in which teacher trainees will have to sit and discuss their pedagogical decisions and future development approaches with their assessment supervisors.

The Ministry of Education has further introduced a five-year teaching practice permit, which will only be renewed if the teachers' records show that he or she has passed a certain number of CPD courses. Teachers must also show they have no criminal convictions, including drug use, child molestation, and child abuse.

As discussed later the department has strengths and weaknesses. Qiyas's results show that a high percentage of future EFL teachers fail to pass the vocational test, in which the pass mark is only 50 out of 100. This alarming fact requires a deeper look into the teaching context in the department. Policy makers in teacher colleges, including department dens, deputies, and the rector, in general, see this high failure percentage directly linked to the fact that staff members in teacher colleges are not fully aware of the school context. A key issue, which is discussed in the thesis, is the widely differentiated makeup of the staff. The general opinion amongst the teaching staff is that the diverse backgrounds of the staff members is an advantage in that there is an opportunity for a rich environment for sharing ideas, teaching, and learning experience. However, this also presents a challenge to the students having to adjust to a range of understating of the teaching/learning process. In terms of English skills, different accents and regional variations make it difficult for students to adapt to. There are

further wide variations in academic backgrounds as well as in levels of English; even in some cases, the level of English is really quite weak for the positions they hold. As regards to ICT knowledge and skills, the same pattern appears. At one extreme, a small number of staff members find it a challenge to log on to their computers, and at the other you could see some creative websites, discussion forums, and maintained blogs by staff members. In terms of backgrounds, it is noticeable that almost half of the teaching staff members lack experience in regards to the teaching context in Saudi schools. Most of the non-Saudi staff members are recruited based on their general qualifications rather than an understanding of local conditions, and they obviously do gain knowledge of Saudi schools through observation and assessment visits, but their motivation to commit to their own CPD is limited as they are on fixed term contracts.

1.3.1.1 CPD at the English Department

As far as CPD is concerned, the college has appointed a quality committee that is responsible for ensuring that each staff member is presented with an opportunity to attend sessions to develop their practice. Most of the sessions are held in Arabic and focus on pedagogy. ICT sessions are also offered by the IT department. These sessions, from personal experience, are basic in nature and only deal with software basic use. Last year, a new interactive–white board course was introduced, and two sessions were held weekly. From everyday participation at the college, I believe that innovations in teaching are highly encouraged and motivated, and monthly there is a nominated staff member for the head dean's 'staff of the month' award. Morale is also quite high for both Saudi and foreign staff members. Compared to their countries, foreign staff members' salaries are significantly higher. Generally, teaching hours are manageable and extra hours are seen as overtime, for which the staff member will be compensated.

Other concerns expressed in the English department are in regard to stability in the department management. Change has been seen as unsettling and lacking 'flow', and it is not sure whether the previously appointed dean was fully aware of the issues related to staff, students, general objective, and financial issues. Generally, there are some areas of curriculum reform that would enjoy broad support but difficulties in planning and implementation. Extra material could be used in certain settings, but there are worries that this would create two different groups of students attending the same module and make it hard to unify the curriculum. The result of such 'intervention' with the curriculum would make students attend the other easier-instructed module.

1.3.1.2 ICT Use in the English Department

As for ICT in the department, each staff member is entitled to a computer at his office, where he (all the staff are male) could access it using his credentials. Most of the administration work, such as grading and submitting exam results, extending work visa, must be carried out through the university portal. This portal also provides ready-made templates for staff members to use as their websites. There is an incentive to do so, 25% of the basic salary, although it is only available for Saudi staff members. Training sessions have been held to introduce the university portal to the staff members, with user manuals being sent through emails. The university has adopted a new approach to encouraging e-learning use in general and ICT applications. In regards to facilities, the department is one of 13 different departments that share the same campus. In almost each classroom an over-head projector is available for use by staff members. However, not all classrooms are equipped with such equipment; and for that reason, the English department has provided three portable projectors. In terms of computer labs, the computer science department benefits from 10 computer labs, though use has to be negotiated by booking a lab in advance through the department secretary. Lately, the English department has invested in three new computer labs

that are designated for use by their staff members only. With the constant demands for using the labs, a booking timetable has been put forward. The general opinion among the staff is that these three labs are not enough, taking into account the number of staff members in the department and the number of classes per day. Some have gotten around constraints by promoting out-of-lecture use of online materials, while others have simply scaled down their use of ICT.

In regard to the staff computer literacy levels, almost all staff members can be considered able to carry out simple MS package tasks, browse the internet; as for the others, they are more advanced and highly motivated to create web sites, programming using different programming languages. As for their knowledge of ICT for EFL teaching, a previous survey (Al Ghamdi 2010) showed that lecturers tended to avoid using ICT/CALL in their teaching and justified this avoidance by lack of knowledge, lack of time, and curriculum constraints. However, some believe ICT is an important support for instruction and have invested their time heavily in developing online resources and material. Frequent use of ICT is made by some teachers and with some emphasizing a communicative language-learning approach supported by communication tools and some tools/application use, such as Wikis and blogs. For example, one staff member has created a Blog for current and future students to communicate; although it is more of a general blog, it is very active.

1.3.2 Secondary School 181

The secondary school that this study took place at is one of the public schools in Riyadh, the capital city of SA. The school accommodates all three stages of secondary level stage and has around 300 students. Only English language teachers for the third stage of secondary level participated in this study. Third level secondary students are aged 17 to18 and present the last stage of public schooling. EFL teaching objectives in this level are to prepare students to

communicate in English adequately and engage in daily conversations and be able to read and write for pleasure and enlightenment. With the current educational reform in SA a new curriculum has been introduced based on a new 'English for Saudi Arabia' series by Macmillan education for intermediate and secondary school stages. The new book series aims to promote better communication skills. I was able to gain access to this site through one of the department staff that recommended the site, but the fact that this was made possible and I was welcomed by colleagues shows that the school is outgoing and interested in CPD. By inspecting relevant documents I found that there were ten EFL teachers for the secondary year. All of the EFL teachers held a BEd in English language teaching while some helf MA degrees, but they have had different degrees of experience ranging from 4 to 12 years, although all of the teachers are Saudi and have been teaching for a minimum of four years. Two of teachers are pursuing their part-time master degrees in Saudi universities. A typical weekly class-teaching load of 24 hours a week is assigned to all teachers. This translates into five lessons a day with one lesson as a substitute teacher. A much-debated issue among English language teachers at the school level is that students' proficiency levels vary and are not consistent across different levels. Some teachers put this down to inadequate time to cover the curriculum and others blame policy makers for their constant change of the curriculum. Some teachers believe that students who are doing exceptionally well are independent and take learning the language seriously, as it would aid them in their future lives. However, other students view English language classes as less important for their future, hence they do not engage in learning the language.

1.3.2.1 CPD at Secondary School 181

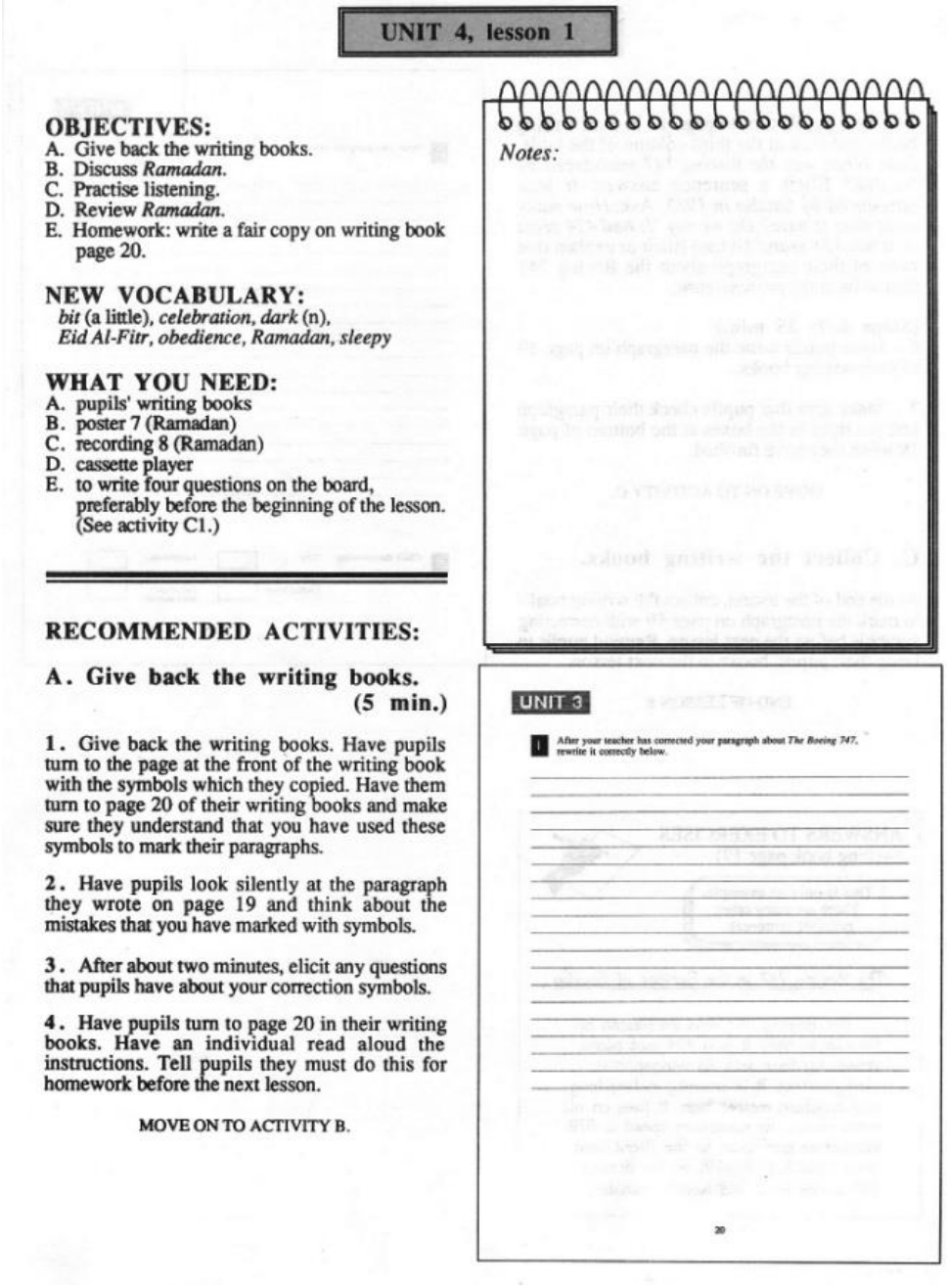
CPD opportunities are offered to all teachers in KSA through the Ministry of Education regional offices. Part of the Tatweer project is the development of English teachers' knowledge of English in general and pedagogy specifically. Other technology-related courses

are for basic generic applications. All training events are held in regional offices and are instructed in Arabic. These offices are also responsible for evaluating teachers' performance once a term through in-class visit sessions, inspection of teachers' log books, and through inspecting school reviews of teachers' performance. Teachers are tasked to complete a certain number of hours of training in order to qualify to be teacher inspectors or hold a managerial role in the school administration. Supervisors can demand that teachers who lack a certain knowledge base attend designated CPD courses. Such courses also provide promotion credit for teachers' positions and contribute to a yearly pay grade. The general view among the school population is that these CPD credit hours are part of the promotion process, and they must be attended. However, as we will see later in the thesis, courses on ICT tend to focus on basic technology and administration tasks, such as the MOE online portal for school administrators. Other technology-related courses focus on the training of using whiteboards, which are not available in all schools. The general opinion among teachers to whom I spoke to was that there was a mismatch between their needs for the training and the training offered by MOE. However, some teachers, as we will see later, have developed their skills in using technology in general and ICT specifically through online training sessions provided privately or by self-teaching. Nevertheless, more formal CPD is still necessary.

1.3.2.2 ICT at Secondary School 181

Most of the EFL teaching is teacher based, textbook oriented, and there is only a small window for ICT use. An analysis of a selected lesson from the teachers' book for the first intermediate level shows that a task-based language-teaching approach is used, in which learning is directed through drills and exercises. Most of the activities are student-centred, and most of the interaction is between the teacher and students where pair interaction is minimum. As we can see from the teachers' book (both in traditional and Tatweer schools) in figure (1.1) and (1.2), both eliminate the teachers' sense of individualism in choosing the

appropriate teaching aids, pedagogy, and general structure of classes. Almost all public schools are equipped with computer labs; nevertheless, the teachers' book guides him to use a tape-recorder and the blackboard. Although these were the traditional tools for teaching, the time has come to adopt a new digital method of instruction and delivery of knowledge. However, enthusiastic teachers have been trying to develop ICT use in the language classroom and as an example, in this school, EFL teachers have been responsible for maintaining a web page for their students, and some teachers are using social media tools to communicate with their students. In regards to facilities, there are four computer labs in the school, and as within the university context, they are being used heavily by computer science teachers. Overhead projectors are available in each classroom and some classrooms have computers for use by teachers, while other teachers use their private laptops or computers. As for the teachers' computer skills, all EFL teachers are computer literate while others are very advanced users of technology.



UNIT 4, lesson 1

OBJECTIVES:
A. Give back the writing books.
B. Discuss *Ramadan*.
C. Practise listening.
D. Review *Ramadan*.
E. Homework: write a fair copy on writing book page 20.

NEW VOCABULARY:
bit (a little), *celebration*, *dark* (n), *Eid Al-Fitr*, *obedience*, *Ramadan*, *sleepy*

WHAT YOU NEED:
A. pupils' writing books
B. poster 7 (Ramadan)
C. recording 8 (Ramadan)
D. cassette player
E. to write four questions on the board, preferably before the beginning of the lesson. (See activity C1.)

RECOMMENDED ACTIVITIES:

A. Give back the writing books. (5 min.)

1. Give back the writing books. Have pupils turn to the page at the front of the writing book with the symbols which they copied. Have them turn to page 20 of their writing books and make sure they understand that you have used these symbols to mark their paragraphs.

2. Have pupils look silently at the paragraph they wrote on page 19 and think about the mistakes that you have marked with symbols.

3. After about two minutes, elicit any questions that pupils have about your correction symbols.

4. Have pupils turn to page 20 in their writing books. Have an individual read aloud the instructions. Tell pupils they must do this for homework before the next lesson.

MOVE ON TO ACTIVITY B.

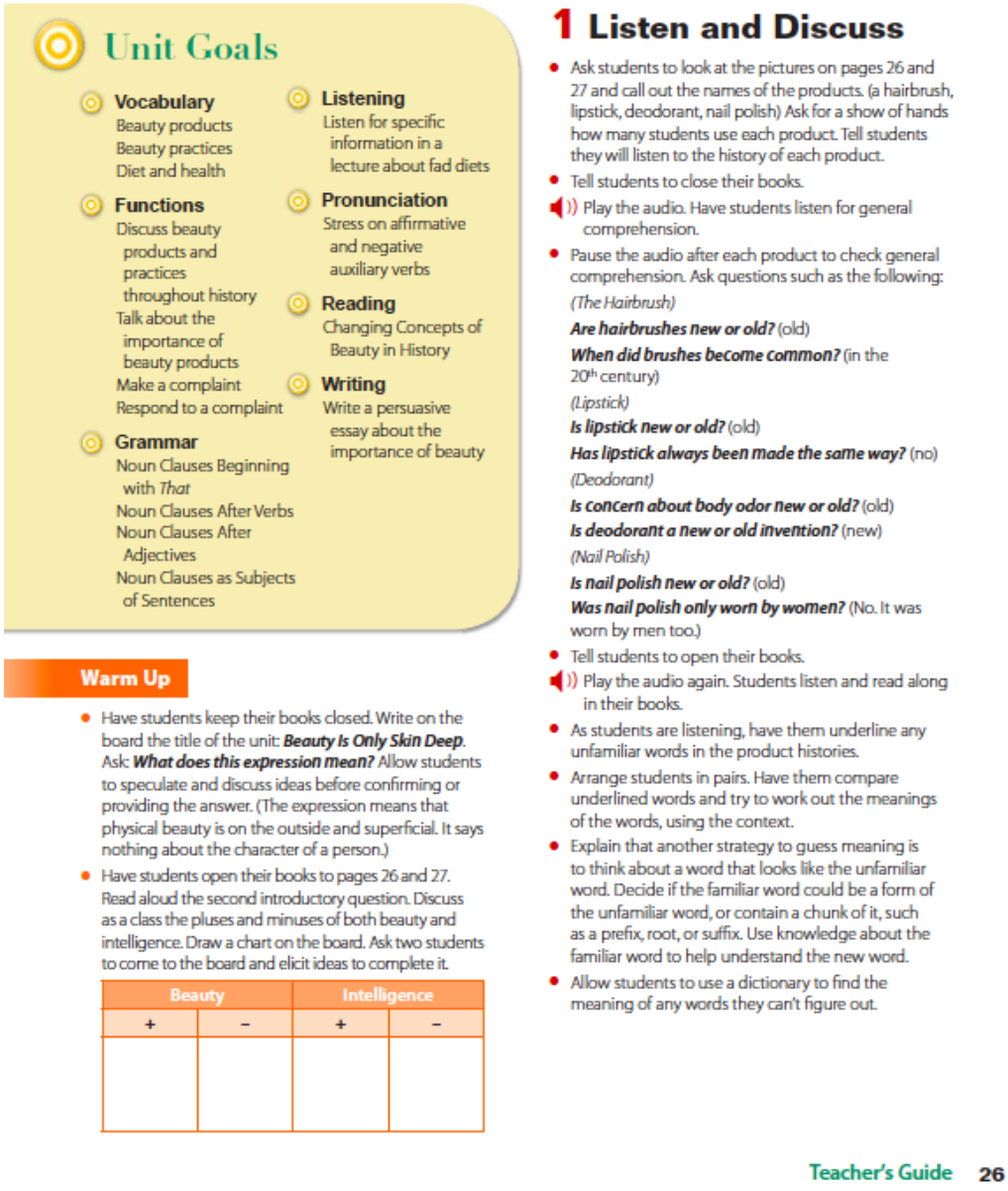
Notes:

UNIT 3

1 After your teacher has corrected your paragraph about *The Boeing 747*, rewrite it correctly below.

20

Figure 1-1. Secondary school teachers' book guidelines



Unit Goals

Vocabulary
Beauty products
Beauty practices
Diet and health

Functions
Discuss beauty products and practices throughout history
Talk about the importance of beauty products
Make a complaint
Respond to a complaint

Grammar
Noun Clauses Beginning with *That*
Noun Clauses After Verbs
Noun Clauses After Adjectives
Noun Clauses as Subjects of Sentences

Listening
Listen for specific information in a lecture about fad diets

Pronunciation
Stress on affirmative and negative auxiliary verbs

Reading
Changing Concepts of Beauty in History

Writing
Write a persuasive essay about the importance of beauty

Warm Up

- Have students keep their books closed. Write on the board the title of the unit: ***Beauty Is Only Skin Deep***. Ask: ***What does this expression mean?*** Allow students to speculate and discuss ideas before confirming or providing the answer. (The expression means that physical beauty is on the outside and superficial. It says nothing about the character of a person.)
- Have students open their books to pages 26 and 27. Read aloud the second introductory question. Discuss as a class the pluses and minuses of both beauty and intelligence. Draw a chart on the board. Ask two students to come to the board and elicit ideas to complete it.

Beauty		Intelligence	
+	–	+	–

1 Listen and Discuss

- Ask students to look at the pictures on pages 26 and 27 and call out the names of the products. (a hairbrush, lipstick, deodorant, nail polish) Ask for a show of hands how many students use each product. Tell students they will listen to the history of each product.
- Tell students to close their books.
- Play the audio. Have students listen for general comprehension.
- Pause the audio after each product to check general comprehension. Ask questions such as the following:

(The Hairbrush)
Are hairbrushes new or old? (old)
When did brushes become common? (in the 20th century)
(Lipstick)
Is lipstick new or old? (old)
Has lipstick always been made the same way? (no)
(Deodorant)
Is concern about body odor new or old? (old)
Is deodorant a new or old invention? (new)
(Nail Polish)
Is nail polish new or old? (old)
Was nail polish only worn by women? (No. It was worn by men too.)

- Tell students to open their books.
- Play the audio again. Students listen and read along in their books.
- As students are listening, have them underline any unfamiliar words in the product histories.
- Arrange students in pairs. Have them compare underlined words and try to work out the meanings of the words, using the context.
- Explain that another strategy to guess meaning is to think about a word that looks like the unfamiliar word. Decide if the familiar word could be a form of the unfamiliar word, or contain a chunk of it, such as a prefix, root, or suffix. Use knowledge about the familiar word to help understand the new word.
- Allow students to use a dictionary to find the meaning of any words they can't figure out.

Teacher's Guide 26

Figure 1-2. Tatweer school teachers' book guidelines

1.4 Significance of the Study

This case study is the first step to implement an ICT CPD in the context of EFL teaching in SA; therefore it will contribute to the quality of the academic outcomes, develop the delivery methods of the content, and provide an example of a CPD program that can be adopted. It also aims to contribute to the current literature on e-learning in the Saudi context. The theoretical significance of the study is in drawing on TPACK as a concept and contributing to a more developed understanding of ICT CPD. This study helps to fill a gap in the Arab world's literature, however it also contributes to the wider field of ICT CPD around the world. It further has a personal significance in that it would allow me to deliver what I have always criticized during my studentship in the English department and that is more creative use of ICT. As for students at the department and the school, I believe it would contribute in providing them with a high quality of education that best suits the 21st century and that respects their own development needs and preferences.

1.5 The Thesis

This first chapter has a) introduced the study, b) highlighted the genesis of the study, c) provided an explanation of the value and interest of the study, and d) given insights to the context. Chapter two explores the two areas of key concern for this study: ICT for EFL teaching and CPD. It provides examples of attempts to promote ICT locally and further afield and looks at the theorisation of the uptake of ICT. The chapter concludes with a definition of ICT CPD. Chapter three presents the methodology of the study and discusses interpretivism as an organising principle for this research. The design of this study is discussed and data collection methods detailed in this chapter. Pen portraits of the participants are also provided. The chapter concludes by summarising how the study followed a hybrid design. Chapter four describes the way that the ICT CPD events in this study were designed and provides data

from the needs analysis questionnaires. In chapter five, an analysis of the findings is given based on the evaluation framework, and a detailed analysis of each level of the evaluation is given. Chapter six discusses the findings of the study and addresses the research questions. This chapter highlights the findings in relation to the design and delivery of the CPD event and discusses possible impact in participants' attitudes and knowledge. It revisits the pen portraits of participants given earlier. It ultimately addresses the question 'can an ICT CPD have an impact on EFL teachers' practice?. Chapter seven concludes the study and includes recommendations for those interested in promoting ICT CPD. The strengths and limitations of the study are noted.

The thesis will now proceed with a literature review that addresses ICT use in education in general and in EFL teaching specifically, and teachers' professional development.

CHAPTER 2: LITERATURE REVIEW

This literature review primarily provides a conceptual and theoretical framework that relates to ICT, CPD, language teaching and learning, and the concept of ICT CPD. Following from this; a conclusion for relating the literature review to the Saudi context will be given. This chapter is divided to three parts: part one is focused on the concept of ICT CPD and how it is viewed as a catalyst for change; part two focuses on CPD and implementing change in the educational settings; and part three is to give an overview of the uptake of ICT through training.

Literature was accessed through online databases using search engines and specifying the search with key words. These searches were performed mainly in English, in which key words such as continuous professional development, lifelong learning, in-service training, technology use in education, computer assisted language learning and others were searched. The literature review began with a bottom-up process of reading in respect to the overarching concern of promoting ICT CPD and then creating a number of categories and themes around which to organise the review, categories such as CPD in schools, CPD in HE, ICT CPD in HE classified the literature. The nature of CPD as a vast field and the published work on CPD allowed me easily to identify key writers in the field, such as the published work of Day in the UK and Darling-Hammond in the USA. Key journals such as the *Journal Of In-Service Education, Education For Teachers,* and the *Computer Assisted Language Learning* journals were informative. Searches were also done in international journals such as the *Malaysian Journal of Educational Technology* and *The Turkish Online Journal of Educational Technology* (TOJET), which included studies relevant to ICT CPD in the developing countries, including Turkey, Malaysia, and the Arab world.

A further literature review search was conducted in Arabic, which confirmed that there was not much written about ICT CPD in Saudi. In fact what literature was available was mainly

related to e-learning, which included ICT as a category of e-learning. To find more on ICT CPD in Saudi I contacted an academic in Saudi who further recommended articles that are in Arabic and not available in English or over the internet. These articles are MA dissertations and PhD thesis conducted by Saudi candidates, which contribute to the fields of ICT and CPD, were also examined. A 'snowballing' process was also used to follow up references from examined articles to other potential articles.

The nature of ICT CPD research in the literature available confirmed to me that the concept is difficult in a number of different ways. First the problematic nature of ICT use in education in general seems to recur in different settings and across contexts as seen, say in studies in both UK higher education (e.g., Kirkup & Kirkwood 2005) and Chinese higher education (e.g., Hu & McGrath 2011) and studies in or of schools (e.g., BECTA 2004 in the UK) and Al Shmrany & Wilkinson (2014) in Saudi Arabia. This reproduction of findings suggests that ICT introduction faces similar obstacles and raises tensions whenever it is implemented. Therefore, I treated the literature on ICT use and introduction in higher education and on a school level as sensitising me to issues across sectors. Second, the literature on ICT use for different subjects, for example, Science, Mathematics, and MFL, yielded a similar pattern of concerns. Hence while the literature on English teaching was of prime concern for this study, though its use in other subjects was briefly examined and found relevant - for example, Joubert (2013) recently examined similar constraints in using ICT in maths teaching as often reported for MFL. Finally, for reasons of space I did not look in depth at CPD in different domains, for example, the field of work-place learning, but a brief exploration suggested that there were similar issues, for example Billet (2001) shows a differentiated response to invitations to engage in workplace learning which parallel the differentiated take up of ICT in education. All this indicated that the literature review is not a straightforward process, as often presented. While this chapter was developed at the start of the thesis, it was updated

throughout the writing of the thesis as different themes from the data analysis and discussion chapters emerged.

2.1 ICT CPD: Potential and Problems

The development of computer technology has not only affected the way we live but also the way we learn and teach. New technological advances have changed the way we deliver knowledge to students in all levels of education. Recently, we have witnessed a shift from the more static ICT tools to interactive forms of social web pages, for example: Wikis, Blogs, and content sharing applications that are often referred to as "Web 2.0" (Gouseti, 2010), although the term is now considered dated. Due to these interactive forms, EFL learners can now engage in a range of communicative activities online. Online based platforms and virtual learning environments (VLEs) are widely used applications to serve students around the world. However, such introduction has faced many obstacles. One of these has been the teachers' lack of confidence in using such technologies and the need for well-designed training programs to develop teachers' competence, knowledge, and skills. In light of this, there have been attempts in many countries to develop teachers' competence in using such technologies. For example, the SEED (2000) report suggest that school CPD initiatives in Scotland should be reviewed and developed to include training opportunities to update teachers' competences in using technology in the teaching context. In Greece, Fragkouli & Hammond (2007) examined the development of teachers' in-service programs and implemented a development programme to cultivate teachers' knowledge of ICT and its application in teaching. However, in many cases it is difficult to separate the desire to encourage teachers' use of technologies with that of changing pedagogical understandings and practice; this may or may not be a desirable goal, but it is certainly an ambitious one.

The following sub-sections will give a general picture of the complexity of change and ICT use. Also, the value of using ICT in education will be highlighted through examining both pessimist and optimist ICT rhetoric. In addition, constraints to ICT use will be examined, internal and external barriers will be reviewed, and attitude and beliefs regarding ICT use and how they can act as a constraint to teachers' adoption and use of technologies in their teaching will be highlighted. This will be followed by sections on CPD. In these sections, CPD will be defined and different models of professional development will be examined, the concept of online CPD will be introduced, and CPD for EFL practitioners will be discussed. Following that, this chapter will shed some light on the concept of ICT CPD along with examining some principles and experiences reviewed from the relevant literature. The last section of this chapter will address the issue of theorizing the uptake of ICT with a summary to conclude the literature reviewed in this chapter

2.1.1 Change and ICT

One challenge for those supporting ICT is that the introduction of ICT has been closely associated with curriculum change more or less since its first introduction into education (Dias & Atkinson, 2001). Although primarily relevant in the context of maths teaching, Papert (1984, p.2) provides a benchmark for those advocating educational change, for according to Papert "the computer is going to be a catalyst of very deep and radical change in the educational system" as it will give more opportunities to change the conditions of learning by providing new relationships between knowledge and learning. Picking up this theme, Watson (2001) argues that ICT use in general should not be viewed only as a catalyst for change but also as requiring changes in learning approaches, teaching methods, and ways of accessing information.

However, Fisher (2009) argues that it is not easy to change the teachers' well-established pedagogical practices, since they have been established over time and enable teachers to do their jobs, hence proving technology does not always guarantee its utilization in the classroom. In the same vein, Hoban (2002) pointed out that establishing ICT use is complex and would need to be rooted in support with the teachers' social and working context. Hennessy et al. (2005) argue that the more-experienced teachers are still most sceptical about changing their pedagogical approaches. In addition, John (2005) argued that school subject cultures are built on deep traditions, making it extremely difficult for teachers of a certain sub-culture context to abandon their pedagogy. As a consequence Ertmer (2005) proposed three 'strategies' to promote change in teachers' beliefs about the teaching and learning with technology: a) personal experience: the principle of this strategy is based on the idea that beliefs are the result of teachers' personal experience and assumes that change in experience will lead to change in beliefs. This calls for presenting teachers with hands-on experience of the technology being introduced. The underpinning notion of this is based on Guskey's (1986) remarks that change in beliefs follows change in practice; b) vicarious experience: this is based on modelling of technology use and observation of use by a novice teacher, where a 'role model' teacher is seen as a source of information and experience in using technology, in this case technology use, and how classroom behaviour can increase the observers' confidence and promote simulation of the same actions carried out by the role model; and c) social-cultural influences: where this strategy assumes that teachers' beliefs are the results of experiences when interacting within their system of power and societies. In that, change of practice can be fostered in small communities that share a similar interest, which Ertmer labelled as a "network of computer-using teachers." Ertmer's (2005) strategies help address the tension in changing teachers' pedagogical beliefs as well as their beliefs toward using technology and ways of promoting change. However, there is something taken for granted

about the value of ICT and an assumption that teachers will share this perspective. Fullan (2007) helps us to understand change in that he argues that change of practice can occur at many levels, and he further points out that innovations in the classroom are multidimensional. He sees three components in implementing any new programme or policy: the possibility of using new or developed materials, the possible use of new teaching approaches, and the possible alteration of beliefs. We could notice that all of the three aspects of change are necessary together when ICT is integrated. Alternately, Fullan (2007) points out that there is a tension running through the educational-change literature between the fidelity and evolutionary prospective. The fidelity perspective assumes that an already developed innovation exists, and the task is to get individuals to implement it in practice. Opposed is the evolutionary perspective, which stresses that change is often and should be the result of adaptations and decisions made by the users as they work in a new program. It is not at all surprising that many cases of ICT integration have been disappointing, as they are often based on top-down design rather than evolutionary perspective. Developers initially set out with high optimism, but the complexity of introducing change has not been understood. Drenoyianni (2006), for example, believes that the rhetoric related to ICT revolves around enriching the learning experience, such as enabling learners to achieve novel ways of thinking, learning, making meaning, and communicating with the world through use of ICT. However, this is not always the case, as we will see in the following section; a pessimistic rhetoric questions the value of ICT in the educational setting and its ability to promote or foster change.

2.1.2 Rhetoric of ICT and the Value of ICT Use

The literature tends to see the problem of take-up as explained by the constraints of context rather than the nature of the technology itself. Lack of time, support, training, positive

teachers' attitudes, and teaching beliefs, as we will see later, have been reported by a number of studies as constraints on ICT use within educational institutes. In an influential study in Silicon Valley schools by Cuban (2001) technologies were found to be "oversold" by policy makers and investment companies and were "underused" in the teaching context by teachers and students. Later, Buckingham (2007) stressed that the Internet and technology use pose a danger to personal privacy and created more inequality and commercial exploitation. Selwyn (2014) pointed out that there were commercial interests behind the promotion of ICT. The pessimistic rhetoric has viewed technology use in the classroom as lacking tangible evidence of its 'promised' ability to promote change and development. Reynolds et al. (2003), for example, concluded that there should be further examination of exactly how ICT can improve education. They also point out that policy makers should lower their expectations on the potential impact of ICT; as such, promised impact on students' achievements is weak. Munro (2010) argues that ICT has developed teaching and learning practice in general but has failed to transform education. In the same line of argument, Hammond (2013) asserts that ICT has provided an illusion of curriculum reform, and while it may appeal to some teachers its use might not be aligned with the policy makers' proposed rationale. Furthermore, there is still not enough research evidence that ICT and technology use in education can have an impact on the teaching and learning context. For example, Conlon and Simpson (2003, p.137) concluded their study with the pessimistic assertion that use of computers in the classroom is "peripheral to the learning process." Similarly, Law et al. (2008) report that ICT practices by teachers are still occasional and only for supplementary activities.

Optimist rhetoric sees technology and ICT as having an impact on practice and pedagogy. For example, Lorenzo et al. (2007), writing about ICT use among college students in the US, argue that through ICT use, students not only consume information but also create and recreate it as ICT supports their creativity and provides them with an open source of material

and a platform for both individual and collaborative learning activities. Blin & Appel (2011) were able to conclude their study of EFL learners' use of computer-supported writing activities by pointing out that such use allowed the learners to engage in different modes of interaction. Although more related to science education, Webb (2008) reports that ICT use allows students to understand complex science concepts, which are difficult without such use, while Somekh et al. (2006), reporting on the value of ICT across different levels of education, points out that students in higher education viewed ICT as essential to their learning. As for the value of using ICT in the EFL context, small-scale and large-scale studies have made the case based on the motivation that ICT seems to provide for language learners (Coombes & Fion 2007; Keller & Suzuki 2004; Sheroff, Vogel); access to authentic material (Herrington 2006; Herrington, Reeves & Oliver, 2010; Miller 2011), the benefit of collaboration in the form of synchronous and asynchronous communication (Cullen et al. 2013, Roberts 2005), multimedia and its ability to increase the quality of learning and cater for different levels and learning styles (Hollenbeck & Hollenbeck 2004; Lu & Liu 2011), the opportunity to guide learners choice in their work and go at their own pace and promote learner autonomy (Khoosf & Khosravani 2014; Reinders & Balcikanli, 2011; Sockett & Toffoli, 2012). As far as learner autonomy is concerned, Khoosf & Khosravani (2014) examined how using e-mail portfolios impacted EFL learners' autonomy and classroom practice by enhancing their engagement and interaction in communication. In the Turkish context, Kocoglu (2008) reported similar results regarding e-portfolios and their potential in the EFL teaching process, as students valued them for the level of collaboration they enhanced. The connectivity of synchronous and asynchronous ICT tools and the role they play in developing collaborative environments for language learners has received a lot of attention in the field of EFL teaching. For example, studies by Mahfouz & Ihmeideh (2009); Wu & Hsu (2011); Yunus et al. (2011) have all examined how such connectivity resulted in

developing language learners' writing and reading skills, confidence while speaking English, and provided them with the means to practise the language with native language speakers. Yunus et al. (2011), for example, examined how ICT tools generally, and discussion groups specifically, can facilitate collaboration in writing tasks. They found that the students used the discussion groups created in an online platform for brainstorming regarding the task at hand. One important aspect of connectivity is offering authenticity for language learners when connecting to the real world. Bell (2005) believed that online newspapers and voice/video podcasts are sources of authentic material that are richer in context than most classroom-developed material. In an experimental study of Malaysian students, Shing & Yin (2014) reported that the participants in their study developed intonation, stress, and pause skills after being exposed to an authentic source of the language compared to the control group that did not develop such skills. (Mayer 2001) argues that the variation of multimedia formats also contributes significantly in accommodating different learners' language levels and learning styles. It is through such use that teachers are able to provide students with opportunities to experience multi-sensory input through text, graphs, sound, and video presentations of the target language. In a recent study, Mayer et al (2014) also found that using video material allowed students to associate the content (pictures and scenes) to the narrated article and this association developed their skills and in turn students achieved higher in comprehension tests.

In 'developing' countries, including SA, in which this study takes place, a number of studies have reported, in similar ways, on the value of ICT to language learning. For example: Hu & McGrath's 2011 study in China investigated EFL teachers' attitudes towards ICT and the contribution of ICT to the language classroom; similarly Park & Son's 2009 study in Korea concluded that ICT can offer students a variety of language input and expand students' learning experiences in real and authentic contexts. In the Saudi context, Al Abdulkareem

(2008); Al Huthefi (2005); Khouj (2011); Samman (2003) and Al Otaibi (2010) reported on the usefulness of using ICT for teaching EFL; for example Khouj (2011) stated the value of using the Internet to EFL teaching and learning in order to support collaboration among students. In her quantitative study, Al Abdulakreem (2008) investigated the current use of ICT in SA and showed that within her study population, teachers had adequate ICT knowledge skills and were able to set up websites, including a comments page and a blog for students and parents. The results of her study also show that the staff members' awareness of use was high, and some sought to engage their students in collaborative language learning activities. The teachers' perception was that ICT had enriched students' learning environment not specifically in EFL but also in other subjects. Al Huthefi (2005) addressed the issue of ICT use and the possible impact on intermediate level students' achievements in Saudi schools. His research findings indicate that the use of ICT had a positive effect on the students' achievements. Most recently, Abanomey (2013) measured the impact of using technology on higher education EFL students' reading comprehension and concluded that such use benefited the students' reading skills as they develop strategies and techniques and motivated them towards the task on hand. After examining the rhetoric of ICT there are still some critical questions to be answered. For example, who or what is responsible for difficulties in uptake, and what is the role of teacher agency in the process? In the following sections, constraints to ICT use will be discussed and highlighted.

2.1.3 Constraints on ICT Use

The literature points to a series of constraints on practitioners' use of technology in their teaching practice: external or first-order constraint relates directly to the context, including: access, time constraints, facilities, financial problems, curriculum issues, technical support, training and development programs, and pedagogical considerations. Internal or second-order

barriers that relate directly to teachers include teachers' perspective, attitudes, beliefs about the teaching and learning context, as well as attitudes towards computer use, motivation, and awareness of the potential benefits of using computers in language teaching and learning. Although different characterization of the barriers have been made (e.g., Ertmer 1999; Pelgrum 2001) they all tend to express all barriers faced by practitioners when using technology in their teaching practice. For example, Ertmer (1999) classifies barriers to ICT use into: first-order barriers that are on an institutional level and second-order barriers that are on a personal level. Whereas Pelgrum (2001) classifies such obstacles to material and non-material conditions, for the purpose of this research internal factors will describe all teacher-related barriers, whereas external factors will describe all context-related barriers.

2.1.3.1 External Barriers

According to the literature, external factors are more related to the surrounding environment, in which access (e.g., Becta 2004, Hammond et al, 2009), time constraints (e.g., Cuban et al. 2001; Egbert et al 2002; Khouj 2011), lack of facilities (e.g., Becta 2004, Mumtaz 2000); administrative support (Osika 2006; Watson 2001), curriculum considerations (Al Ruz & Khasawneh 2011; Al Nifessah 2007), technical support (Cuban et al. 2001), teacher development programs and financial issues (Lam 2000; Shin & Son 2007) all affect the implementation of computers and ICT in the teaching context.

Accessibility to computer resources at school and home remains one of the most significant barriers to ICT use in education. Cuban et al (2001) note the lack of access to technical facilities and the availability of computers when needed as being a constraint to technology use. Hammond et al (2009) point out that such difficulties can hinder teachers' use of technology and access to facilities as a barrier is linked with other external barriers. For example, Lam (2000) reported that financial problems had a direct impact on the

implementation of computers in the classroom, if budgets failed to provide the educational institute with the adequate equipment. Teachers refrained from using ICT if facilities did not accommodate their needs in terms of the number of computers available. Financial problems generate other complications, such as inadequate Internet connections, availability of new versions of software, renewal of hardware, and also the needed technical and administrative support for running computer facilities. Shin & Son (2007) agree with the findings of Lam (2000). They support the latter's argument about access problems caused by financial barriers and their effect on computer classroom implementation; they also add lack of technical support as a barrier to such implementation. Cox et al. (1999) and BECTA (2004) also note the cost of meeting continuous maintenance needs. Hennessy et al. (2010) too reported that inadequate facilities, poor Internet connection, and lack of electric power prevent ICT use in schools. In the Saudi context, Al Wehaibi et al. (2008) reported that university teachers regarded Internet connectivity as a main barrier to their ICT use in the teaching context.

As far as time is concerned, in their study on technology use by teachers in Silicon Valley schools, Cuban et al. (2001) indicated that teachers did not have enough time to fit technology use into their teaching routines. Similarly, Egbert et al. (2002) found that participants (teachers) in their study wanted more time, resources, and support to enable technology use in the classroom. Responses to the BECTA (2004) survey of barriers to ICT use also indicated time as a constraint on the use of ICT in classrooms, and some specific dimensions of time included: time to deal with technical issues, time spent preparing material, and time spent on practicing using ICT tools. In Saudi Arabia, Al Nifessah (2007) explored current use of ICT in schools and indicated that there is a considerable amount of curriculum and time constraints. In a study of EFL teachers' use of ICT in Saudi Arabia, Khouj (2011) reported that teachers felt under pressure to 'cover the syllabus' and the use of ICT might have been seen as a

distraction. Similarly in Saudi Arabia, Ageel (2011) reported busy teaching schedules as being a barrier to ICT use.

As for support, Osika (2006) pointed out that the successful implementation of computers in the classroom in distance-learning courses required support across the whole institute, including faculty, students, and technology support. Lam (2000) discussed administrators' attitudes and examined the role it played in the implementation of computers in the classroom. It was found that insufficient material was a barrier to ICT use. Brand (1998) argued that in addition to a culture of encouragement, teachers should be able to access development programs to help in establishing flexible schedules and promote a community of inquiry. Cox et al (1999) too reported a lack of institutional support, as seen in leadership, planning, and the involvement of teachers in implementing the change, as a barrier to computer adoption in the educational institute. Al-Ruz & Khasawneh (2011) also reported leadership issues and support as a significant barrier. They conclude in their study of Jordanian teachers' adoption and technology integration that school-structure and the presence of a support figure are an influential factor and have a direct effect of ICT adoption

As for teacher-training programs, an early and still influential paper by Veen (1993) and Vanfossen (1999) note the lack of training tailored to teachers' existing computer skills and a lack of focus on the integration of technology in the classroom. Becta (2004) also reported a lack of pedagogical training, lack of skills training, and lack of ICT development programs as barriers to ICT integration in the MFL classroom. In the Saudi context, a number of studies examine how training was a significant barrier to ICT use among EFL teachers and teachers of other subjects. In his study of ICT use to teach natural sciences in higher education, Al Shahrani (2010) investigated the requirements of establishing an e-learning environment in higher education, by looking at the students' needs and expectations, teachers' use and

understanding, curriculum constraints and flexibility. He received responses from 250 staff members and felt a need to establish a base knowledge for e-learning in higher education, provide courses to equip staff members, and develop pedagogy. Similarly, Al Ghamdi (2008) interviewed 108 teachers of mathematics in order to identify their knowledge and pedagogy needs to engage in e-learning environments. He concluded that teachers' experience and their qualifications played a major role in the adoption of an e-learning environment. The findings showed that math teachers were aware of the potential benefits of using ICT but they showed less awareness as to e-learning usage and recommended more CPD courses to be offered for teachers. Similarly, the study revealed that there was no statistical significant correlation between e-learning use and other factors such as age, qualifications, and number of CPD courses attended. Again in the field of Math education, Al Sufyani (2008) looked at teachers' and teachers supervisors' views. Her research was concerned with private and public school teachers, and teachers' supervisors, and showed that years of experience, and job statues collate low to better ICT use; however, age, qualification and number of CPD courses attended did correlate to high e-learning usage.

In a wider context, the literature suggests that there should be a distinction between teachers' training and continuous professional development. As we will see later in this chapter, teachers' training has been associated with intentional attempts to develop teachers' professional knowledge, attitude, and beliefs; whereas professional development addresses the wider issues of developing teachers' understanding and role in the learning process and has taken in broader notions of informal learning

2.1.3.2 Internal Barriers

Internal factors, generally, are associated with teacher-related barriers, attitudes and beliefs towards computers, confidence levels when dealing with computers, and beliefs about the

teaching-learning process. Becker (2001) pointed out that teachers' beliefs about the process of instruction and teaching were highly influential to their use of computers in the classroom, and their computer educational use can be understood by identifying their educational beliefs. Cox et al (1999) found that teachers who avoid using computers are unwilling to change their beliefs about teaching and have a low level of personal change-management skills. Hermans et al. (2008) reported that teachers' beliefs influence their ICT use in the classroom, and that traditional approaches to teaching have a negative influence on ICT adoption. Sadaf et al. (2013) reported that teachers' intentions to use ICT are closely related to their beliefs regarding the teaching and learning process, and users of ICT might seek to develop students' engagement. Inevitably, a key factor for the successful integration of computers in the classroom is the ability of the individual to exploit the computer's usefulness (Dusick, 1998). Several studies (e.g., Atkins & Vasu, 2000; Al Shmrany & Wilkinson 2014; Bax 2003; BECAT 2004; Lam 2000) show that teacher confidence levels in using computers will affect the integration of ICT in classrooms. For example, Clark (2000) and Lam (2000) investigated computer anxiety, which they refer to as technophobia. Computer anxiety may be a direct result of low self-confidence, low expectations of the outcome, or lack of motivation, all or some of which will influence teacher computer acceptance in the classroom. In different studies, BECTA (2004), Jamieson-Proctor et al. (2006), Russell & Bradely (1997), Henderson (2014) and Pelgrum (2001) it was shown that teachers with low confidence levels avoided using computers for fear of embarrassment in front of their students and colleagues. As such, teachers with low confidence levels will avoid using computers if they sense that their use will allow the classroom to get out of control. A study by Lee & Son (2006) pointed out that acquiring confidence is, not surprisingly, experiential and reinforced by practice; if teachers use computers for teaching and learning experiences, they are more likely to be confident in using computers. In their study of Australian teachers' use of ICT, Jamieson-

Proctor et al. (2006) reported that teachers' low confidence levels, ICT skills, and resistance to change were all barriers to successful integration of ICT in education. In the same line of argument, Jones (2004) reported that low self-confidence as a barrier to ICT use was closely related to other barriers such as: amount of training available for teachers, access time, and technical support provided. As for teachers' knowledge and skills, Debski (2000) asserted that even if teachers believe that the integration of computers in the classroom has a potential value, they do not always know the way to make this happen in the language classroom, and as a result they will avoid using them. Lam (2000) points out that the degree to which teachers are aware of how to utilize computers in their language classroom will affect their willingness to use it. In other words, teachers might not be techno-phobic but lack sufficient knowledge of how to utilize computers in the language teaching-learning environment. Goktas et al (2009) reported that barriers to ICT manifest through lack of ICT skills and knowledge of how to use them. As far as teachers' motivation is concerned, it has been reported as a significant barrier to adopt ICT and promote change in a number of studies. Snoeyink & Ertmer (2001) pointed out in their study that teachers lacked motivation to change teaching methods and as a result they avoided computer use. However Cox et al. (1999) concluded that teachers who resist change are not rejecting change as a concept but lack fundamental tools necessary for that change to take place. In general terms, the literature points out that change is resisted as a result of teachers' teaching beliefs and lack of evidence of the value of ICT use in the teaching and learning process. Newhouse (1993) found that some teachers view computers as nonessential and supplemental to their teaching, and that they do not believe that computers have a useful pedagogical objective. Similarly, Yuen & MA (2002) investigated the perception of some teachers in which computers do not enhance learning, and they associated such perceptions with learning-teachings beliefs. As concluded in their study, Baylor & Ritchie (2002) found out that teachers who are willing to change and

adopt new instructional innovations in their language classrooms, for example teachers desiring to promote their students' high-order thinking skills were more likely to use ICT. They argue that the development in the learners' thinking skills was a direct result of the teachers' implementation of innovative instructional methods that fostered these skills. They also asserted that the way teachers use computers would define its success.

Where does all of this leave us? The literature shows that introducing ICT in classrooms is very difficult and issues of use are complex and involve different issues and solutions. Recommendations have been given to increase the use of ICT through teachers' development programs, development in hardware and software and support by policy makers and institute leaders (Tondeur et al 2008; Hammond et al 2011; Pinto et al 2013; Ghamrawi 2013). However, these provide answers to the "how to" questions but underplay the fundamental issues of educational change. The literature is doubtful that ICT use enriches the learning process; but is it the answer to the problem of educational change? Is educational change bound to follow the use of ICT tools and application or is something more intentional but also more subtle needed? Can change be imposed on education or are teachers and only teachers the key to unlocking change? Beliefs and attitudes appear to be important, and they are examined in a more detail below.

2.1.4 Beliefs and Attitudes

Thomas & Zananiecki (1918, p.19) mention that "by attitude we understand a process of individual consciousness which determines real or possible activity of the individual counterpart of the social value, activity, in whatever form, is the bond between them." Another early attempt defining attitude is offered by Morgan (1934, p.47) who claims attitude is "literally mental postures, or guides for conduct to which each new experience is referred before a response is made." Roberts & Jowell (2008) argue that all of the definitions mentioned above contain helpful suggestions in defining attitude, but each lacks the ability to

distinguish between attitude and habits. According to Allport (1935, p.806) attitudes are "a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related." What we can understand by the definition is that attitudes reside in the private experience of an individual; therefore, we cannot directly experience one another's attitude. Also, we may understand that each individual was not born with their attitudes towards a particular object but acquired them through direct or indirect experience with that particular object. However, clearly attitudes do not only motivate the individual to act in a certain way but also guide the individuals and directs them to act in an orderly and coherent manner.

Attitudes are regarded as being acquired and are not innate, and therefore can/will be influenced by other attitudes and factors. Therefore, an attitude stands in relation to other attitudes and other influences, whether these influences are caused by the situational setting or the personal context. Social scientists often have assumed that responses that reflect evaluation and therefore express peoples' attitudes should be classified into three different categories: cognitive, affective, and behavioural (Kats & Scotland, 1959; Rosenberg & Hovland, 1960). Evaluative responses of the cognitive type are thoughts or ideas about the attitude object. These thoughts are conceptualized as beliefs, where beliefs are the links that individuals tend to make between the attitude object and attributes (Fishbein & Ajzen, 1972).

When addressing teachers' attitudes to ICT use, the literature points out that such attitudes are linked to other barriers to ICT use. For example, BECTA (2004) links teachers' negative attitudes to ICT use to their perception of the value of such technologies in the classroom environment. Hennessy et al. (2010) found too that some teachers will avoid using ICT as they did not believe it could have an impact on the teaching and learning context. On the other hand, Al Zaidiyeen et al. (2010) points out that there is a positive correlation between

teachers' positive attitude to ICT and ICT use for educational purposes, indicating that there is a link between positive attitudes and greater use of ICT in teaching. It is interesting to note as well that in the Turkish context, Tezci (2010) examined the relationship between teachers' attitude to ICT use and other factors and concluded that there was a clear link between attitude to ICT use and knowledge of ICT, in that the more knowledgeable teachers are the more likely they will have a positive attitude regarding ICT use. Also, Teo et al (2008) found a positive correlation between teachers' attitudes to ICT use and their level of confidence. As for beliefs and computer use in general, Tondeur et al. (2008) conducted a study to examine teachers' pedagogical beliefs and computer use and found a link between teachers' adoption of constructivist and traditional approaches to teaching and their computer use. As for ICT use, they point out that use is mediated by teachers' beliefs about teaching and learning and confirm the hypothesis that teachers' pedagogical reasoning can determine why teachers integrate ICT in their teaching. In the same vein, Hermans et al. (2008) found a positive effect of teachers' constructivist teaching beliefs on classroom computer use and a negative impact of traditional teaching beliefs on classroom computer use. However, Somekh (2008) argues that ICT use and pedagogical change cannot be isolated from the wider context where ICT is used. For her, teachers' ICT use depends on a number of factors, including: teachers' beliefs, attitudes, confidence, and competence with ICT. She also states that teachers' should not be solely blamed for the lack of ICT integrating and the transformation of pedagogy, as policy makers and evaluators have failed to understand the complexity of pedagogical and educational change. Recognising that much of the research on ICT integration has revolved around teachers' resistance to change, Somekh (2008) questions initiatives based on a deficit model of change and argues instead for a more teacher-centred approach. This leads to a discussion below of the concept of CPD and how CPD has been envisioned.

2.2 CPD

The need for professionals to be up to date with developments across different disciplines has increased the interest in CPD and even in some cases regarded them as part of the code of practice (for example in medical science and engineering). The field of education and language learning is not different, in that there are demands to develop teachers' in general, and language teachers, specifically, skills and knowledge. Such demands have transformed into development policies that require teachers to engage in an on-going professional development throughout their teaching carrier. For example, in Finland, Sahlberg (2013) reports that the Finnish Ministry of Education has addressed the issue of teacher education by putting forward a policy providing systematic professional development for all teachers and increasing research on teachers' education. Without a doubt such legislations only confirm the interest for better understanding and supporting teachers' professional development.

In trying to define CPD, the literature provides a number of different perspectives. However, the common perception of CPD is associated with attending courses and formal training events. Guskey (2000, p.16) for example defines CPD as: "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." However, Friedman & Philips (2004) point out that there is an emerging paradigm that shifts professional development from the practice of attending courses and training to a lifelong learning process. Supporting this view, Villegas-Reimers (2003, p.12) argue that CPD "is a long-term process that includes regular opportunities and experiences planned systematically to promote growth and development in the profession." She also stressed that this "new image" of CPD is different than in-service and even seen as a new paradigm of CPD. In spite of the difference of emphases, there is an agreement that CPD is any action

undertaken by teachers to develop their skill and knowledge, in order to promote positive and successful teaching outcomes. However, some have argued that professional development is a synonym for in-service training and staff development training (for examples, see Shaw 1995 and Dean 1991). Craft (2002) also reported that CPD, professional development, and in-service training are terms used to describe activities that contribute to teachers' learning after their initial training. Friedman & Phillips (2004, p.362) added a number of claims for professional development that are evident in the literature: 1) lifelong learning for professionals, 2) a means of professional development, 3) a means for individual professionals to ensure measures of control and security in the often-precarious modern workplace; 4) a means of assuring a wary public that professionals are indeed up-to-date, given the rapid pace of technological advances; 5) a means whereby professional associations can verify that the standards of their professionals are being upheld; and 6) a means for employers to garner a competent, adaptable workforce.

Day (1999, p. 4) offers a wider and increasingly cited definition. For him, professional development

'consists of all the natural learning experience and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school, which contribute, through these, to the quality of education in the classroom. It is the process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purpose of teaching; and by which they acquire and develop critically the knowledge, skills, and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues throughout each phase of their teaching lives.'

From this definition, it is clear that the common perception of CPD is a restricted one. Day (1994, p.4) points out that teachers should 'develop critically knowledge [and] skills,' in other words his definition begins from the teacher and the teachers' agency. The teacher has both a moral and practical interest in CPD. CPD is not something done to the teacher but something the teacher does. The teacher is expected to exercise judgment rather than be told how to do it. Day (1999) further raises the issue of quality in teaching. In his definition, he describes how teachers' personal attitudes, awareness, and development contribute to the development of teaching quality. This definition of CPD has considerable importance in the context of developing ICT CPD as a concept, in that it raises issues of agency and attitudes, which will be later discussed in theorizing the uptake of ICT through CPD. Across different professions and from the different definitions, it is noticeable that the corner stone for almost all of the definitions is that CPD is a continuous pursuit of an individuals' knowledge and skills through their career. In a broader scene, CPD is the development of an individual's knowledge and practice skills after their initial training to their retirement. This development includes the process where professionals acquire new knowledge and skills, continuously develop themselves, and reflect on their practice. In this thesis, CPD is viewed in accordance with Day's (1999) definition, and is regarded as encompassing in-service training and teacher development perspectives.

2.2.1 Models of CPD

In the literature, there are a range of CPD models and a number of proposed frameworks. Kennedy (2005) highlights that these frameworks are primary focused on the perceived purpose of such models. As you will see below, models are distinguished by different characteristics, including the level of autonomy it allows for teachers and divide of power between policy makers and providers of CPD. When examining CPD from different

dimensions, Fraser et al. (2007) suggest a combined framework of three different models, which includes the three aspects of professional learning suggested by Bell and Gilbert (1996), Kennedy (2005) spectrum of the purpose of CPD and Reid's (2005) quadrant of teacher learning.

Kennedy (2005) proposed a continuum that characterises the professional learning opportunities based on the precise purpose of CPD model as: transmissive, transitional, and transformative. Models of CPD that rely on teachers' development through external delivery by an expert are characterised as transmissive. This type of CPD focuses on the technical aspects of the teaching profession rather than issues related to beliefs, values, and attitudes towards the teaching profession. Transitional models depend primarily on form and philosophy, and can support either a transmissive or transformative agenda. As for the other end of the continuum, transformative professional learning opportunities imply a stronger link between theory and practice, and awareness of the political and professional context, leading to a wider perspective of the elements that should take roles in the professional development.

Based on this continuum, Kennedy's (2005) identifies nine models of CPD including the training model, which has been the dominant model of CPD around the world and as the name implies is based on the traditional training method. Most of the criticism of this model is due to its lack of connection to the classroom context. However, the training model received attention based on its ability to be compatible with the standards-based view of teachers' development. The award-bearing model is based on completing a programme of study, which is administrated by an awarding body. This model has faced a great deal of criticism for being more 'academic' than 'practical' and lacking the links between what is being thought of as a professional development study and the real classroom practice. The

deficit model and the standards-based model are similar in their concept in that the former addresses a specific deficit in teachers' performance, and the latter sets a connection between teacher development and students' learning. The aim of both models is to improve educational outcomes. Both the cascade model and the coaching/mentoring model involve peer-to-peer collaboration. The cascade model involves some teachers attending CPD programs and then cascading the content of the programme to other colleagues. The coaching/mentoring model relies on a one-to-one relationship between a novice teacher and an experienced one. On a broader scale, relationship between more than two people may constitute a community of practice, in which mutual support and development occurs. One successful community of practice may be a formal and direct relationship between practising teachers and teacher educators, but the sharing of knowledge and reaching agreement on procedures and actions are important stimuli for the creation of new knowledge. The action research method involves teachers investigating their own actions by carrying out implementations and evaluations aimed at improving the quality of their actions. The quality of action can be perceived as the participants' understanding of the situation, as well as the practice within the situation. The last model in the Kennedy (2005) continuum is the transformative method, which involves the combination of a number of processes and conditions from the previously mentioned methods. It could be described as the effective integration of the range of models with a sense of awareness of issues related to power.

In categorising CPD, Reid (2005) distinguished two dimensions: formal-informal and planned-incidental, for teacher learning. Teacher learning that is demanded from policy makers is generally seen as a formal learning opportunity, whereas informal learning occurs when teachers seek knowledge on their own. On the other dimension, planned opportunities refer to opportunities that are pre-arranged, whether they are formal or informal, whereas incidental opportunities represent spontaneous learning opportunities. In Bell and Gilbert's

(1996) framework, teacher-learning opportunities are thought of comprising personal, social, and occupational aspects. Professional learning is based on the personal aspect, so that teachers' attitudes, beliefs, and values contribute to the teachers' ability to change. A range of factors such as prior experience, expertise, and teachers' choice over the degree of engagement were all reported as factors inhibiting change. As for the social aspects that support teacher learning, a community of practice reinforces shared beliefs and can facilitate the reconstruction of personal and professional identities. In contrast, an isolated learning environment can result in learning resilience. Occupational aspects draw on the importance of relating theory to practise, in which the school context presents a rich environment for teachers to make sense of practice.

Kennedy (2011) currently labels the previous models as parts of a "triple lens framework," and believes that the combined use of them can give a multidimensional view of the complex aspect of professional learning. She also discusses the complex nature of professional learning through the perspective of CPD so that "triple lens framework" is appropriate to be used more than any single model alone. Of course, other CPD models have been reported in the literature, for example the community of practice model, teacher enquiry model, critical reflection model, and case making model (Pachler et al. 2009). All of these models do resemble in their foundations some aspects of the "triple lens model" framework with differences in the provision of CPD activities. Also, Vrasidas & Zembylas (2004) developed an "interactional" framework that views professional development as multidimensional based on individual and group interaction. They argue that the interaction taking place should be based along a constant developing continuum of: personal and social constructivism; situated and distributed cognition; and local and non-local communities of practice. In this model of professional development, Vrasidas & Zembylas (2004) emphasise that personal and social constructivism should be viewed as interrelated and argue that knowledge is constructed

through social interaction and in individuals minds. In this model, cognition and knowledge are viewed as being situated in the real world and individual learning can be evaluated and designed through the interaction they make to artefacts, tools, and the sociotechnical environment. In the last dimension of this model, local communities of practice are seen as the result of the development of communication technologies and should be based in a workplace environment. Thus any possible change or "learning" that takes place is through interaction within this continuum.

2.2.2 CPD Evaluation

Evaluation is defined by Guskey (2000, p.42) as: "the systematic investigation of merit or worth" He also breaks down the definition to further emphasise different characteristics. In his view, *systematic* implies an intended plan to carry out evaluation through a purposeful process. As for investigation Guskey (2000) points out that it refers to the collection and analysis of the information gathered through various methods and techniques, and Merit or worth refers to the judgment of the outcomes. Evaluations, therefore, are used to determine the value of something and to measure the level of success after reflecting on the outcomes. The point here is that evaluation is not just a technical issue but an educative one too, and thus there is no value free way of evaluation.

Different approaches have been introduced to classify evolution frameworks and models, and some trace back to the early works of Tyler (1942) and House (1983). A major concern in the evaluation field is the 'what,' 'how,' and 'who,' of the evaluation process. A wide range of evaluation models and frameworks try and address these concern by presenting different levels of evaluation that would correlate with the CPD programme design and implementation. For example, Tyler's (1942) framework focused on the activity goal and noted the importance of a clear vision of the outcomes of CPD as a first step of evaluation.

Later works of Metfessel & Michael (1967), which is built on Tyler's (1942) framework, expands to include a wider level of evaluation to include institutional variables as well. Stufflebeam (1983) proposed the CIPP framework, which is similar to Tyler's (1942) framework, in that it starts with a clear vision of the outcomes. A widely used framework in evaluating training is Kirkpatrick (1976) four level framework. As this thesis adapts Stufflebeam's and Kirkpatrick's evaluation frameworks, they will be discussed later in this section.

Guskey (2000) proposed an evaluation framework that is based on Kirkpatrick's model of evaluation. Guskey's proposed model is based on five levels of evaluation, and success in each level is based on completion of the previous levels. This hierarchical approach to evaluation allows for evaluating impact of professional development from simple to complex. For example, in the first level of evolution, reactions to the professional development are examined, in which questions such as enjoyment of the training, planning of event, and value is analysed. When the goal at this level of evolution is achieved, evaluation can take place at the second level of evaluation, which involves a participant's learning.

In the literature, studies have adapted a number of different frameworks to evaluate professional development programs. For example a study by Muijs & Lindsay (2008) examined the hierarchical evaluation frameworks and their fit for evaluating CPD, and combined Stake's (1967) countenance model, Stufflebeam's (1983) CIPP model, and Guskey's (2000) five levels framework. They reported a reasonable fit between the frameworks used and the evaluation of teachers' CPD. Similarly Hahs-Vaughn et al. (2007) study looked at online CPD and also examined the fit of combining a number of evolution frameworks to evaluate online CPD, in which they adapted the logic model (Coffman, 1999; Harris, 2001); the CIPP model (Stufflebeam's 1983); five levels of Guskey (2000); and the five pillars of quality online

education (Mayadas et al. 2002). They concluded that such a "hybrid model" was fit for purpose and report that this model contributed to the field of ICT CPD evaluation, in that it captured best practice in professional development and online learning. In a study to address challenges in designing and delivering CPD programs for leaders, Nicolaidou & Petridou (2011) based their evaluation framework on Stake's (1967) countenance model and Guskey's five level of evaluation (2000). What we can understand from the use of these models collectively is that CPD is multidimensional, and furthermore capturing specific information regarding effective professional development is complex and difficult. However, it is evident from the previous studies that Guskey's (2000) framework is influential to a number of evaluative studies, and for that reason a deeper understating of this model should be provided.

Guskey (2000) proposed a five level framework that looked at participants' reaction, learning, organizational support and change, use of new knowledge/skills, and students' learning outcomes in any professional development program. As we have pointed out previously, the framework is based on analysis of questions collected though the stages of evaluation. In the first stage, participants' resection is examined through asking them questions grouped under content, process, and context. Questions such as, Were the facilities appropriate? And, Was the classroom size adequate? Would inform evaluating the context in the first level.

The second level, which is participants' learning, is examined through asking questions that highlight learning goals in three different categories: cognitive, psychomotor and affective. Cognitive goals are assessed in light of the participants' specific elements of content and pedagogical knowledge, whereas psychomotor goals assess acquisition of skills, practise, and behaviour goals. Affective goals are assessed in light of development in participants' attitudes and beliefs. As for the third level, Guskey (2000) proposed the evaluation of policies

and resources, openness to experimentation, and leadership and support. This level is mostly concerned with the organizational role and how it contributes to managing change.

The next level of evaluation, participants' use of new knowledge and skills, focuses on assessing elements of change that occur as a result of participating in the professional development program. Guskey (2000) labels this level of evaluation as complex and time consuming, as the use of new knowledge and skills can take time.

As for the last level of evaluation, based on students' learning outcomes, Guskey (2000) groups such learning into cognitive, psychomotor, and affective. Cognitive outcomes are related to students' overall achievements, whereas psychomotor outcomes are related to the students' developed behaviour, actions, and practise. Effective outcomes are related to the development of students' beliefs and feelings. As we have seen previously, this five level framework is widely used in evaluative studies, as it is goal oriented and provides a systematic approach to evaluation as it was built on Kirkpatrick's framework.

The hybrid framework for evaluating ICT CPD in this study is adapted from Kirkpatrick (1976) and Stufflebeam (1983) models. The former developed a four-level framework for evaluating training programs to measure changes that occurred as a result of training. A break-down of the levels of this framework follows:

- Participants' reactions and satisfaction: this level of evaluation is based on formative and summative evaluation of the training. Formative evaluations by participants' include their views of the training in terms of the content, presentation, and design; summative evaluation is more concerned with satisfaction with the training in terms of effectiveness and value.
- Participants' learning: this level evaluates changes in knowledge including new knowledge, skills, and attitudes. Such change can be to cognitive or affective knowledge.

Cognitive knowledge addresses changes in participants' formation of new skills, while affective knowledge addresses their attitudes towards the new knowledge.

- Changes: this level evaluates changes in behaviour as the extent to which participants adopted ideas, practices, and strategies. This level tends to focus on the transfer of knowledge to behaviour.
- Outcomes: this level evaluated business outcomes, as this was the context in which the evaluation framework was generated. A comparable element in education would be to 'measure' the impact of CPD on student learning outcomes (e.g., Guskey 2000), but this is not the focus of the study.

The strength of this model is that it enables the evaluators of the training to be more systemic and pragmatic (Coldwell & Simkins 2011). The Kirkpatrick (1976) framework has been adapted to overlap with Stufflebeam's (1983) framework, which focuses on four main elements: context, input, processes, and product (the CIPP model). A detailed examination of this model is as follows:

- Context: refers to the identification of problems, needs, and opportunities that can guide programme planning.
- Input: evaluation refers to allocation of resources to the evaluated program, and also allows for the evaluation of alternative strategies to achieve programme goals.
- Process: evaluation focuses on implementation process where evaluation is concerned with providing information that can be utilized to guide the process of the training.
- Product: this level is mostly concerned with measuring and interpreting how the training goals were achieved.

The value of this framework is that it tries to give account to the different elements of the CPD and assess the inter-related components of such programs to present the relationship

between the different elements. As we have seen earlier both models have been adopted in a number of studies. For example, Grammatikopoulos et al. (2013) adopted the Kirkpatrick (1976) model to evaluate Greek teachers' induction-training programme and reported the usefulness of the levels-based evaluation. In addition, Tokmak et al. (2013) adopted Stufflebeam's (1983) CIPP model to redesign an online master's course based on the students' evaluation of the context, input, process and product. They concluded their study by redesigning the course to meet the students' needs through their evaluation of the existing course.

A much-noted criticism for Kirkpatrick's model is that it is based on three assumptions that may not be valid in practice. Alliger & Janak (1994) point out that each level in Kirkpatrick's model is based on the success of the previous level, and that each level is more informative than the one prior, and finally each level builds on the previous one. However, the widespread use of Kirkpatrick's model has been viewed as an evidence for its validity. The vale use of this "hybrid model" is that it captures the complexity of CPD in the classroom. Acknowledging the wide use of the Guskey (2000) evaluation framework, this study opted to adapt the original proposed framework by Kirkpatrick and combine it with Stuffelbeam's framework to address issues with context that are not addressed cohesively in Guskey's framework. However as this study attempted to evaluate an ICT CPD, there was emphasis on the input of the training and also the process of the training, which cannot be captured by Guskey's framework. Hence the "hybrid" evaluation framework adapted for this study consists the following levels: context, input, process, reaction and satisfaction, learning outcomes and change, which be examined later in the methodology chapter.

2.3 Online CPD

So far the value of ICT has been discussed, and models and perspectives for developing teachers' use of ICT have been described. However, the medium of CPD needs to be considered, and one mode of delivering CPD is online. Indeed online CPD (according to Culp et al. 2005) holds the key to the future of CPD development. Similarly, Simpson (2013) believes that distance and online education is going to be increasingly used in both developed and developing countries.

Online CPD can be seen as a form of distance learning. As the name implies, distance learning is a mode of delivery that connects teachers and learners across diverse geographical distances. In fact, distance learning may be a form of open learning but the two are not synonymous. For example, Holmberg (2005) points to the open access in open learning, while Foks (1987) gives a clear distinction between open and distance learning, in that open education allows learners to take control over the content and learning modes whereas distance education is a structured learning environment. Such differences in concept and pedagogical underpinnings have resulted in a number of models of online-based learning. For example, Rodriguez (2013) explores the issue of openness in online learning through examining different types of massively open online courses (MOOCS). Generally, connectivist MOOCS are based on a more open-learning principle in which learners interact with an open network and share openly their contributions facilitating collaboration in knowledge forming. On the other hand, so-called x MOOCS adopts a more traditional pedagogy and relies on a tutor-centred approach.

In examining the literature on distance learning, Greenberg (1998, p.36) sees distance learning as: "a planned teaching/learning experience that uses a wide spectrum of technologies to reach learners at a distance and is designed to encourage learner interaction

and certification of learning." What is generally inferred by distance learning is that it can be used to compensate for geographical distances between the trainer and the trainee. In the field of teachers' CPD, receivers of the training can be teachers across the country and still be able to attend the training. This general feature of distance learning has made online CPD stand out of different types of professional development. The idea of being independent and to be flexible in the what, where, and how to receive the training has appealed to teachers. In the same line of argument, Smith et al. (2009), saw the advantage of online CPD and how teachers can freely choose what they want to learn and even fit such learning around their daily schedule. Nevertheless, as any new form of education delivery, some disadvantages are also reported in the literature that would jeopardise online CPD. This is mainly due to teachers' technological competence, motivation, procrastination, and loss of interest in that if teachers' do not see the value of such courses, the employment of such a medium is set to fail before it begins. This also can be seen through the retention rates of distance learning courses and MOOCS. For example, in a study by Simpson (2010) at the Open University in the UK, only 22% of all students enrolled in distance learning courses graduate, meaning that a dropout rate of 78% compared to only 18% in conventional learning. Other factors also contributed to this rate, for example students at the Open University reported lack of face-to-face interaction and dissatisfaction with the overall environment. To support these assertions, Burns (2013) found out that teachers are more likely to drop out of online courses compared to a "hybrid" model that comprises of a mixture of online and face-to-face interaction. In her study with Indonesian educators, Burns (2013) reported a 31% attrition rate in the online model compared to hundred percent in the hybrid model. Similarly in this study, as we will see later, two participants (out of 14) dropped out during the training and reported dissatisfaction with the approach to training. As far as MOOCS drop-out rate is concerned, Kay et al. (2013) reported that only 5% of 150,000 students completed a

MOOCS ran by MIT in the US. In the same vein, Seaton et al. (2014) reporting on a MOOCS ran by MIT point out that out of 108,000 students enrolled only 7% completed the course. Also Rodriguez (2012) reported an 8% completion rate out of 160,000 students enrolled in a MOOCS offered by Stanford University.

In this study, the online delivery of the training was suitable, as one of the desired objectives of the training was to establish a community of inquiry for the participants and such a model facilitated such a desired goal. Secondly, online delivery would be cost effective and time saving, finally and most importantly, online delivery allowed participants' access to CPD in the first place. We now move on to consider goals of teacher CPD.

2.4 Contexts of CPD and EFL Teachers' Professional Development

For Guskey (2002) professional development has three purposes: changes in teachers' practice, change in teachers' attitudes and beliefs, and changes in learners' outcomes. Guskey (2002) provides a review of the historical context of professional development, which he believes should be replaced by a new model of professional development. The "model for teacher change," which he proposed, is revolved around the principle that changes in teachers' attitudes and beliefs occur after they have seen evidence through the outcomes of their teaching in the form of students' learning. Furthermore, he argues that such change is not a direct result of the professional development but rather it is "the experience of successful implementation." In light of his new model of change, Guskey believes that well-designed, thoughtfully planned, and supported professional development is a necessary ingredient in all educational improvement efforts. Similarly, Clark & Hollingsworth (2002) list six different perspectives to teacher change:

- Change as training: implies that teachers are changed by an intervening body.
- Change as adaption: implies that teachers are changed as they respond to change in conditions.
- Change as a personal development: implies that teachers sought to change to develop their skills and competence.
- Change as local reform: implies that teachers change something for personal development
- Change as a systematic restructuring: implies that teachers carry out the change policy of a system.
- Change as growth or learning: implies changes in teachers' professional development occur as they act as learners in a community.

Drawing on Guskey's (2002) remarks on why CPD has always failed (as it is assumed that change in practice follows change in attitudes), Clark & Hollingsworth (2002) provide a model for professional growth. For them, change can occur through teachers' reflection and acting across four domains: personal, external, practice, and salient outcomes. Change for example in the practice domain (ICT use for example) will reflect change in the personal domain through negotiating new attitudes, which is presented through the consequences domain as a salient outcome. However, Roesken-Winter et al. (2014) argue that there is a growing body of research that expands effective CPD criteria to include collaboration and school/policy development. Eraut (1995) further pointed out that teachers' professional development can be seen parallel to school wide development in that teachers' development should not be taken in isolation of other school-wide related issues, such as support and leadership. In the same line of argument, King (2002) argues that a powerful school-wide professional development should consist of: a) clear and shared goal for students learning, b) collaboration among staff, c) professional enquiry to address challenges, and d)

opportunities for staff to influence school-wide policies. Supporting such remarks, Bolam & McMahon (2004) argue that collaborative CPD not only enriches an enquiry-based approach to professional development that is based on classroom reflection but also improves the overall quality of education and learning outcomes. A reflective practice is defined by Osterman and Kottkamp (2004, p.2) as the "means by which practitioners can develop a greater level of self-awareness about the nature and impact of their performance, an awareness that creates opportunities for professional growth and development." They also assert that such awareness is essential for behavioural change. Harrison et al. (2005) for example, conclude by identifying a direct link between reflective practice strategies and change in practice. However, although different perspectives to professional development exist, Guskey (2000) reports that evaluating professional development has been a major concern among educators and practitioners. He believes that such interest is based on that fact that: a) teachers have developed a better understanding of the perspectives of professional development and the importance of measuring progression, b) recent perspectives view professional development as an intentional process, c) better understating and sufficient information are required to guide and emphasise educational change and reform, and d) teachers should be held accountable for what they do in classrooms in terms of value and productivity.

In the field of language teachers' development, Mann (2005) draws a distinction between language teachers' training and professional development. For him, language teacher training lies in the introduction of different methodological and learning strategies that form the basis of language teaching. Whereas, language teachers' professional development surely should have a wider goal but in practice is a narrow perspective and is instrumentally perceived. Mann also argues that language teachers' development is a bottom-up process and should encompass moral and ethical values as well as practical outcomes; it is a process that can be

facilitated though training and educational programs. González et al. (2002) meanwhile conducted a study to examine EFL teachers' professional development needs and reported that EFL teachers felt that their professional development should address three experience domains, namely their experience as workers, instructors, and learners. In another study to explore EFL teachers' professional development, Dayoub & Bashiruddin (2012) pointing out that EFL teachers in developing countries are often left to adopt a self-directed learning when professional development opportunities are not offered. They want sustainable long-term professional development programs to be considered by policy and decision-making bodies, when planning EFL teachers' professional development initiatives. In the Saudi context, Al Wehaibi (2014) examined EFL teachers' professional development through a blended task-based in-service professional development program, and concluded that such an approach had a positive impact on teachers' knowledge and performance. Again in the Saudi context, Shukri (2014) explored EFL teachers' reflection on their practice and their professional development, and concluded that there was a strong link between reflective teaching and professionalism. Similarly in the Arab world, Shoqair & Shaaban (2013) examined strategies adopted by EFL teachers in relation to their professional development and concluded that an action research approach to professional development was adopted by teachers in their study. Elabbar (2014) examined Libyan EFL teachers' action-research oriented professional development as well and argued that such an approach is fit in the context of Libyan EFL teachers' professional development. Similarly, McDonough (2006) found that the field of language teachers' professional development has emphasized reflective practice as a tool for developing teachers. Furthermore, she found language teachers developing their understanding of research and developing an interest in peer-to-peer collaboration. In the same line of argument, Yang (2009) reported that when EFL teachers' adopted a critical

reflection approach to their professional development this had an impact on their pedagogical reasoning.

It is evident from the literature reviewed that EFL teachers' professional development can be facilitated through a number of models. For example, a reflective practice can engage language teachers in rediscovering their own understandings of their teaching practice. whereas an action-research oriented professional development can contribute to peer-to-peer collaboration between EFL teachers. The use of ICT tools/application, as can be seen in Yang's (2009) study, can contribute to providing a space for teachers' to reflect on learning theories and critically examine what theories could be suitable for certain learning and teaching situations. The use of ICT tools such as Twitter and Facebook (Shoqair & Shaaban 2013) can be seen as a medium of reflection on EFL teaching as well. We now turn to the idea of ICT CPD as a concept.

2.5 Defining ICT CPD

Before attempting to define the concept of ICT CPD, we should step back and represent what we have learned from reviewing the literature on ICT and CPD. As we have discussed earlier in this chapter, ICT is associated with educational change, with several variables influencing the level and nature of change. Change in itself is complex, and the teaching practice is often the result of years of experience on the part of the teacher. As for ICT tools and applications uptake and use, there is a complex mix of opportunities and constraints. Opportunities are often differentially perceived and bound up with school-wide policy and attitudes towards the use of technology education. As for constraints, there are sets of external and internal barriers that are intertwined. CPD can help address constraints but often fail for different reasons, with the mismatch of the training needs and actual needs a key issue. CPD itself does not have a single definition. It provokes a discussion of purposes and of agency.

Should CPD happen to teachers or happen by teachers? We reach a point where a working definition of ICT CPD should be made. A point of reference in the literature is the concept of Technological Pedagogical Content Knowledge (TPACK), which is used to capture the knowledge needed to implement ICT use (Mishra & Koehler 2006). TPACK as a concept builds on the work of Shulman (1986) that differentiates between content knowledge and pedagogical knowledge. For Shulman (1986), teaching practice should build on the intersection of these two different knowledge circles, and that teachers' Pedagogical Content Knowledge (PCK) is their ability to communicate the subject knowledge to the students to facilitate their learning. As for the PCK of EFL, teachers should be concerned with representation and formulation of concepts, pedagogical techniques, knowledge of what makes concepts difficult or easy to learn, and knowledge of students' prior knowledge and theories of learning. It involves knowledge of teaching strategies, which will aid teachers in addressing learner difficulties and misconceptions and foster meaningful understanding. It further includes knowledge of what the students bring to the learning situation and includes knowledge of pupils' strategies, prior conceptions, or misconceptions. Schulman introduced the notion of PCK as the interplay of content knowledge and pedagogy knowledge; however, the intersection of technological knowledge with PCK forms Koehler and Mishra (2008)'s TPACK. TPACK describes the knowledge and skills that teachers need to meaningfully integrate technology use into instruction in specific content areas. The complexity of addressing EFL, ICT, and teacher training, and helping teachers to develop their PCT and TPACK, is a demanding challenge as it draws on ICT as an allusive term and the promise of educational reform and the problematic nature of CPD.

ICT CPD could be defined as the negotiation and balance between teachers' technological pedagogical knowledge (TPK) and technological content knowledge (TCK), in that any training programme should first address the knowledge about how technology may be used to provide

new ways of teaching content (Niess 2005), and the "knowledge of the existence, components, and capabilities of various technologies as they are used in teaching and learning settings" (Mishra & Koehler 2006, p.1028). Pachler et al. (2010, p.3) capture a perspective on ICT CPD which they understand as "professional development activities and experiences, including skills training, which enhances pedagogy across the curriculum and beyond, and which helps to deepen teachers' knowledge and understanding of how to use technologies effectively in teaching and learning, including for professional administrative activities. It includes a spectrum of both formal and informal arrangements, which help teachers use technology, and may involve both in-house and a range of external or networked bodies, which contribute to those arrangements". From this we can conclude that ICT CPD could be seen as any formal or informal training initiative carried out by teachers themselves or offered as part of an educational reform process that is based on their needs, is collaborative in nature, relates to the teaching context, and first addresses teachers' technological pedagogical knowledge and introduces technological content knowledge.

2.6 ICT CPD: Principles and Experiences

There are number of small and large-scale studies that report on ICT CPD initiatives (NOF 2002; PIPS 2001; Intel tech to the future 2005; TTP 2007; Vital 2009, iEARN 2001) and shed light on effective training. The New Opportunities Fund (NOF) was an initiative for providing training for all UK teachers in order to raise their ICT skills and foster positive attitudes towards the use of technology in their teaching. The report by OFSTED (2002) concluded that the NOF training was successful at the teachers' level in that it increased teachers' confidence in using ICT in their practice, and that increased the frequency of teachers using ICT in general; teachers' prior knowledge was a factor of their successful future use of ICT, and teachers' took an active role in selecting training material that

correlated to their teaching objectives. At the school level, the training was also successful when schools had an active role in prioritizing ICT use and providing active role in support of the training. However, the report also highlighted factors that contributed to the failure of the training, including lack of time, administrative support, and leadership; poor support; and mismatch between training content and actual needs. What is surprising about these reported factors is that they are all at school-level barriers, which may be a result of the school not taking an active role in promoting ICT policy and use. A more critical report pointed out that the NOF initiative lacked collaborative training, focused on IT skills, and failed to differentiate between learners (Galanouli, Murphy & Gardner, 2004; Conlon 2004).

Bradshaw et al. (2012), reporting on the Vital project, pointed out that participating teachers valued the peer discussion the online portal provided, and wanted practical learning to be transferred to their teaching practice immediately. In addition, teachers also reported taking an active role in peer sharing of training knowledge and engaged in forming communities of practice within their schools. Bradshaw et al. (2012) point out that the Vital project was a successful intervention, as it adopted a bottom-up design, and that reflective practice was a core element of the design. In the ICT CPD landscape report, Pachler et al. (2009) made a series of recommendations in relation to ICT CPD:

- As a priority, the training must be designed to the teachers' individual needs; the focus should be in an area where teachers feel they need training.
- The ICT CPD training should be based on a collaborative approach, where peer review, discussions, and reflection on practice are encouraged.
- Institute-level support should be provided for teachers.
- Employment of current online professional development programs should be incorporated, with the possibility of using Web 2.0 technologies as a vehicle for delivery.

Intel and iEARN teacher development programs reported similar findings. The Intel tech to the future (2005) programme was an international initiative to train teachers on using technology and ICT. The programme was built on a train-the-trainer principle, in which one teacher will be trained from each participating institute and then that teacher will pass on that knowledge to colleagues. The Intel (2005) initiative was successful in motivating teachers to experience new technologies in their teaching and use different ICT tools to plan their teaching. However, Light et al. (2006) point out that teachers found a gap between the vision of the Intel initiative and the environment in which they worked, with constraints on what was practical. To provide greater support for teachers the iEARN (2001) training programme drew on the principle of community of practice by facilitating a community of teachers. The training programme was offered for participating teachers across the world. Chitanana (2012) reported that teachers valued the iEARN programme design, as it allowed them to share information, and that helped them develop better ways of using the technology themselves.

What we can conclude from the above is that there are some shared characteristics in ICT CPD, and these can be classified under different themes. CPD itself should be based on teachers' training needs and differentiated between individual skills (Pachler et al. 2010); the model used should be appropriate for training objectives and teachers' needs (Edmondson 2003); teachers' positive attitudes towards technology should be encouraged (Hammond 2010); beliefs about the teaching and learning process should be identified (Pickering et al. 2007). As for the design of any ICT CPD, the online medium may be used for delivering training (Pachler et al. 2010; Cordingley et al. 2005) and should support teachers' engagement in peer discussion and on reflective practice (Pachler et al. 2010). Online courses may help generate a collaborative knowledge-sharing culture (Sorensen et al 2014; Pachler et al. 2010; Cordingley et al 2005). As for institutions, they must embrace an ICT policy

(Hansson 2006; Somekh 2008), provide support to teachers (Scrimshaw 2004), and provide equipment and maintain facilities (Preston et al 2000; Tearle 2003).

2.7 Theorizing ICT Uptake and Use

Papert (1984) stressed that technology integration in the classrooms needs a theoretical base that can address how learning can be fostered when technology is used. A number of theories lend themselves to the exploration of technology use and integration of ICT technologies in education and provide a lens in examining the complexity and constraints of introducing and using technologies. Different models and theories have addressed acceptance, diffusion, adoption, and use (for example Davis, Bagozzi & Warshaw, 1989; Ajzen & Fishbein, 1975; Engestrom 1987; Rogers 2003; Cartwright & Hammond 207). Such frameworks and models have been adapted to examine and understand ICT use in educational settings, for example in studies by Md Yunus 2007; Teo &Wong 2008; Tezci 2009; Lee & Sparks 2014. .

A primary motivation for computer use is the individual's belief concerning the outcomes of such use and their perception of this usefulness (Davis et al. 1989). In fact, teachers' attitudes towards computers are a significant indication of behaviour that might influence their ability to achieve success in using computers in their instructions. Francis et al. (2000) and Lawton & Gerschner (1982) argue that teachers' attitudes towards computers play a significant role in the effective investment of computer technology to support instruction and successful implementation of computers in teaching. Davis (1989) reported that teachers' attitudes towards computers can predict their future use of computers. Moreover, Davis et al. (1989) introduced a Technology Acceptance Model (TAM) to show how an individual reacts towards new technology use, although not intended to explain teachers' use of technologies, it has often been adopted in education research. TAM aims to explain and predict why a user would accept or reject using information technologies. The basis for this model is derived

from the earlier work of Ajzen & Fishbein (1980), which proposed the theory of reasoned actions (TRA). TRA was developed from their work on attitudes and behaviour and was later adopted as the basis of the TAM model to give insight into individuals' attitudes and behaviour towards using technology. The main idea of the model was to highlight and present the external factors that could influence the individual internal attitudes and future use intentions, and through these conditions, predict the individuals' acceptance and potential use of technologies. Ajzen and Fishbein suggested that when an individual is presented with new technology a number of factors influence their decision in when, how, and where to use this technology. They note two factors in particular, perceived usefulness and perceived ease of use, and define perceived usefulness as the degree to which an individual believes that a certain technological aspect would assist in developing job performance, and they define perceived ease of use as the degree to which an individual saw a technological aspect free of effort. Thus, according to this view, a teacher's decision to use or reject computer use would be influenced by their attitude (whether positive or negative), their perception about the ease of use, and their expectations regarding the potential outcome of such use. The model has been used repeatedly to explain the take up of ICT. For example, a study by Lee & Lehto (2013) found a significant correlation between behavioural intentions and perceived usefulness and satisfaction of use, and concluded that perceived usefulness and perceived ease of use affect individuals intentions to use e-learning systems. Edmunds et al. (2012) adopted TAM to examine students' attitudes towards technology in the workplace and in social life. They examined students' attitudes towards technology in three different contexts, namely: workplace, social life, and course study. They concluded that usefulness and ease of use affected students' attitudes towards ICT use in all three contexts.

TAM has an obvious value in that it associates usefulness, ease of use, and system (technology) use to adoption attitudes and behaviour. However, a critique of this model is

that it looks at the teacher as an individual and less at the context in which the teacher works. In fact TAM was not developed within education and transference is much more problematic than its users imagine. Legris et al. (2003) questions the capability of TAM to predict ICT adoption, unless it is integrated into a wider model that examines the contextual and organizational factors.

The diffusion of innovation theory (Rogers 2003) also has been adopted to theorize the uptake of ICT (for example Al Birini 2006; Kirkup & Kirkwood 2005). The foundation of this theory is built on the idea that innovations are communicated through a social system through time. Rogers (2003) stresses that four elements influence how a certain innovation spreads in a social system, namely: the innovation itself, the communication time needed for the innovation to be passed on, the nature of the social system, and the communication channel that passes on the innovation. This theory is heavily dependent on the human factor of adoption, and Rogers (2003) categorizes four adoption levels: innovators, early adopters, early majority, late majority, and laggards. ICT use and introduction of technologies in education has also been examined in a more general theoretical level, including through the lens of activity theory. Activity theory is rooted in the works of Vygotsky (1978) and Leontiev (1978), in which both try and describe the structure of human activity. The premise of activity theory is that an individual's activity is directed towards an object, where artefacts and tools mediate the outcomes and goals. Engerström (1987) has expanded the notion of activity systems, in which within any given system, individuals collectively form a community that is governed by rules, and divides labour among the subjects of that system. This interplay between subjects, objects, and tools describes the context in which activity takes place within the boundaries of the community rules and under the division of labour provided. Activity theory has been used as a framework to explain connections within social systems and to give an account of the relationships between them. Although Activity theory is tied with research in

social science to understand human activity within any given system, it has been used as a framework to theorize the uptake of ICT (e.g., Blin & Munro 2008; Demiraslan & Usluel 2008; Karasavvidis 2009). The value of using Activity theory to theorize the uptake of ICT lays on its ability to capture the entire system in which ICT use is situated and provides a wider context of study. In fact, it highlights the tension between social and individual learning aspects, as it sees learning as the collective interactions between both aspects (Blin 2005). Blin & Munro (2008:477), in justifying the adoption of activity theory to understand the uptake of ICT, stress "it enables us to understand the underlying systemic tensions that manifest themselves through conflicts, breakdowns, or simply through the non-adoption of ICT." In their study they draw attention to the lack of evidence of ICT impact on teachers' practice.

An interesting model based on a grounded theory approach or the 'FIT' model, which gives account to the different variables that shape the interaction in a system and result in forming a phenomenon. Brown (2001) adapted a grounded theory approach to develop a theory examining the process of community building through distance learning classes. This model was also adapted and developed by Cartwright and Hammond (2007) in a study of the use of ICT in primary school. The model was developed from a grounded theory paradigm (Strauss & Corbin 1998), however there is considerable debate as to the compatibility of the original idea of grounded theory. The key value of the model is that it sets out casual, contextual, and intervening conditions that contribute to a phenomenon, the strategies undertaken by 'actors,' and the consequences resulting from the phenomenon.

As this model is revisited later in the discussion chapter, I would like to explain the elements in more details. Casual conditions as defined by Strauss & Corbin (1998, p.131) refer to "events or happenings that influence phenomenon." These events are seen as a necessary element for the phenomenon to take place; without these events the phenomenon could not have existed. In the

context of the ICT CPD this might be the provision of the course and the elements of the action-oriented training. Strauss and Corbin (1998, p.131) define contextual conditions as "the specific sets of conditions (patterns of conditions) that intersect dimensionally at this time and place to create the set of circumstances or problems to which persons respond through actions/interactions." In the ICT CPD this might be the nature of employment and the provision of the training. As for intervening conditions, Strauss & Corbin (1998, p.131) define these as "those that mitigate or otherwise alter the impact of causal conditions on phenomena . . . often arising out of contingencies (unexpected events), which in turn must be responded to through a form of action/interaction." In the use of ICT these may include time, motivation, and curriculum. All these sets of conditions shape different adoption strategies by individuals within a system and contribute to the formation of a phenomenon. As a consequence of the interaction of all the conditions and strategies towards the phenomenon, different patterns emerge and shape the system.

The FIT model offers, first a hierarchy of 'factors' that point out that some conditions are essential, without which the phenomenon would not have been possibly formed, while pointing out other contributing factors that deal with contextual and intervening conditions and in this having a high level of structure. Second, it includes actions undertaken by actors or strategies that had developed to deal with the phenomenon in light of the conditions presented within the context, which presents a high level of agency and control.

The issue of structure and agency is central to the debate here. The notion of system "structures" being an outcome of all human actions, against individuals possessing the "agency" to act independently of such structures, is a point of conflict in the literature. As presented earlier in some theories and models, the use of ICT has been attributed primarily to teachers being "actors" within a system that expects an outcome, which is ICT use; in others

the focus is more on teachers individually taking actions that enables ICT use. There has been a tendency to stress causality, for example TAM seemed intended as a causal model but this is not always clear; in contrast CHAT had a strong interest in agency but, for some, became a causal model not least because the triangles within triangle diagram is easily reinterpreted as setting out casual connections between factors. The FIT model too suggests a causal connection that again was not intended necessarily.

2.8 Summary

In this chapter, the use of ICT in the teaching context has been examined, and we concluded that such use enriches the learning environment through different technical characteristic and by promoting various pedagogical principles. However, the promise of promoting change through using ICT has given rise to a technology focused rhetoric and we concluded by pointing out that teachers' attitudes in respect to teaching are a key issue for change to take place; teachers' perspectives on change are fundamental. When ICT is merely viewed as a tool to deliver traditional teaching, teachers are perhaps likely to adopt technology but more likely to resist change in underlying teaching practice as their practice is based on deep understanding and tradition. However, if ICT use engages teachers in rediscovering the purposes, aims, and processes of teaching, they are more likely to initiate a change process. We have also pointed out that the implementation and adoption of ICT is faced by a number of internal and external constraints that makes educational change more complex. On an institutional level, we have reviewed different obstacles such as support, training offered, teaching time, access, and leadership. We have also pinpointed some teacher-related constraints, such as confidence levels, technical skills and attitudes towards technology. We have also cross-examined the literature in the Saudi context with the international literature, and we can confirm that similar findings are reported in the Saudi context, which in turn

confirms that ICT use in the teaching context is complex and therefore promoting change is difficult. As the aim of this study was to evaluate and understand ICT uptake, we have examined online training and tried to provide different attempts made to theorize the uptake of ICT through training. As far as CPD is concerned, we have reviewed different models and perspectives on professional development and pointed out that teachers should be active learners in the change process through evaluating, reflecting, and engaging in the planning and implementation of change. Where does this leave us? We agree with the claims of the value of ICT in teaching, the optimism reported, and the constraints identified. However, what we don't agree on is what ICT CPD is and how it is supported. Taking into account the approaches used to identify what kind of change can ICT support and how TPACK can be used as a point of reference, how TPACK can be supported better is a question that remains unanswered, but aligned with a view of change; we need to initiate change through allowing and supporting agency

CHAPTER 3: METHODOLOGY

3.1 Introduction

The study grew out of interest and concern for using ICT to support the teaching of EFL. The aim of the study was to make an intervention that would lead to better support and training opportunities for EFL language teachers. The nature of the problem investigated in this study required a progressive problem-solving process designed to improve the practice of the teaching staff. In principle this classifies the study as an example of Action research (e.g., Stringer 2007) with the exception that although based in a teaching context, as a research based overseas, I was not seeking to develop my immediate practice context. The study may be better thought of as an experiment in teaching aimed at understanding the use /practice of ICT for language teaching. The outcomes of this training programme were not predictable; therefore, it was difficult to say how this study would contribute to the literature. Three scenarios were considered. If the ICT CPD course succeeded in having an impact on the participants' teaching practice, and the desired outcomes of the course were evident in the teaching practice, the study would contribute as an example of a successful intervention even perhaps a countervailing case. This, for example, might be taken as a case of agency over structural constraints (e.g., Somekh 2006). However, if the course failed to have an impact on the participants' teaching practice, due, for example, to attitudinal and behavioural factors, it would contribute to our knowledge of the challenge of educational change. As far as the content, design and delivery of the course was concerned, a 'failed' CPD intervention could be seen as a result of the course being unrelatable to the teachers' context, not addressing the participants' needs or delivered ineffectively.

The study aimed at investigating the impact of an ICT CPD on the teaching practice of EFL university lecturers and school EFL teachers. It sought to develop an understanding of how

training opportunities could affect the participants' ICT uptake and use in the language classroom. More specifically it addressed the question: Can an ICT CPD programme have an impact on EFL teachers' in Saudi Arabia? This raised some further sub questions:

Sub research question 1: How was the ICT CPD designed and implemented?

Sub research question 2: What was the impact of the training on the participants' knowledge, attitude and behaviour?

This chapter gives an account of the considerations that helped inform the design of the study, methods of inquiry and data collection methods. The first section gives a description of the research design, including the ontology and epistemology of the research. This is followed by an overview of the research paradigm and why this research adopted an Interpretivist approach. Later, a case study method is justified alongside an overview of the data collection methods used. Finally a description of the time framework of the research and a biography of the participants is provided.

3.2 Research Design

A research design is described by (Creswell 2009, p.5) as "the plan or proposal to conduct research, (it) involves the intersection of philosophy, strategies of inquiry, and specific methods". In carrying out a research study, it is important for researchers to identify the philosophical stance that will influence the paradigm of research within which they will work. This stance will take in beliefs about the nature of reality (ontology), theory of knowledge (epistemology), and how knowledge may be gained (methodology).

Denzin & Lincoln (1994) argue that certain considerations address the adaptation of a particular paradigm. The choice depends on the context of the study and, most importantly, the nature of the research questions. The methods of inquiry are also shaped by the researchers'

philosophical understanding, experience and personal beliefs. This study explored the multiple meaning participants associated with the phenomenon of ICT CPD, I believed that it was only through interacting with the participants and placing my observation within their daily work place; I would gain access to their views, beliefs and meanings of such a phenomenon.

3.2.1 The Ontology and Epistemology of the Study

The general aim of the study was to develop an understanding of the participants' experience of the phenomenon of ICT CPD. The ontological assumption was that these participants will have a personal perspective, constructed through exciting beliefs, past experiences, decisions they make, and that no two individuals will experience the same events in the same way. According to Bryman (1984); Merriam (1988); and Maxwell (2009) reality is socially constructed and interpreted by people in their interactions with each other in the wider social systems (epistemology). Therefore, only through interaction with the participants, would I be able to interpret their perception of the phenomenon of ICT CPD. I, however, approached this interpretivist approach with caution, as it would bring to the fore my own understanding of the world and views on teaching – see the introduction.

3.3 The Research Paradigm

A paradigm concerns beliefs that inform the research actions, in this research an Interpretivism paradigm was adopted. Interpretivism views research as needing a strategy that respects the difference between human activity and physical behaviour. It is therefore, based on the assumption that researchers need to uncover the meaning of social actions. Interpretivism sees a phenomenon as bounded to a specific context, this to varying degrees makes it unable to be generalized to a larger population (Bryman, 2001). Meaning within an Interpretivist perspective is socially constructed through the interaction between

individuals, and is socially and historically negotiated (Creswell 2009). Qualitative research methods are often used as data collection methods within this 'paradigm', as they allow the researcher to go into deep social interaction. The use of qualitative research methods has been the main criticism for this paradigm. Qualitative methods are mainly criticized for being biased to the researcher's experience, lacking generalizability, and personally attached to the researchers' views. They lack reliability and would not yield the same results if carried out by a different researcher. An Interpretivist paradigm would lead this research into understanding how the participants adopt the use of technology in their daily teaching and their perception of ICT as they experienced through the CPD training course.

3.4 Case Study Approach

This study adopts a case study approach, "to explore in depth a program, an event, an activity, a process, or one or more individual" (Creswell 2009, p.13). Gerring (2004, p.342) points out that academics' attempts to clarify the definition of case studies has resulted is a "definition morass". However, a much sited definition is of Yin (1994, p.13) were he defines a case study as "an in depth inquiry that investigates a contemporary phenomenon within its real-life context." Yin (1994) distinguishes between different case studies, in which this classification is based on number, design and types, and Stake (1995), who classifies cases based on the nature of inquiry. Case studies have been classified based on number and design, single case or multiple case; holistic or embedded, and type; explanatory, exploratory and disruptive by Yin (1994). Single case design aims at understanding a unique or extreme event, whereas multiple case studies present different cases to find similarities and differences among them. Single-case study design is, generally, criticized because of the uniqueness of the case investigated; data collection might not reveal whether this case is

unique or critical. Therefore, a single case study design requires the researcher to investigate critically the characteristics of the case in order to maximize the chances of understanding the uniqueness of the case. On the other hand, multiple case study design has the benefit of contrasting and comparing and may offer a more general view of a phenomenon. However, in multiple case research, the unique cases being investigated can be analysed within each setting and across settings, which would be time consuming and expensive to conduct. As far as design is concerned, a holistic case study is concerned with understanding the global nature of a phenomenon in a context, where it has a single unit of analysis. One of the disadvantages of a holistic case study design is its inability to penetrate to deeper levels of the case to reach specific phenomenon in operational details. Embedded case study design, on the other hand, is when more than one unit of analysis is involved, in which attention is given to sub-units as well as the main unit of analysis. Embedded design is powerful when the aim of the study is to understand a phenomenon in context with different variables. Case studies are also classified based on type as explanatory, which seeks to understand real-life interventions that are too complex to explain through surveys. Exploratory case studies are used to explore situations where the interventions being evaluated have no single, clear set of outcomes. Descriptive case study design attempts to describe a phenomenon or an intervention within its real-life context (Yin 1994). However, Stake (1995) classifies case studies based on the nature of the purpose as previously stated:

- Intrinsic case study: carried out to gain a better understanding of the case, and not that of the uniqueness of the case in itself. The focus is on the relevant interest of the case to the researcher.
- Instrumental case study: the focus of study is not on the case itself; it is used rather to clarify our understanding of something else. There is a thin line between intrinsic and

instrumental case studies, as Stake (1995) points out what distinguishes one from another is the separate purpose of the case.

- Collective case study: as the name implies, it is the study of a number of individual cases within a context; the main aim is to generalize a theory over a large number of cases.

This study was an embedded multiple case study that was exploratory, explanatory, and descriptive in nature. It might be seen as an intrinsic case study. It sought to understand the impact of training on the participants' teaching practice through examining their classroom instruction in the university and school context. The use of a case study approach was valuable in that it could contribute to developing a theory, evaluation of the program, and development of the intervention.

The nature of the research question in the study required a deep understanding of the participants' views and attitudes to be explored through the analysis of qualitative data. In particular this study has a strong focus on attitudinal orientation towards ICT use and covering teachers' affective, behavioural and cognitive reflections on the use of technology. Although the study of teaching beliefs and ICT use is helpful in its own right (see for example Ertmer 2005) in order to provide a clearer and more focused study this study is bounded by an interest attitude rather than the much wider notion of belief.

The researcher agrees with Ulin et al. (2004) on qualitative methodologies, that they are more concerned with in-depth understanding though qualitative, as a concept does not rule out the use of simple surveys, the counting of data, and its representation in tables. To qualitative purists, however, the study does not seem to fall completely in one particular paradigm. In fact this is not unusual, for as McNiff, et al. (2003) point out, action research can be defined as a method that is directed at developing greater understanding and

improvement of practice over a period of time; it is not defined by the use of particular tools. Although this was not strictly action research based, a similar flexibility was shown in this study. One final consideration in designing the study was that as with action research I had a dual role of being the trainer and the researcher. The trainer role offered some opportunities for me to get closer to the participants and show flexibility in supporting the use of ICT but of course presents difficulties in distancing myself from the data.

3.5 Data Collection Methods

Creswell & Clark (2011) note that mixed methods research is a research design with philosophical assumptions as well as methods of inquiry. They argue that it includes assumptions that guide the direction and analysis of a combination of qualitative and quantitative approaches, and methodological focus on collecting and analysing data in a single study. Creswell (2009, p. 15) states that "recognizing that all methods have limitations, researchers felt that biases inherent in any single method could neutralize or cancel the biases of other methods." It is based on the view that quantitative and qualitative data can be combined to triangulate findings in order that they can be mutually corroborated (Creswell & Clark 2011). Qualitative and quantitative methods have been debated on the bases of their limitations in the methodology literature, however a combined approach to this research is appropriate in that it provides me with the best of both methods. Punch (2009, p. 290) rationalized using mixed methods by pointing out that "we can learn more about our research topic if we can combine the strengths of qualitative research with the strengths of quantitative research while compensating at the same time the weakness of each method."

For this reason, this research combined different data collection methods (as can be seen in table 3.1) and to some extent mixed quantitative and qualitative methods. The table presents the data collection methods used to address each research question.

Table 3.1: research questions and data collection methods used

RQ's	**Data collection methods**
How was the ICT CPD designed and implemented?	Questionnaires, Pre course Interviews Pre course interviews
What was the impact of the training on the participants' knowledge, behaviour and attitudes?	During course interviews Observations Focus groups
Can an ICT CPD have an impact on EFL teachers in Saudi Arabia?	Post interviews Observations Focus groups

3.5.1 Stages in Data Collection

As seen later in this chapter, there were two contexts in which data were collected for this study. The first context was an English department at a Saudi University and the second a secondary school in Riyadh, the capital city of Saudi Arabia. As for the stages of data collection, there were three stages in each setting as set out in table 3.2. The first stage was a pre-course needs analysis, which consisted of questionnaire survey and interview. The data generated were compared and contrasted to inform the ICT CPD design, content, and delivery. It also explored both contexts of the study in terms of motivation to teaching, teaching environment, ICT opportunities, and CPD offered. The second stage of data collection was to evaluate the ICT CPD in terms of the content and the process. Impact of the training on the participants' attitudes to the training and ICT knowledge was also addressed in this stage of data collection. The last stage of data collection was focused on addressing possible changes in practice through identifying potential adoption of ICT tools, ICT use patterns, and the participants' evaluation of use. It should be noted, however, that there were

two contexts for the study, consecutive cases of implementation (table 3.3) and data collection was carried out in the same fashion in both the university and school contexts.

Table 3.2: Stages in data collection

Stage	Objective	Methods	Number of participants
Pre course	Needs analysis to address potential number of participants and design appropriate training that is based on individual needs. Interviews to explore opportunities and constraints in both contexts in relation to ICT and CPD.	Questionnaires	Uni=18 School=10 Total: N= 28
		Interview	N=14
During course	Evaluation of the ICT CPD in terms of the contextual issues, tools/application presented, online training and impact on the participants' attitudes to professional development and knowledge of ICT use.	Interview	N=14
		Observation	N=5
Post course	Identify possible changes in practice (ICT adoption, use patterns and evaluation of use)	Interview	N=12
		Focus Groups	N=4 groups discussions

The study was set out to evaluate an ICT CPD intervention in a university context. However, as the staff members were reallocated to different departments in the university, some of them had to opt out of the training, as they had a larger number of teaching hours and were undergoing a transition by being allocated to a new teaching environment. For this reason, and for sake of broader understanding, the study spread out to consider another context. Some school EFL teachers showed interest in taking part in the training and proposed their school as a second context of the study. As we will see later, ten potential participants were approached with the idea of the ICT CPD; the training only appealed to six participants and these agreed to take part in the training. The stages of data collection followed in the same manner as with the university context although with different starting and ending dates as can be seen below.

Table 3.3: Programme schedule in both contexts

Date		**Objective**
University	**School**	
18-22 /8/12	1-5 /9/12	Introduction week
1-9 – 26/12 /12	8/9/12 – 2/1/ 13	Delivery/evaluation of the training
29/12/12– 2/1/13	5-9/1/13	Evaluating impact on practise

3.5.2 Surveys

According to Creswell (2009, p.143) a survey design provides "a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population." A survey approach was adopted in the preliminary stages of this research, through a questionnaire that informed the participants' needs of the training course, willingness to attend the course, and content of the course. In order to examine the participants' training needs, a needs analysis questionnaire was administrated prior to the design of the ICT CPD. Barbazette (2006, p. 5) defines needs analysis as the "process of collecting information about an expressed or implied organizational need that could be met by conducting training." A point of debate is how needs are represented and what characterizes needs. Bradshaw (1977) addresses this issue by classifying needs as expressed, felt, and comparative needs. A needs analysis questionnaire was administered to evaluate felt needs by the participants. The aim of this stage of data collection was to assess and evaluate the participants' past and current experiences and training needs.

In total 18 pre-course questionnaires were handed out to potential participants, which represents the total number of teaching staff in the English department. The questionnaire items were divided into sections addressing demographics, such as age, qualifications, teaching experience, and general computer use. Other sections addressed the participants' applications skills, and general knowledge of ICT tools, opportunities and constraints on ICT

use. The final section was mainly intended to deal with past training experiences and their intention in attending future CPD programs, including some insight into the preferred delivery method, content, and design of the training. A summary of the questions in relation to the design of the ICT CPD is provided below and the full questionnaire is provided in appendix 1.

Table 3.4: Summary of needs analysis survey in relation to the ICT CPD design

Design of the ICT CPD	**Questionnaire question example**
What content would you like the training to cover:	● Using blogs ● Management tools ● Creating out of classroom material ● Using online presentational tools ● Using wikis ● Using online discussion tools ● Others
What would be your preferred training methods:	● Hands-on demo ● A focus on "how the tool works" ● A focus on the use of the tools for teaching ● Self-access online ● Instructor demonstration
How long would you like the training to be for:	● Single event ● Small number of events ● Small number of event with classroom support ● Longer accredited course

The needs assessment questionnaire tried to cover all-important themes reported in the literature regarding designing and delivering training initiatives. Some of the items presented were open ended to allow the participants to express their thoughts on previous training events, which gave an indication to their previous negative or positive take on training in general and the design of the course. This shall be discussed later in the following chapter. On the basis of this work, a programme was designed around eight practical workshops that

introduce so-called Web 2.0 applications that can be used in the EFL teaching context (see appendix 2).

The content of the course focused on the introduction of Blogs, Wikis, and online platforms, as these were tools/applications that the lecturers reported as part of their training needs. The course did not attempt to 'sell' one approach to language learning rather teachers were asked to develop their practice with technology as appropriate to their needs and environment. This was seen as possibly generating a tension, as the objectives of each session was not to model a particular approach to using an application or tool but to show that other approaches were possible. A further tension from planning the programme was that the participants' reported valuing hands-on demo presentation of the tools/applications with classroom support if needed. This was understandable but could lead to designing a technology-led approach. In order to relate the tools/applications to the classroom context, participants were encouraged to provide examples of how they had adopted different tools/applications in their teaching.

Out of the 18 potential participants in the university context, only eight agreed to take part in the training although all 18 showed prior interest in attending the training. However, when setting up the training web page, ten participants opted out due to time restriction and unanticipated workload. Although this was disappointing, in retrospect it was inevitable given the non-compulsory nature of the training. However, this meant that the study was one in which people were interested in using technology in their teaching. In order to address the possible shortage of data due to the reduced scale of the intervention offered, I decided to carry out a similar study in another context, that of school. When discussing the condition to one of the university participants, he suggested carrying out a similar study in the school context and even suggested a particular school. In the school context, ten EFL teachers were e-mailed the questionnaire, and the purpose of the study was explained to them. However, the training only

appealed to six teachers, who agreed in taking part in the study. From both contexts, a total of 14 participants took part in this study and completed the ICT CPD training, while two teachers' opted out during the course.

3.5.3 Interviews

According to Punch (2009) interviews are the most prominent data collection methods within qualitative research. He also points out its ability to access individuals' perceptions, meanings, and construction of reality. Interviews are defined by Kvale (1996, p. 14) as "an interchange of views between two or more people on a topic of mutual interest, sees the centrality of human interaction for knowledge production." Interviews are generally categorized on the variation of the degree of the structure during the interview (Punch, 2009) structured, semi-structured, and unstructured. Structured interviews, as the name implies, are scheduled by the interviewer in order for the interviewees to receive the same stimulus from the questions. Therefore, all interviewees will experience the same sequence of questions. Generally, questions in a structured interview are specific and offer a range of answers for the interviewees (Bryman 2001). Semi-structured interviews differ from the structured interviews, in that they allow the interviewer to ask follow-up questions that rise from the interviewees', and thus do not follow a schedule strictly. Questions in this type are more of general nature. Unstructured interviews, on the other hand, do not follow a schedule or a sequence of questions; they cover a number of the main issues or topics of the research through an informal setting. As far as this study was considered, a semi-structured interview approach was used to allow the researcher to follow up any other issues that arose from the participants' responses (see appendix 3). This approach could be justified by the fact that the training course, feedback and insight from the participants on the training course, the delivery of the course, and the content had to be developed along the way. Bryman (2001) also points

out the importance of rapport, which means a good relationship with the respondents, as it encourages them to take part in the interviews. This relationship should allow the respondents to maintain an interest in taking part in this study.

As parts of this study were carried out while I was in the UK, online data collection methods were seen as appropriate for conducting interviews, focus groups and observations. Hine (2004) claimed that online research methods have generated more interest over the last decade and O'Connor et al (2008) pointed to the potential and the value of adopting online research methods in that it allows to compensate for distance and space between researchers and participants. Although all the pre course interviews were face-to-face, during and post interviews were carried online. In carrying these interviews, Mertens's (1998) recommendations regarding telephone interviews were followed. In that, before carrying out an interview, a suitable time for the interview and the use of the online medium was discussed and agreed upon with the participants. When an online call was established, usually using Skype or Facebook call service, the participants were informed of the purpose of the interview and a description of the questions was provided. The use of a voice recorder was mentioned and they were assured that the data will only be used for research purposes.

Reflecting on the context of the study and the fact that I was a student and a current lecturer, I believe that there was a good relationship between the participants and I. However, too much rapport could lead the interviewees to concentrate on pleasing me as a researcher more than reflecting their 'true' views. As this study tried to evaluate the ICT CPD intervention, pre, during and post-course interview stages were built around the evaluation levels. The framework for evaluating ICT CPD in this study was adapted from Kirkpatrick (1976) and Stufflebeam (1983). The former developed a four-level framework for evaluating training programs to measure changes that occurred as a result of training. This focused on

participants' reactions to and satisfaction with the training; participants' learning including new knowledge, skills and attitudes; and changes in behaviour as the extent to which participants adopted ideas, practices and strategies. Kirkpatrick's (1976) framework has been adapted to overlap with Stufflebeam's (1983) framework, which focuses on four main elements: context, input, processes, and product. In this model context refers to the identification of problems, needs, and opportunities that can guide programme planning. Input evaluation refers to allocation of resources to the evaluated program, and also allows for the evaluation of alternative strategies to achieve programme goals. Process evaluation focuses on implementation, while product evaluation focuses on teaching outcomes. The first three levels of Stufflebeams' framework comprise the first three levels of evaluation in this study, namely, context, input, and process. As for Kirkpatrick's framework, reactions, learning outcome and change completed the framework adopted in this study. Following from this, a detailed description of the interviews will be discussed.

3.5.3.1 Pre-Course Interviews

As detailed previously in the needs analysis section, the pre-course interview was meant to try and uncover the nature of the participant in terms of teaching motives, perception of students, as well as an overview of their teaching practice and current use of ICT and CPD. In total 14 pre-course interviews were carried out to assist in the identification of problems, needs, and opportunities in order to guide programme planning, design, and delivery. As explained earlier, the purpose of this stage of data collection was to highlight the participants' needs and develop a general idea of the context. A semi-structured interview approach was used to allow the researcher to follow up any concerns or issues raised or pointed to by the participants. For example, when discussing the participants' past experiences with CPD courses at the university, some participants raised the issue of the mismatch between the training offered and the facilities available in the department and school. Generally the interview questions

included some items regarding the participants' motive for teaching and how they became teachers, their perception of students, constraints and opportunities at the department and school, past experiences of CPD, evaluation of courses attended, and the possibility to attend future training events. Each interview lasted approximately 30-50 minutes, with all participants, with whom I contacted and arranged the interview to be during work hours and at a convenient time. The interviews were semi-structured as justified previously. As for coding and analysing the interviews, a detailed description will follow after presenting all three stages of interviews.

3.5.3.2 During-Course Interview

As discussed earlier in the evaluation framework adopted for this study, the stages of the evaluation also informed the interview questions, analysis and coding of the data. During this stage of data collection the context of the study, content of the training, process of delivery, reaction and satisfaction of the training, learning outcome, and change were the main themes of analysis. This approach allowed me to focus the interviews on specific elements of the training and gave me a systematic way of conducting the interviews. All of the participants were interviewed at this stage online as to provide more flexibility for the participants and to compensate for the geographical distance, as I was not available to be in SA during the entire time of the training.

The sections of the interview covered the six levels of evaluation. For example, in the context section, the participants were asked about the curriculum, type of students, class time, class size, and leadership support. The purpose of this section was to examine how the participants viewed their teaching and work-place environment, to give an indication to any concerns and conditions that may be viewed as constraints to ICT uptake and use of ICT in the language classroom. The second section of the interview focused on the input and content of the training.

It allowed the participants to reach conclusions about the content and gave indications of future use and attitudes towards using different application. This section also focused on identifying the different application and tools that the participants used or favoured. Questions in this section included, What tools have you enjoyed using? What tools have you used or tried to use? How did it go? Did you face any difficulties in using the tool? The third section dealt mainly with the process of delivering the training. The online platform was agreed upon to be a suitable approach for the training as it allowed the participants more freedom and room in learning about the tools in their own time. This section of the interview focused on the participants' views on the online approach and how they felt about engaging in an online learning platform. Questions in this section included, What do think of the online design of the training? Did you enjoy discussions online? What do you think we should do differently in terms of the design of the training? It should be pointed out that the design of the training appealed to all the participants, however, one participant opted out, as he did not enjoy being part of an online community. The fourth section of the interview was intended to deal with the participants' reaction to and satisfaction of the training in general. Specific questions on reaction in general and satisfaction of the content, design, and delivery were asked in this section. For example, What have you enjoyed so far in the training? What development should we make in regards to the content, delivery, and design? Of course during this section, development issues were discussed with the participants regarding the online community. For example, a number of participants thought that a combination of face-to-face and online sessions would benefit them. However, this was not possible, as I was in the UK at that time. The fifth section of the interview focused on the learning outcomes of the training. In this section, the participants were asked to evaluate their use of different tools and applications. For example, What tools have you used? How do you evaluate their use? How do you see your ICT use now? During this section the participants gave detailed account of the tools and

applications they have used and the reactions of their students on that use. In general terms, the participants also stressed positive and negative attitudes towards applications and tools, which will be discussed in the analysis chapter. The last level of framework was evaluated after the completion of the course, and will be discussed in the following section.

3.5.3.3 Post-Course Interviews

The third stage in the data collection was the post-course interviews. This stage was carried out with all the participants in the study. Generally, interviews were semi- structured and conducted online and lasted from 30 to 45 minutes. The aim of this stage was to evaluate changes in the participants' practice after attending the ICT CPD course. Questions in this stage focused on asking the participants if they had adopted using ICT in their teaching practice, developed new use strategies, and their evaluation of ICT use in the language classroom. Questions in this stage included: How do you see the impact of the training on your teaching? How do you evaluate your ICT use now, after you have attended the training?

The post-course interviews were followed by group discussions as to give a much-detailed view of the ICT CPD in general and change in practice in specific.

3.5.4 Observations

Generally, observations are methods that are used to record actions in their real life context (Cohen, Manion, & Morrison, 2000) as they give the researcher the opportunity to discover the participants' real life practice. In the literature on data collection methods, observations have been classified as quantitative and qualitative; based on how structured or unstructured the observation is. Quantitative "structured" observations follow a precise scheduled structure, through which there are pre-established categories that shape the observation (Bryman 2001). On the other hand, qualitative "unstructured" observations do not follow a

particular schedule, as they aim at recording a large amount of details in order to develop a narrative account of the behaviour (Bryman 2001). When analysing unstructured observation data, categories and concepts are generated from the data rather than being imposed on the data from the beginning. Online or e-observations have been increasingly used as a result of the widespread adoption of technology in general and in social research specifically. Mann & Stewart (2000) argue that using technology can enhance and transform many aspects of research, including data collection.

In this study, observations were used as a method to discover what participants could not have said freely in the interviews; it was through this method that I was able to gain a credibility check on the participants' views towards using technology in their teaching practice. However, measuring the impact of training by observing the participants' teaching does not necessary indicate that this "change in practice" was an outcome of the training. Therefore, data from the observations helped trigger interview questions on how a particular participant integrated technology in his teaching. The nature of the content of the training also made it much easier to observe the participants' uptake of technology. For example, the participants were encouraged to share their use of tools/applications within the group and this allowed me access to observe the interaction that took place on that platform. Most of the observations were online as classroom observation was not possible, because I was in the UK during that stage of the research. However, they allowed me to draw on accounts of classroom practice that seemed credible. The data generated from the observation was a meaningful input in following up with the participants during the interviews and training discussion. During the interviews and group discussions, data generated from observations allowed me to ask participants to justify and explain why they had used certain tools and applications for different classes. For example, in observing an

online Wiki, the participant was asked how he had used Wikis in teaching and what benefit it served him.

During the five observations that took place in this study, a structured schedule (see appendix 4) was used to allow me to gather as much details as possible. Generally, I would look at the tool or application use, teacher role, purpose of using applications, students' engagement, and the relationship between the application and teaching methods. Notes taken during the observations were grouped under different groups. For example: application use, interaction, engagement, and awareness of use. The value of these observation prevailed in judging the overall impact of the training and whether the participants reported what they said during the interviews. Of course a number of applications were introduced and observations were conducted among different classes, where different application or tools were used. However, as we will see later, not all the tools and applications appealed to the participants equally and thus the observations would be seen as a personal credibility check for individual participants' use. Having said this, the data generated was still very valuable during the focus groups.

3.5.5 Focus Groups

As detailed later in the analysis chapter, four online focus groups were conducted with the participants. Focus groups or group discussions are a method used within the premise of qualitative data collection (Morgan 1997). Berg (2004, P.123) defines a focus group as "an interview style designed for small groups". The value of using a focus group in research is that it allows interaction to be built around discussions and group members can comment and brainstorm form other group members' comments (Berg 2004).

In this research, the online focus groups were valuable in providing a deep understanding of the participants' attitudes, use patterns, views, and to confirm their ICT uptake through the training. Focus groups are criticized on the bases of analysing the data it generates. The main concern of this debate is whether the data should be analysed in the same manner as interviews, or should it be analysed differently due to the nature of interaction. In this research, the data generated from the focus groups were treated in the same manner as interviews. Generally, the focus groups were conducted online and lasted between 30 to 45 minutes. The discussion was initiated by the researcher and tackled three aspects: an overview of the training, tools implementation, and attitudes towards using ICT in EFL teaching context. The general view among the participants was that the ICT CPD course was a first step towards better utilization of ICT in the context, and that it led to a change in the way they viewed themselves and their students. The data generated from the observation triggered questions regarding application use, where participants reported on their views of different applications and how applications would be used in certain teaching objectives. A detailed description of the focus groups is provided in the analysis chapter.

3.6 Coding and Themes

In qualitative research, coding is defined as the "systematic way in which to condense extensive data sets into smaller analysable units through the creation of categories and concepts derived from the data" (Lockyer 2004, p.137). In other words, it is the steps taken by the researcher to assign meaning to words or phrases generated from the qualitative data. There are different approaches for coding qualitative data, for example a top-down or a deductive approach involves using a coding protocol, which is then applied to units of meaning. Inductive or bottom-up approach requires reading the interview transcripts and assigning codes to units of meaning where it could be words or phrases. As pointed out

previously in the evaluation framework adopted in this study, the six levels of evaluation also informed the coding of the data. A deductive coding protocol was developed around six themes, context, input, process, reaction and satisfaction, learning outcomes and change (see appendix 5). The pre, during and post-course interviews data were reduced into these themes. An inductive coding process began to represent these themes into sub-themes that emerged after examining the transcripts. Sub-themes were revised, grouped, and tested against an example of the transcripts to determine their fitness to the meaning. After reaching a coherent coding protocol, the final process was to code all interview transcripts. During this process of developing the coding protocol, different issues emerged. Firstly, the experimenting process allowed me to uncover different meanings and develop a deeper understanding of the context. If it was not for this process I would not have been able to analyse the data as I have done. Secondly, the process allowed me to develop a systematic way of looking at the transcripts, in that it reduced the subjectivity of the process and made me more aware as to how my background and knowledge of the context might be influencing my coding.

After reaching the final coding protocol, all transcripts were uploaded to Nvivo, an electronic coding software that allowed me to store, organize, manage, and reproduce the transcripts. All of the participants' names were anonymized and alias names were used in the scripts, however a table containing their true identities, including names and aliases was kept on a separate storage system so that I could attribute correctly. Using Nvivo I was able to create a project that was named ICT CPD, import the interviews, and categorized them under pre, during and post-course interviews. Under each interview, the scripts were important accordingly. The software allowed me to reproduce the coding protocol into nodes and sub-nodes. Through these features, I was able to assign codes to the appropriate units of meaning from the transcripts. After completing the coding process and during the analysis I was able to access each theme separately and bring up all the coded units of meaning of the scripts, as

will be seen in the analysis chapter. In assigning the themes, I had to summarise and describe different themes based on my own understanding and interpretation of what it represents and what it stands for. For example, in the pre-course interviews, participants responded to interview questions that asked about the teaching environment in general. Their responses varied as they saw different obstacles and challenges. As we will see later in the analysis chapter, codes such as students' perception were assigned to units of meaning that address issues with the students in terms of their language level and motivation to learn English. This, however, raises issues with reliability as my own understating and interpretation is bound to my experience and background. Following from this, I give a detailed discussion of reliability and validity of my research below.

3.7 Reliability and Bias

Evaluation of social science is mostly related to validity, and is concerned with the integrity of the conclusion of a study; and reliability, which address the question of the results being repeatable (Bryman 2001). These criteria are applied to quantitative research, where validity is distinguished into internal and external validity. Internal validity relates to the issue of causality in the relationship between variables and addresses the question of whether such conclusions about this relationship is valid or not. In contrast, external validity is more concerned with generalizability of the research results beyond a specific context. Reliability addresses the question of whether the results of a particular research can be repeated. Lincoln & Guba (1985) addressed the issue of evaluating qualitative research by proposing trustworthiness as criteria for such evaluation. Trustworthiness as criteria of evaluating qualitative research runs parallel with quantitative research evaluation criteria, so that credibility is broadly matched to internal validity, transferability to external validity, dependability to reliability, and conformability to with objectivity. However, recognizing that

the research bias could affect internal validity (Lincoln & Guba, 1985), I have identified my worldview and my theoretical assumptions previously. I have maintained a trustful relationship with the participants of the study, as they were my teachers and are my colleagues now.

3.8 Contexts of the Study

As we have pointed out in this chapter, the study was set to address the evaluation of an ICT CPD intervention to examine EFL teachers' uptake of ICT in the university context. It was however carried out in a school context as well. Participants in the first phase of my study consisted of EFL lecturers in a teachers' training college, which is part of KSU. At the time of the study there were 27 teaching staff members in the university context, six of whom held a PhD degree, 11 an MA degree, and 12 others teaching certificates. In terms of background, they came from different countries; three were from English speaking countries (England, Canada, US), 12 area Saudi citizens, and five other Arab countries. All of the non-Saudi staff members were recruited on the basis of their qualifications and experience. The department recruitment committee holds meetings at the end of each academic year to discuss future recruitments' needs. As for the Saudi staff members, they were recruited based on their high grades in their BA programme. Typically they teach a full academic year as a teaching assistant (or lecturer) and after that they are granted full scholarships to pursue higher studies. In 2011, there were only two Saudi teaching staff members in the department; all of the remaining Saudi national staff members were pursuing their PhD degrees. Most teaching staff members had more than five years of teaching experience. As for 2012, when the idea of ICT CPD was introduced, there were 18 staff members in the department. Those taking part in the study are summarized in table (3.5) below. Following that is a pen portrait of each participant based on his background, challenges in the context, technology use and his activeness in the ICT CPD.

Table 3.5: Biography of the university context participants.

University context	**Biography details**
UT1	Is a Saudi national in the (20-29) age group, on a long contract, holds an MA
UT2	Is an overseas national in the (20-29) age group, on yearly renewable contract, holds a pre master degree
UT3	Is an overseas national, in the (30-39) age group, on yearly renewable contract, holds an MA degree
UT4	Is an overseas national, in the (40-49) age group, on yearly renewable contract, holds a PhD degree
UT5	Is an overseas national, in the (40-49) age group, on yearly renewable contract, holds a teaching diploma
UT6	Is a Saudi national, in the age group (30-39), in a long contract, hold an MA degree
UT7	Is a Saudi national, in the (30-39) age group, in a long contract, holds an MA
UT8	Is a Saudi national, in the (30-39) age group, in a long contract, Holds an MA

- UT1: explained that he saw teaching as based on a mutual relationship of respect between teachers and students. He criticized the college syllabus changes over the last year, which marked the college joining KSU on the grounds that the five-year programme was more focused on English as a second language more than the teaching of English as a second language. He avoided using technology with his students as he 'wanted to keep a distance between teaching and social life,' and had worries about students' exposure to inappropriate vocabulary. He was sceptical about the MOHE's efforts in promoting e-learning in the university. For example, feeling that if more focus on ICT was to be promoted then ICT experience should be a condition of entry. He also felt that rewards were given to staff for trivial use of ICT. He turned out to be one of the most interested participants in social media platforms.
- UT2: he was directed to a teaching profession, as his grades were average in his university studies. Besides his job as a staff member he managed the department Facebook group and posted recent news, exam dates, and all information that is related to the department. He believed that the course books restricted any of use of supplementary

material. As a language teacher he thought that class sizes for the first two semesters were too large for the computer facilities in the department. He avoided using technology in some of his classes as he did not have the knowledge to set up such application use. It is also worth mentioning that he had postponed his MA studies in order to start teaching in the department. He turned out to be one of the most enthusiastic users of ICT tools.

- UT3: was also 'directed' into teaching. He thought that a turning point in his technology use was the teaching of the CALL course, as he became more aware of what technology has to offer for the language classroom. He criticized the university's policy on technology use but his enthusiasm towards technology had made him one of the most active participants in the training, and although his interaction with other participants and the researcher was low, he showed signs of interest by asking questions in the discussion group.
- UT4: He pointed out that he was very fluent in English in high school, and he decided to complete his university studies in a subject that he was good at. His motive to teach was that it was a family trade as his father was a teacher himself. He saw technology use as important to allow students to engage in real life situations. Compared to his previous work he did not see teaching at the college as a challenge. His dedication to implementing ICT made him one of the most frequent users of technology. He used a number of tools/applications to address his students' needs.
- UT5: He had a previous job as a translator in the Saudi army and then moved to a teaching position as it was 'less demanding' and he wanted to pursue a higher degree. He believed that teaching translation was more demanding and therefore expected high engagement and participation in his classes. He regarded technology use as very valuable to his teaching. He was knowledgeable of different applications/tools and turned out to be one of the most frequent users of different ICT tools.

- UT6: he held a teaching diploma and was appointed as a language teacher in the department. Besides his teaching, he was responsible for the graduates' practicum supervision course. He preferred to work in Saudi over a position abroad for a number of reasons, such as family stability and financial benefits. Most of his courses were designed for beginner students from other departments. He saw technology use for teaching as very complicated. He opted out of the training course during interviews and made little use of technology. His views on technology use were that it distracted learning although he reported using some tools/applications in his teaching.
- UT7: He was approached by the university before his graduation and was offered a teaching position, as his grades were good. Teaching literature influenced his thinking on language and he saw languages as a window to different cultures of that language, and used technology to facilitate such views in his teaching. His technology knowledge and skills helped him transform his teaching and 'made teaching more enjoyable'. He broke technology use into three factors: the teachers' readiness to use technology, students' willingness to engage in such classes, and course flexibility. He contributed heavily in the online discussions and provided very creative examples of his ICT tools use.
- UT8: Being a student at the department and scoring a high GPA, he was offered a teaching job in the department. He taught all of his classes in the English club and he relied on technology use in almost of his classes. During his studies abroad, he became aware of online presentation applications. After returning to the department, he transferred his experience to his teaching.

The second context of this study was a secondary school in the city of Riyadh. In the school context, 10 teachers were assigned to EFL teaching. The participants in this study were 6 schoolteachers, with a minimum of four years of teaching experience. All 6 schoolteachers

hold a BA in EFL teaching degrees from Saudi. Two of the participants were pursuing their MA degrees at Saudi universities. Table (3.6) below gives general information of the school teachers who participated in this study, followed by pen portraits that provide general background information similarly to the university context participants.

Table 3.6: Biography of the School context participants.

School context	**Biographic details**
ST1	Is a Saudi national in the (30-39) age group, has been a teacher for four years
ST2	Is a Saudi national in the (30-39) age group, has been a teacher for 11 years
ST3	Is a Saudi national in the (30-39) age group, has been a teacher for ten years
ST4	Is a Saudi national in the (30-39) age group, has been a teacher for eight
ST5	Is a Saudi national in the (30-39) age group, has been a teacher for seven
ST6	Is a Saudi national in the (30-39) age group, has been a teacher for nine

- ST1: explained he had a previous job at a bank for a year after graduating from teachers' college, but wanted to switch to teaching because it was less demanding and the teaching working hours were less compared to the private sector. He had taught for almost four years. He was using ICT in his teaching before the training and saw technology as a necessity in this context. He found that offered CPD in the past was weak as it lacked follow up, and he had criticisms regarding the professional preparation of teachers. He showed high interest in ICT and technology use in the classroom. He turned out to be very cautious in his technology use.
- ST2: explained that he chose this career path as it was less demanding. He has taught for 11 years and wanted to teach for two more years, where he would retire and become committed to the family business. As for his annual evaluation, he did not show any sign of concern even if he had a poor evaluation, as there were no consequences to such reports. He showed a reluctant use of technology with his students, and stressed that he

had used Twitter, as it was not demanding to use. It was worth noting that this participant was very passive in the training group.

- ST3: taught for 10 years in two different schools, and was trying to apply to pursue a MA degree in English. He trialled some of the tools/applications presented. His motivation for teaching was remarkable; in that he spent extra hours helping students develop their language skills through out-of-school classes. His contribution to the training was very clear through encouraging other participants to share their experience and try different tools. His comments were very valuable as they portrayed a deep understanding for the context and for students' level of English. He turned out to be one of the most enthusiastic users of ICT tools.
- ST4: showed great interest in the training opportunity. He evaluated all of the applications and started using the application that suited his needs the most. He was well aware of what each tool/application had to offer him or his teaching. Although he was very active in the training, his technology use was limited as he explained that he did not want to rely on technology in his teaching. He turned out to be very cautious of his technology use.
- ST5: he had taught for 7 years, and had a degree in English language translation and had to take a teaching diploma to get a teaching position; he was very motivated regarding the quality of his teaching and initially did not start using ICT with all of his classes. He was very active and engaged in the discussions, made broad use of the ICT tools, although he believed that technology could expose students to unwanted input.
- ST6: he had a degree from the teachers college and had taught for 7 years. He had used some sort of technology with his students, mainly mailing groups. He viewed technology as a distraction in the teaching and learning process. He was one of the most sceptical participants of the training, as he did not enjoy the ICT CPD design in general and does

not believe in technology use. He turned out to be one of least interested participants in the training although he used the tools presented more than once before he withdrew from the training.

A follow up of the participants' attitude and use patterns are provided in the discussion chapter in this thesis, where further pen portraits are provided to evaluate the participants' development as a result of the training.

3.9 Ethical Considerations

Ethical issues may arise at any stage of a research depending on the investigated problem and case. Diener & Crandall (1978), break down social research ethical considerations into four groups, in which these groups helped me assess my ethical considerations:

3.9.1 Harm to Participants

This is concerned with the participants' being harmed physical, emotionally, and being under stress. It is also concerned with the confidentiality of data that might harm the participants' states or position, especially when dealing with teacher participants. In this study, the participants' well-being is not at risk by taking part in the training course. However, and specifically with qualitative methods, teachers' views can be traced back to them, and particular care has to be taken with regards of the possibility of identifying participants. The nature of the research question demands the participants engage in critical conversations of the teaching context of the study, which would demand me to keep assuring them total anonymity of the data. The table containing their true identity is safely stored and protected with an encryption. Other issues such as emotional harm were also crucial in the data collection process. Different beliefs and interpretations of the world were respected, acknowledge, and recognized as personal perspectives.

3.9.2 Informed Consent

For this research to take place I had to gain permission from King Saud University, Warwick University and the participants consent to take part in this study. Prior to data collection I obtained a written consent from my sponsor (King Saud University) to proceed with the data collection; this was mainly obtained by providing a brief introduction of the research, research methodology, ethical considerations, and a timetable for the data collection dates. Similarly, I had to submit an ethical form to the ethics committee at Warwick University prior to my upgrade procedures. Where the committee allowed me to take the research forward while recommending I update my supervisor during the data collection stages. Informed consent was also obtained from the participants before attending the course, by which they agreed to take part in this study. As for the school context, the participants volunteered to take part in the training, where a written consent was obtained from the school administration and the participants. The aim of the study was discussed with the participants and they were assured that the data generated by them was only to be used for research purposes.

3.9.3 Invasion of Privacy

Online classroom observations were used as a method for assessing the impact of ICT training on the participants' teaching practice, which raised ethical issues related to access and privacy. Teachers were encouraged to share and provide access to their online classes where technology has been used, for example Wikis. Issues of privacy are related to anonymity and confidentiality of the data being obtained, raising the participants' attention to the fact that the data recorded were kept anonymous and saved securely by the researcher. The participants were also reminded that they held the right to withdraw from the study at any time. As for the interviews and focus groups, the participants were insured

that they held the right to withdraw from the interview at any point and not provide answers to sensitive questions being asked. As the study's could reveal private views that teachers might not like to be see publicly presented; their privacy was respected

3.9.4 Deception

This is mainly related to the research measuring what is discussed and informed to measure. In this study, the study was set out to measure the impact of training on the participants' teaching practice, and they were assured this was the main aim of the study. Other ethical considerations are taken into account, which mainly deal with the participants' agreeing on a mutual time for the training sessions.

3.10 Reflection on data collection methods

As a number of unconventional data collection methods, i.e. online interviews, observations and focus groups, were used a number of limitations in data collection should be pointed out. Although qualitative research methods allow the researcher an opportunity to explore in-depth the participants' emotions, values and experiences; data cannot be easily generalized. Bianco & Carr-Chellman (2007) further assert that useful data can be obtained through e-inquiry but, in regards to online interviews, there are challenges in relation to interview design, building rapport, the medium used and research ethics (O'Connor et al 2008). Through all the online interviews carried out I addressed these challenges accordingly. In respect to the interview design, I contacted the participants individually to set up a convenient time for the interview, once an online call was established, I welcomed and thanked the participant for their time, reminded them of the reason for the interview, explained the nature of the questions and the estimated time of the interview, clearly pointed out their right to withdraw from the interview and reminded them that the call will be recorded and assured

them that the data will be used for research purposes only. As for building a good rapport online, with the absence of facial expressions and visual cues, I was able to build on my past relationship with the participants and interact freely with them. In relation to the limitation of the online medium used for the interviews, the participants were allowed to choose the medium that suits them the most and I had to accommodate their choosing. As for online observations, Bianco & Carr-Chellman (2007, p.308) believe that "observing individual students in their home space will offer a significantly deeper understating of the experience and setting that learners engaging in online courses". Thus, the online observations in this study served as a credibility check of what the participants may have not said freely in the interview and generated follow up questions for the next stage of interviews. Liang (2007) also discuss the advantages and disadvantages of e-observation, in that she points out that online observation are flexible in relation to time and place to observe; open possibilities to observe a number of research sites; limits the degree of invasion of classroom space and is more successful in accessing authentic data. She also raises the issue of physical absence and interaction, which reduces the quality of the data. Nevertheless, she concludes by pointing out that e-observation should be used as a complementary method to other data collection methods.

Turning to online focus groups, one limitation was of moderating the discussion and allowing the participants time to comment and debate through the focus group. This was approached with great care as to allow adequate time for participants to debate and counterarguments were dealt with great delicacy as to not offend any group member. The overall reflection of the data collection methods used is that by employing these different data collection methods I was able to develop a better understating of the participants' emotions, feelings, and attitudes about the use of ICT in their teaching.

3.11 Summary

To summarize the methodology of this study, to the purist it does not appear to be 'proper' action research, as I am detached from the context albeit I have designed and delivered some sessions and offered support for colleagues. Perhaps the best way of summing up the study is that it is a bounded case study with an interventionist agenda. It adopted an Interpretivist approach and is descriptive and exploratory in nature. The research was not testing a hypothesis about take up of ICT but took a more exploratory and grounded approach. However, it is not grounded theory as I had read a fair amount of literature to inform my study, and this had already sensitized me to likely interpretive frameworks.

CHAPTER 4: ICT CPD DESIGN

The main aim of the training intervention was to provide EFL teachers with knowledge necessary to implement ICT in their teaching practice. Koehler & Mishra (2008) developed TPACK as a model to address the essential knowledge required by teachers to implement technology in their classes, and this informed the design of the training in the following way:

- Technological knowledge: the participants' use of technology in general was examined through the needs analysis questionnaires and the pre-course interviews to determine their computer-use skills and their general technical understanding. Generally, individuals differed and had a range of experiences and attitudes towards computers and technology use. However, the general view among the participants was that they were computer literate and their use of ICT covered both personal and educational use. Based on the needs analysis I made the decision to introduce a number of tools/applications in the likelihood that some would appeal and be new to the participants.
- Content knowledge: as all of the participants were EFL teachers, I therefore made the decision not to investigate this knowledge base explicitly in the program, though of course some participants did have varying levels of content knowledge and in some cases content knowledge appeared much weaker than in others.
- Pedagogical knowledge: all of the participants were teachers for at least four years and their pedagogical knowledge was explicit in the teaching practice. Again, the teachers' knowledge of teaching methodology and approaches to teaching were varied, as participants were differentiated in terms of backgrounds, origins, motive to teaching, and teaching practice; though their commitment to educational change was not assumed. Again I needed to acknowledge their pedagogical experiences and the fact that I could not present myself as an expert in pedagogy.

- Pedagogical content knowledge: as with pedagogical knowledge, participants' views of EFL teaching methodology could lead to tensions if not aligned to the design of the ICT CPD intervention. I therefore made the decision to present tools/applications that could provide different approaches to language teaching.
- Technological content knowledge: ICT CPD initiatives should be focused on how technology can present the content in different ways that may appeal to the teachers and students differently. The knowledge base allowed the participants to reflect on their tools/applications use and share such experience in the online community. I therefore made the decision to encourage the participants to share and reflect on how and why they have used different tools/applications in their teaching.
- Technological pedagogical knowledge: I attempted to present to the participants different tools and applications that might aid them in demonstrating content in different forms and ways. However, I also wanted to address the issues of pedagogical reasoning for using such forms and, for example, how this would influence the teacher to use a certain tool or application for a certain teaching objective. I therefore made the decision to explicitly introduce tools/application in the context of language teaching.
- Technological pedagogical content knowledge: as a model TPACK is a holistic view of the knowledge necessary for implementing ICT and technology in the teaching context. and I made the decision to evaluate the changes in the participants TPACK as a result of the training.

4.1 Needs Analysis Questionnaires

The ICT CPD design began with a needs analysis that was administrated at the university and school contexts. Although 28 respondents completed the questionnaires, the data presented below only cover respondents who agreed in taking part in the training (n=14). The main aim

of this stage of data collection was to inform the design, content, and delivery of the training. Generally as we will see later, the questionnaires started by asking some demographic questions and moved on to ask questions regarding computer personal use. The second section looked at the participants' overall technical skills, attitudes, and views on ICT use. The third section examined barriers and opportunities to ICT use, while the last section was mainly concerned with the previous CPD events and the presented ICT CPD opportunity in terms of content and delivery.

4.1.1 Section One: Demographic Information and Computer Use

Question items in this section asked the participants general information such as: age group, qualification, and years of experience. Also in the first section, some questions were asked to address the participants' computer personal use, where questions addressed such things as ownership of a personal computer, access to computer and Internet, activities, and daily use of computers. As most of the demographical data were presented in the Methodology chapter in detail, table (4.1) merely gives an overview of the participants' years of experience and qualification.

Table 4.1. Demographic information

Years of experience	**Qualification**				
	Diploma	**B.Ed.**	**Pre.MA**	**MA**	**Ph.D.**
1-5	1	0	1	0	0
6-10	0	4	0	5	0
11-15	1	0	0	1	1

As we can see from (table 4.1) most of the participants (9 in total) had at least 6 to 10 years of experience while only three had taught from 11-15 years. This would suggest that they were experienced teachers with developed pedagogical understanding. In terms of hours that they taught per week, not surprisingly, nine participants indicated teaching more than 15 hours per week, while four indicated teaching 10-14 hours a week and only one participant indicated teaching fewer than four hours per week. This was mainly due to the fact that in the school context, teachers were assigned a minimum of 20 hours a week, while in the university context teaching hours were assigned in accordance with qualification held. For example, PhD holders taught 10 hours a week, MA holders teach 12, while teaching assistants holding bachelor degrees taught 18 hours a week. As we will see later, teaching schedules were seen as a barrier to ICT use in both contexts.

As for the participants' use of computers, we can see in (table 4.2) that almost all the participants indicated that they are very familiar with computers (n=10) while two participants indicated they were slightly and fairly familiar, respectively. As for access, all the participants indicated having access to computers at home and work, which is regarded as important in terms of participating in the training. In terms of the participants' daily average use of computers, 10 participants indicated using computers 3-5 hours a day, while two participants indicated using computers 6-9 hours a day and two participant indicated using computers fewer than two hours a

day. Such percentage of use is important in understanding the feasibility of using an online platform and to establish an appropriate length for the training content.

Table 4.2. General computer use information

Statement	**Number of response/ items**			
In general, how familiar are you with computer	Very familiar	Slightly familiar	Fairly familiar	Not at all
	10	2	2	0
Where do you have access to a computer	At work	At home	Do not have access	
	14	14	0	
What is the average number of hours that you spend using computers	0-2	3-5	6-9	9- above
	2	10	2	0
What is the most common activity that you use computers for	Personal interests	Work based research	Administrational work (e.g. grading, exam writing)	Teaching
	9 (5)	5 (9)	14	9

Participants undertook various computer-based activities, for example all participants indicated using computers for administration, nine indicated using computers for personal, work-related research and teaching, while five participants used them for personal and work-research activities. Administration activities included grading exam results, word processing, and other activities. It is also clear that most of the participants used computers in general in teaching. Such use was identified in the second section of the questionnaire, which will be analysed below.

4.1.2 Section Two: ICT Skills and Use

In this section of the questionnaire participants' were asked about their general applications skills and their ICT use in the teaching context. As far as their applications skills were concerned, the participants were very confident in dealing with ICT related activities. For example, all the participants indicated being very confident or fairly confident in respect to

generic skills, creating presentations, and accessing information over the Internet. Only two participants indicated being slightly confident in creating presentations. This indicates that the participants' general knowledge of applications was sufficient and that they should not have had difficulties participating in the ICT CPD. In (table 4.3) we could notice that six participants indicated always using ICT for research purposes, while three and one participants indicated rarely using ICT or never using it for research purposes, respectively. As for teaching purposes use, three participants' indicated always using ICT in their teaching compared to two teachers who indicated never using it for teaching purposes. The majority of participants (n= 9) indicated using ICT for teaching purposes differently, with seven teachers reporting that they sometimes use ICT while two indicated rare use of ICT in teaching. As far as such use of ICT was concerned, six participants indicated never using ICT for students in class use such as students' access to information, computer quizzes and presentations. Similarly, four participants' indicated rare ICT use in the classroom. On the other hand, however, two participants indicated that they sometimes and always use ICT for students in class use, respectively. As for students' engagement in out-of-class ICT activities, nine participants in total indicated that they always or sometimes use ICT to engage their students in Blogs, Wikis, and online platforms, while three teachers indicated rarely using ICT for such purposes and two teachers indicated never using ICT for such an objective.

Table 4.3. ICT skills and use information

ICT use	**Never**	**Rarely**	**Sometimes**	**Always**
a. Research purposes	1	3	4	6
b. Teaching in general	2	2	7	3
c. For students in class use (e.g. quizzes, presentation, access to Internet)	6	4	2	2
d. For students out of class use (e.g. discussion forums, Blogs, Wikis)	2	3	5	4

4.1.3 Section Three: ICT Use Opportunities and Constraints

This section of the questionnaire examined the participants' views about opportunities and constraints of ICT use. As far as opportunities were concerned, the questionnaire items tried to reveal how the participants viewed ICT use in their classroom, while the constraints questionnaire items looked at availability of facilities, class time/size, and support. In (table 4.4) we see that there was generally a good understating that ICT use was regarded as interactive, and such use was seen as engaging for students. However, there was also a negative attitude towards ICT use in the EFL classroom, as three participants disagreed with the statement that ICT was interactive and a total of three participants indicated strong disagreement with the statement that ICT use was engaging for EFL students. On the other hand, 10 participants in total strongly disagreed, and disagreed to the statement that ICT use distracts students learning, while three in total agreed and strongly agreed. However, 10 participants in total strongly agreed and agreed that their ICT use allowed them to clearly present their ideas in the EFL classroom, while two participants' disagreed with the statement. Regarding the last statement of the section on opportunities of ICT use, nine participants in total strongly disagreed and disagreed to the statement that ICT should be used as supplementary to teaching, while only four participants strongly agreed and agreed.

Table 4.4. ICT opportunities

Opportunities	**Strongly disagree**	**Disagree**	**Neither agree or disagree**	**Agree**	**Strongly agree**
a. My teaching is more interactive using ICT	0	3	2	4	5
b. I would like to use technology more in my teaching	0	1	3	4	6
c. I can present idea more clearly using ICT	0	2	2	5	5
d. ICT enables my classes to be more engaging	1	2	2	4	5
e. ICT use distracts students	5	5	1	2	1
f. ICT should be used only to supplement teaching	6	3	1	3	1

As for constraints to ICT use, which are presented in (table 4.5), we could see that the main constraints indicated by the participants were: availability of facilities (n= 10) where six participants strongly agreed that it was difficult to book a computer lab while four participants agreed; reliability of facilities (n=9), where five participants indicated that the facilities in their context, including hardware, software, and Internet connection were not reliable, while four participants agreed to the number of facilities (n=8) statement; were four participants indicated strongly agreeing and agreeing to the statement that there was not enough number of computer labs in the context, while four participants in total strongly disagreed or disagreed; curriculum issues (n=10) where participants indicated it was difficult to use ICT with the existing curriculum and seven participants strongly disagreed or disagreed with the statement that it takes time to prepare ICT-related material. Eight participants indicated that class time was a barrier to their ICT use, where five participants strongly agreed to the statement and three agreed; class size was reported by 10 participants as a barrier to their ICT use in EFL classrooms, where six teachers strongly agreed and four teachers agreed to the statement. Nine participants in total strongly agreed or agreed to the statement that there was too little support for teachers who want to use ICT in their classroom, while only three teachers in total strongly disagreed or disagreed.

Table 4.5. Constraints on ICT use

Constraints	**Strongly disagree**	**Disagree**	**Neither agree or disagree**	**Agree**	**Strongly agree**
a. It is difficult to book a computer lab for my lectures.	2	1	1	4	6
b. Facilities are not reliable (e.g. software, hardware, Internet connection).	1	2	2	4	5
c. There is not enough class time for me to use ICT.	2	2	2	3	5
d. Most entry level classes are too large to fit in computer labs.	1	3	1	4	6

Constraints	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
e. There is a limited number of computer labs to be used.	2	2	2	4	4
f. I takes too long to develop ICT teaching material.	4	3	1	2	4
g. There is too little support for ICT use.	1	2	2	4	5
h. I can't use ICT with the curriculum.	2	2	1	5	4

4.1.4 Section Four: ICT Training

This section of the questionnaires tried to capture the elements of the ICT training that the participants had liked or disliked in the past and then moved on to presenting the opportunity of attending the ICT CPD that this study proposed. It asked the participants to indicate the content that they would like the training to cover, preferred delivery modes of the training, and the length of the training session. From the participants' responses it was clear that the majority (n=12) had attended at least one ICT training course. However, two participants indicated that they had not attended any ICT-related training previously. Responses to the type of previous ICT training attended varied, where nine participants indicated attending a lecture-type ICT training, three indicated attending a hands-on style training, while one participant indicated attending an online self-access and a demonstration-style ICT training, respectively. An example of the participants' responses to the open-ended question that asked them what they liked or disliked about the ICT training they attended is provided below:

Liked the training:

- "The training was for interactive white boards and the instructor was an expert in using them and he described it very well to us."

- "I enjoyed the Intel training but I did not like the group-work parts as we had to work from lecturers from other departments."
- "I liked it because it gave me some ideas about how to teach with technology."

Disliked the training:

- "What is the point of attending a training on whiteboard if you don't have one in your classroom?"
- "There was no need to introduce online learning when we do not have computer labs."
- "I did not like the workshops style; we need to know how to use them in the classroom, we do not need information only"

When offered the opportunity to attend an ICT CPD that was based on their needs, the participants (n=14) agreed to take part in the ICT CPD offered by the study. In terms of the content of the training, the majority of the participants (n=12) indicated that they wanted the training to cover authoring application, online presentation, and social media platforms, while eight participants indicated VLEs and Google services. As far as the design of the ICT CPD was concerned, responses (n=11) showed an interest in online training with classroom support, while others (n=7) reported a mix of online training and a hands-on demonstration of the tools and application. Lecture-style training was the least reported (n=3). Responses to the preferred length of the ICT CPD also varied, for example six participants indicated that they would like the training to be a small number of events, while four indicated they would prefer attending a small number of events with classroom support. Three participants indicated that they would like to attend single-event training and one participant preferred attending a long accredited training.

The general picture was that the participants had a positive attitude towards using ICT in the EFL teaching context with different frequency of use. There was also a positive attitude in

general regarding use of computers for different purposes such as administrational and work-related research. There was also a general tendency to engage students in and out of classroom ICT-related activities with less engagement in the classroom, which could be a result of the availability of facilities or curriculum constraints. In terms of opportunities, there was also an agreement among the participants that ICT use was interactive and allows activities that are engaging for the students. There was, however, a proportion of the participants (n=5) who believed that ICT use should be supplementary to classroom instruction. Nevertheless, a large number of the participants (n=10) indicated that ICT allowed them to deliver ideas more clearly, which showed an understanding of an opportunity provided by ICT use in the EFL classroom. In terms of constraints, as with the literature review in chapter 2, availability and reliability of facilities, class time/size, support, and curriculum issues were reported with different variations. In terms of training opportunities, as we have seen earlier, lack of relevance to practice, mix of teachers from different fields, and mismatch to teachers' needs were reported as negative attributes of previously attended training events. In contrast having a skilled trainer and the introduction of practical implementation ideas were reported as elements that the participants had enjoyed about previous training events. In terms of the content, delivery, and length of the ICT CPD offered, the participants indicated a tendency towards a mix of different applications that serve different purposes with authoring tools, online presentations and social media application being the most preferred. They also preferred the training to be online and saw a mix of a small number of events and classroom support as important. As for the delivery of the training, the participants favoured a mix of online training and hands-on demonstration of tools/applications use in the classroom.

Following from the breakdown of TPACK and how it informed the design of this ICT CPD, and examining the data from the needs analysis, the expected outcomes of the training were set as the following:

1. All teachers would use some ICT tools and applications, some would show frequent use.
2. All would understand the pedagogical implementation of selected ICT tools/applications and their applications in the EFL context.
3. Teachers would share experiences and ideas and establish the basis for a community of inquiry.

In relation to TPACK the overall aim was to develop the participants' ICT use through developing TPK and TK and allowing the participants' time to experiment using the tools in their teaching (TCK) and reflect on their use. It was through such process that the aims of this ICT CPD could be met.

4.2 Content of the Training and Online Delivery

The content of the training (as can be seen in table 4.6) was designed around Web 2.0 applications and tools that could be used in the EFL teaching context. Primarily, the training was focused on four aspects of Web 2.0: social media tools, VLE's, authoring tools, and online presentation platform (a screen shot is provided in appendix 5). However, not all of these tools were seen as needed by the participants as seen in the responses to the needs analysis questionnaire; in fact, the participants indicated that they would like to attend an ICT training event that covered: social media platforms, authoring tools, and online platforms. However, VLE's and online presentations were included in the training as an additional training content based on my observations and background knowledge of the context. The underlining idea of presenting a large number of ICT tools and applications (eight in total)

was that at least some of the tools would appeal to the participants; it was not expected that teachers would use all eight. This of course ran a risk of technology overload and making the training too superficial, for example failing to engage the participants in questioning their pedagogical approaches even if the pedagogical value of each tool was discussed among the participants during the training.

Table 4.6. Outline of stages of ICT CPD

Date	**Objective**	**Comments**
University context 18 – 22 / 8 /2012 School context 1-5/9 /2012	Introduction week: the participants agreed to take part in the training and an outline of the training was provided.	The course was voluntary.
University context 1/9 – 26/12 /2012 School context 8-9/2012 – 2/1/2013	The delivery of the course was carried out, with one (tool, application) per week and another week for trial use for (Social media tools: twitter, Facebook) Authoring tools (blogs, wikis, Google applications) Web 2.0 tools (Edmodo, Udutu, Prizi). Evaluation of the content, process, input, reaction and satisfaction, impact on attitude and knowledge.	Formative and summative evaluation was conducted, with focus on participants' attitudes, and change of practice. Interviews took place during and after the training, to develop an understanding of the content, methods and value of the training course. The training was focused around, pedagogy, technology and ICT.
University context 29/12/2012 – 2/1/2013 School context 5-9 / 1/ 2013	Evaluating the impact of the training course (Change)	Online group discussion were conducted to evaluation the overall view of the training and potential change in practice.

What we can report is that the content was praised by the participants and focused on what was applicable to the available resources and the overall curriculum needs of their institutions. One aspect of this was that the course offered a more 'communicative approach to language teaching' and student-cantered learning, one that in spite of tensions and difficulties in implementation was theoretically valued in EFL teaching in Saudi Arabia (see introduction). Tearle (2003), as seen earlier, pointed out that for an intervention to be

successful the content has to be focused on the context and have a degree of flexibility. In fact I was able to do this by designing the ICT CPD based on contextual constraints and opportunities. As for the delivery of the course, an online platform was seen as ideal for the situation and training was delivered through a social media platform (i.e., Facebook). This was for three principle reasons. Firstly, one issue raised in both contexts was of access to ICT facilities and poor working conditions of facilities, therefore an introduction of online tools/applications that can be used in and out of class was ideal. Secondly, responses from the needs analysis and pre-interviews showed an interest in online training events (n=9) as teaching hours varied from moderate to difficult in relation to attending face-to-face training sessions. Finally, the time needed for data collection, including delivery of the course and carrying out the interviews, was over three months; and I could not be away from the UK for that length of time due to sponsorship restrictions. As a result, the training was carried through Facebook after agreeing with the participants that it was a suitable solution considering they all had accounts on Facebook. Two different groups were set for this task, a group for university participants and a group for school participants. As we will see in the next chapter negative and positive responses were made about the online nature of the program. The general view was that the delivery of the training was pragmatic and ideal for the context; however, some participants reported negatively and a small number thought that a combination of face-to-face and online interaction would appeal more to them. However, they were very considerate to the circumstances that influenced the decision to go online.

4.3 The way the ICT CPD was carried out

As we have seen in the methodology chapter, in total 14 participants volunteered to take part in this training, eight from the university context and six from a school context and a description of the participants and pen portraits has been provided (see page 111). As pointed

out previously, after the data from the questionnaires were analysed and the number of participants who agreed to take part in the training was known, an outline of the ICT CPD event was e-mailed to the participants (see appendix 2). The e-mail highlighted the general principles of the training including: an outline of the tools/application to be presented, and participation guidelines.

During the training, tools/application were presented fortnightly. This involved posting a video tutorial of a certain tool/application. The tutorials were posted fortnightly, allowing the participants a week to set up their user accounts and experiment using such applications in their teaching. The second week was designated for reflection on tools/application use and sharing classroom experiences with colleagues. The ICT CPD followed a pattern. The participants were expected to view the tutorial for use of the tool/application as presented online (there is screen shot of this page 281). The tutorials tended to focus on 'how to' issues for example how to set up accounts and create user names. My role as an instructor was to provide the fortnightly tutorials for the two groups by, for example, sourcing or creating relevant tutorials and posting them online. I was also available to troubleshoot problems and answer more general questions. I would provide suggestions on how to use the tool in the classroom. I encouraged participants to share their experiences and posted specific questions about, say, the difficulty of using the tools or ask about student feedback. As can be seen in appendix 5, I encouraged the participants to share their experience and one of the participants commented and shared his use experience with other group members. Generally what can be said regarding this pattern of activity is that it allowed the participants enough time to try out the tool/application and develop a critical reflection of the value of the tool/application that could be useful to other group members. Of course it was not expected that the participants would use all the tools/applications presented as this would risk the training being technology driven and would overload the participants with too large a number of tools/application.

In reflecting on the design of the programme the stages seemed to match well against the community of inquiry model (see pages 196-199) in that the idea was to *trigger* activity (i.e. by posting a tutorial), the participants' task was to *reflect* on their use of the tool/application critically with other group members, through such reflection that participants develop ways of *integrating* the tools and reaching a stage of *resolution* in which they meaningfully use different tools/applications for different pedagogical values. This is a strongly situated learning approach.

What we can notice in table 4.7 that almost all of the participants engaged with the training in that they used most of the applications in the classroom. There were however more and less popular tools/application. For example, the most popular was Edmodo, Prezi and Twitter and this may be because there were more familiar and more appealing to students from social network platforms. The least used tools/application was Udutu and this can be attributed to it being more technically complex than other tools. For details of the applications see the findings chapter on pages (206-208).

The second part of Table 4.7 shows the level of participation in the online discussion areas set up for participants. In quantitative terms this shows that the forums were active but constrained. There was a balance between tutor and participant contributions. The messages were coded at whole text level against the 'presences' in the CoI model (see pages 138). Social presence was fairly straightforward to code and included greetings or items of news, for example as in the excerpt 'hi, thank for setting this page up, glad to be here, good morning all'. Cognitive presence covered pedagogical issues such as the difficulty of implementing different tools/applications and knowledge of using different tools/applications as presented in the following excerpt:

> "I like it! I tried using Facebook for communicating with my students but I felt that there was something missing. Edmodo could with its options to make that communication on task. Now, I can create different groups dealing with each one apart from the others. Also, I can send photos, videos, links so easily. Assignments can also be graded .....etc. It is a comprehensive teaching\learning experience"

Teaching presence represented how the tutor but also students sought to help stimulate other contributions and to lead group activity as in the following excerpt in a discussion on using Twitter in teaching:

- Instructor: Hi all, can you please share your experience with using Twitter.
- UT2: I have started using it this week and I surprised by the level of interaction, I will keep you updated.
- UT4: Yes, I have created a hashtag for my class today, and there is some good interaction with me and with each other. I think using it for communicating is much more useful.
- UT2: I have tried using a hashtag but with no results.

Table 4.7. Observation of participants' online interaction

Stimulus	Seen by	Comments	Comments on comments	Instructors comments	Nature of comments (in relation to CoI)		
					Social presence	Cognitive presence	Teaching presence
Article of value of ICT use in the teaching context	14	10	6	3	4	8	7
Video tutorial on using Facebook	14	9	4	4	2	7	8
Video tutorial on using Twitter	14	7	8	5	5	8	4
Video tutorial on using Prezi	14	10	8	4	5	8	9
Video tutorial on using Wikis	10	6	5	3	2	7	5
Video tutorial on using Google tools	10	8	5	4	3	8	7
Video tutorial on using Blogs	12	8	6	5	5	8	6
Video tutorial on using Edmodo	12	10	7	4	4	8	9
Video tutorial on using Udutu	9	5	3	3	2	5	4

4.4 Reflections on Needs Analysis

The main aim of the needs analysis was to provide a general view of the opportunities and constraints of ICT use in both contexts. Such conditions were also examined in light of CPD opportunities provided and training needs reported by the participants. Such insights allowed the ICT CPD to be designed in terms of content and delivery to meet the needs reported. As the training was based on TPACK as a guiding model for the training input, the goals were set to bridge the gap between the participants' training needs and the knowledge that would allow them to implement ICT use in their teaching. Apart from this, the general design of the training took into consideration that the participants in both contexts volunteered to take part in an ICT CPD as it allowed them access to a professional development opportunity that met their needs and the flexibility of an online delivery of the training. Based on the data analysed a number of design decisions were made:

- The use of an online delivery platform.
- The introduction of a number of tools/applications that provide different technological pedagogical values (e.g., collaboration, presentation, multimedia, VLE's).
- Adequate time frame for presenting and experimenting with the tool/application.
- Collective and individualized tools/applications use support with the participants.
- Constant motivation and engagement to share experiences with tools/application use.
- Follow-up on tools/application use and evaluation of experience.
- Validating consistencies/inconstancies reported by the participants in terms of tools/application use.

4.5 Summary

In this chapter, the design and implementation of the ICT CPD was highlighted in light of the needs questionnaires analysis. The general principles of designing the intervention were presented in relation to TPACK, and the desired outcomes of the training were pointed out. The time schedule of delivering the training in both contexts was presented and an observation of the tools/application presented in the training examined the participants' interaction through the online platform. Finally, a reflection of design decisions was provided. Following from this chapter, the analysis of the three stages of interviews, observations and group discussion will be provided.

CHAPTER 5: DATA ANALYSIS

In this chapter the data from the interviews, observations, and group discussions are analysed and illustrated. The chapter starts with the analysis of the pre-course interview and then leads to during-course interview followed by post-course interview and observations. Finally the analysis of the group discussions is covered. The data are presented in regards to the interviews timing and is analysed in accordance to the levels of the evaluation framework. It is necessary to point out that in the tables illustrated in this chapter, the number of respondents to whom a code has been assigned will be represented as NR, and the total number of times the code has been applied will be represented with No, while university teacher will be represented by UT and school teachers will be identified as ST.

5.1 Pre-Course Interviews

The data presented in this section refer to pre-course interviews and are presented according to the themes, as we will see later. The purpose of these interviews, as we outlined in the methodology chapter, was to identify each context in terms of the participants' backgrounds and views of the teaching practise, the nature of the teaching practise, CPD opportunities, and ICT use. The data from these interviews informed the design of the ICT CPD. The themes that were generated in this interview are: motive for teaching, conception of students, environment, CPD opportunities, and ICT use.

5.1.1 Motive for Teaching

Participants' responses regarding motive for choosing teaching as a profession are outlined below. These responses are grouped into three codes: altruistic, instrumental, and vocational. These were not of course exclusive terms, for example even participants who had altruistic

motives would not do the job for free (i.e., without instrumental reward). It is worth reminding the reader that teaching is a profession that some participants are directed into as a result of their grades in high school and overall GPA.

Responses that are coded as **Instrumental motivation** tended to highlight the material benefits of the job, for example levels of pay, time for holiday breaks, the sense that the job was not as demanding or consuming as others could realistically make comparison to. Those that stressed the **vocational** aspect highlighted their enjoyment of teaching and the relationships with their learners. In practice the vocational and the altruistic tended to converge whereas the instrumental was easier to identify on its own. Those that stressed an **altruistic motivation** saw teaching as a selfless job that is focused on the preparation of young people for a better life achievements' and regardless of it being time and energy consuming.

The most frequently coded motivations to teach were the **instrumental** and **vocational** ones (in both cases n=9 teachers), however instrumental motives were more frequently expressed (n=12 against n = 11)

Table 5.1. Frequency with which each code was applied in respect to motive for teaching

	NR	**NO**	**UT [n= 8]**	**ST [n=6]**
Instrumental	9	12	5/8	4/6
Vocational	9	11	6/8	3/6
Altruistic	5	7	2/8	3/6

Those citing instrumental reasons tended to see teaching as a job with better salary opportunities in a less demanding environment, and an example of such motivation is suggested by ST1: "*the salary is different compared to the Bank but the work load is less stressful.*" At University, UT5 explained: "*teachers in Saudi got a good salary and the working load is not too difficult.*" Vocational motives, were less frequently expressed (n=11)

and captured by ST3: *"I enjoy teaching and I am good at it*" also UT1, 2, 3, 4, 6, 8 ST4, 6 expressed similar views. Altruistic motives were the least frequently expressed motive (n=5 UT3, 6; ST2, 3 and 4.

An example was expressed by UT3: "*It is the idea of sharing new knowledge, even if it was as simple as a new vocabulary item or a grammar rule; it is simply great to see your students learn and react to your teaching."*

A relatively similar mix of motivations was held by participants in both school and University contexts. As an example, UT3 and UT6 expressed altruistic and vocational motives to teach, as did ST3 and ST4. Again UT5, UT7, ST1 and ST5 shared an instrumental motive to teach. It is often thought that schoolteachers might be more vocationally motivated as teaching is often seen as a vocation. Here however, the differences between university teacher and schoolteachers are not marked. One difference in emphasis in comparing university and school participants is that schoolteachers were proportionally more altruistically motivated than university teachers.

In summary, teachers reported a mix of motives to teach, with university teachers reporting more vocational motives and schoolteachers reporting more instrumental ones. This implies that teachers in both contexts will have a range of motivations and responses to the CPD opportunities I am offering. Those who take intrinsic satisfaction from teaching (vocational/altruistic reward) might be more interested in understanding if ICT could offer their students greater satisfaction, and those who take extrinsic satisfaction from teaching (instrumental reward) might be more interested in understanding if ICT could make their work more effective. These speculations will be explored during and post the course interviews to investigate to what extent participants from the two contexts make use of the training in their teaching.

5.1.2 Conception of Students

Participants' responses regarding their views about the students they teach are outlined below. Responses were grouped into: students' ability to learn, learning styles, motives to learn, and impact of their prior learning on their current learning opportunities.

Impact of prior learning referred to students' background and previous knowledge of the language, and teachers' comments tended to highlight that their students' current level of English was a consequence of past work, and this left a gap in knowledge and naturally differentiated classrooms. **Mixed motivations** referred to the diversity of the classroom and were reported as a challenge with teachers stressing that some students did not want to learn and this was a de-motivating factor for them as teachers. Diversity was again raised in respect to **learning styles** and the difficulties felt about accommodating students' preferred learning styles and strategies. Responses that are coded in **Ability to learn** tended to highlight the fact that the students' had different learning abilities. As previously explained there is a certain degree of overlap between these cases, for example UT4 often made reference to **ability to learn** and **learning styles**.

Table 5.2. Frequency with which each code was applied in respect to conception of students

	NR	**NO**	**UT [n= 8]**	**ST[n=6]**
impact of prior learning	8	10	5/8	3/6
motivation	6	6	4/8	2/6
diverse learning styles	5	6	3/8	2/6
ability to learn	4	4	2/8	2/6

The most frequently used code was impact of prior learning (n=8). Some of these codes carried positive and negative connotations, for example prior learning could be seen as a plus as students had past knowledge but also a deficit as students lacked sufficient groundings in

the language. It should be noted that all secondary school students had been studying English as a foreign language for five years, and university students eight years. All teachers referring to prior learning felt that their learners were products of what they had experienced in the past (UT 2, 4, 5, 6, 8 and ST 3, 5, 6). It should be pointed out that prior learning carried positive and negative connotations. For example UT5 pointed out the difficulties of previous good/poor formal teaching and how it contributed to their university teaching: *"there are some good and poor students in English, the problem with secondary schools is that it is the last stage in their formal teaching and students levels is a direct result of the teaching they received."* ST3 also report similar concerns: *"I can't judge their previous teachers, but I think they can communicate very briefly in English."*

In summary then in both university and school contexts teachers reported positive and negative aspects of the prior learning of their students. It should be highlighted that the participants' responses to the questions regarding students' conception, drew attention to the fact that university teachers and schoolteachers share similar views about difficulties with students in terms of motivation, ability, and addressing learning styles and strategies.

The second most frequently reported code was motivation (n=6). Participants expressed different views of their students' motivation, for example UT3 pointed out that his students are motivated to learn and explore extra material: "*Even the students want to go beyond the text book.*" UT1 expressed different views from UT3, as he reported: "*Even the students get bored*" regarding learning English. In contrast, schoolteachers (n=2) saw their students being highly motivated on instrumental grounds to learn English as it contributed to their final grades in high school, rather than being interested in the language itself; this was mentioned by ST3: "*Students focus on learning English so they can pass the final Ministry test, and I think it is ok as long as they learn the language."* On the whole, university teachers (n=4)

tended to see their students as more interested in the language as an object of study perhaps because they were going to teach English in the future.

Students' learning styles was the third most frequently reported code (n=5). Here the diversity of learning styles was mentioned by both university and school teachers, who explained their difficulty to accommodate all learning styles in their teaching. Teachers also indicated that aspects of their teaching did not address learners' preferred ways of learning. To take a very basic example, UT4 pointed out: "*But the students want something written"* as an indication to students preferring hand-outs over a visual presentation of information. However, in the school context, ST2 pointed out: "*They memorize the comprehension passage and write it by heart in the exams; they see it as a short way to good grades."* However, others have seen this strategically narrow learning style as a lack of ability, which will be discussed in the following section.

Ability to learn was coded four times. Here university teachers expressed their students' diverse abilities in terms of learning the language and repeated assessment. Strategy learning was seen by some as a response to testing regime, as stressed by UT4: "*Students memorize the syllabus the night before the test so they can pass, really you don't see them engaged in anything else".*

The overall picture was that both contexts present teachers with challenges due to students' diverse experience of prior learning, mixed learning styles, and ability to learn. Neither school teachers nor university teachers tended to see their students as deep learners with a passion to learn the language; many were naturally strategic and 'surface' learners. However, its contribution to GPA gave school students a motivation at least to succeed academically, and the vocational goals gave university students a genuine interest in the language. The implications for using ICT are not straightforward, but it might imply that participants in both

the school and university context would seek tools/applications that address learners' mixed abilities and learning styles, that is the use of ICT could present the students with more mixed and differentiated resources. The teaching context is challenging and diverse and introducing ICT may have an impact but cannot be a magical solution. However, this will be highlighted later on when investigating post course interviews.

5.1.3 Environment

Participants' responses regarding their teaching environment were grouped into: facilities, positive and negative syllabus, class time, positive and negative management attitudes, collaboration, hours and pay, and class size.

F**acilities** referred to all available equipment for using ICT in the classroom, including hardware, software, IT technician, and sufficient Internet connection. Responses coded under facilities draw attention to the availability of computer labs and how well institutions are equipped with computers, and how reliable the Internet connection is. By **syllabus** was meant the flexibility and quality of the curriculum for ICT use and modifications to suit technology implementation and responses often covered issues regarding the choice of textbooks and the flexibility to use extra material. Other syllabus-related issues included administrational pressure on the pace of the teaching, which affected the quality of the teaching being delivered. By **class time** was meant whether in both contexts the time was adequate enough for teaching, ICT use, and extra material use. Responses that were coded under class time covered how adequate time is for teaching and learning. By **management attitude** was meant all managerial decisions regarding students learning and technology use. By **collaboration** was meant the relationship between the administration and staff and among staff themselves. Responses regarding collaboration covered the relationship among the

teaching staff and administrational staff and what level of collaboration there is. By **hours and pay** was meant hours of teaching and staff pay. Responses highlighted the differences among staff in regards to their pay and teaching hours, about which they showed both satisfaction and frustration. By **class size** was meant the number of students acceptable to ensure quality in teaching and how class size contributes to the quality of teaching, for example: computer use, activities time, and the initial settling-in time.

Table 5.3. Frequency with which each code was applied in respect to environment

	NR	**NO**	**UT[n= 8]**	**ST[n=6]**
Facilities	12	16	7/8	5/6
Positive syllabus	9	13	5/8	4/6
Negative syllabus	6	9	3/8	3/6
Class time	5	5	4/8	1/6
Negative management attitude	3	4	2/8	1/6
Collaboration	2	2	2/8	0
Hours and pay	2	3	1/8	1/6
Class size	1	3	1/8	0

It was found that teachers in both contexts expected to have access to a computer lab and a language lab, and this was the case even if they knew of other cases where such facilities were not available. However, the availability of qualified IT technicians was a problem in school, where IT teachers were responsible for the maintenance and operation of computer labs, which tended to give a sense of ownership of the labs to IT teachers. ST3 reported that the computer lab in his school was only used by IT teachers: "*It's very difficult to use the lab; they see it as theirs."* However, ST6 reported positive collaboration between IT teachers and English teachers "*It is not our lab and it is not theirs as well, we have a timetable to use the lab, so we don't have a problem".* In the university context, UT8 mentioned: *"I enjoy being there with my students, good computers, good projectors, good air conditioning";* he also

reported negatively on the Internet connection quality: *"As I said [poor] connection does make my teaching difficult sometimes."* Overall the absence of computers in the classroom other than OHP devices was rarely mentioned - it was taken for granted - though of course such absence made using ICT in the classroom difficult. The tendency was to comment positively on the resources that were available in both contexts.

Issues regarding the syllabus were coded 15 times, with 22 references made by 15 participants. On the positive side, UT2 for example pointed out that the quality of the books used in the college was high: *"The kind of books we use here is very good, I mean the series is perfect and it builds a very good basis";* ST2 shared similar views and indicated that their school had been attracting new students from different schools: *"It is a new text book and it is very good, the focus is different, the content is new, and the level is different."* In both contexts, there were committees that appointed textbooks for each year of study along different stages in public schooling. The textbooks used in the school context were a special edition of Macmillan press for Saudi Arabia, which focus mainly on communicative aspects of the language. In the university, a board carried out such duties and assign material. It must be mentioned that in both contexts, teachers were expected to complete the assigned text book as progress is built on successful mastery of skills in the previous textbook. Such constraints were expressed as negative ones regarding syllabus, and mentioned by six participants (UT1, 3, 4 and ST1, 3 and 4. UT1 for example expressed his frustration with the syllabus repetition: *"They only study tenses, two years to study tenses";* ST4 shared similar views of the syllabus: *"It has been the same book for 5 years"*

There were five coded comments referring to class time, showing optimism that computers could be fitted into classes. Four university teachers agreed that class time was sufficient for computer use during their teaching, for example UT3: *"Two hours every lecture is enough."*

In the school context ST5 disagreed: *"I will be wasting my time explaining to them how to use computers and not teaching a language,"*. It is important to draw attention to the different contexts in both cases and the time allocated for each lecture/lesson. The guideline for school education was that lessons were allocated to 45 minutes/periods, whereas in the university it varied from 1-3 hours/lecture.

Management attitude was only reported negatively (UT1, 3 and ST3) and covered views about policy and poor management skills. For example (UT5) expressed his issue with text books: *"Every year they have a new plan and a new text book."* In the school context, ST3 expressed views about the policy of the ministry of education and its aims: *"The policy is aiming very high but currently we are not there yet."* Such remarks are expected in this context as both systems adopt a centralized decision-making system.

Collaboration and consideration among the participants in different contexts was reported by two participants, UT6 and UT7, and both reported that staff members in the college were friendly and helpful: *"Sometimes I can't come to my class so I ask a colleague to take the class for me"* (UT6). Examples of such collaboration were reported too by UT7 *"In some courses I teach a lot of classes and they do help me whenever they can."* UT2 was the only participant that regarded class size as a problem, and he suggested that: *"I teach the four skills, and I have a large number of students, and that is a problem."* He also pointed out the fact that more advanced courses had fewer students, as a result of some courses being a prerequisite for others: *"The more you teach advanced students the less the class gets."*

In summary, the two environments were different, but what strikes one is the similarity in responses. On balance however, the university environment was seen as a more flexible teaching environment with longer lessons and less demanding hours. The school environment was thought of as being less flexible with more frequent evaluation and constant observation

and control. Schoolteachers appeared more favourably disposed to the syllabus and the text book they followed, whereas almost half of the university respondents criticized the syllabus. It was expected that schoolteachers completed the assigned curriculum each term, and this compromised the quality of teaching. This had implications for the ICT CPD intervention in the sense that the participants might avoid using ICT because of constraints regarding facilities, syllabus, time, and collaboration.

5.1.4 CPD Opportunities

Participants' responses to interview questions regarding their personal development and CPD opportunities are outlined below. Their responses were grouped under three codes: informal development, good CPD, and poor CPD. **Informal development** meant any efforts by the participants to develop their knowledge without being directed by any institution or training authority. These responses highlighted activities often related to career development. **Good CPD** meant that the training the participants' attended was seen as valuable to them as teachers. **Poor CPD** meant poor quality and often involved presenting opportunities that could not be applied to the classroom. It should be pointed out that all CPD opportunities discussed by the participants were offered from their institutes and that there were regular opportunities to attend events. Generally, schoolteachers were tasked to complete a certain number of in-service training hours, as this contributed to their annual review report. The Ministry of Education provided the training events in regional offices all over the country for teachers. In the university context, the deanship of development held regular training events that were offered for the teaching staff of the university, but these were less well attended.

Table 5.4. Frequency with which each code was applied in respect to CPD opportunities

	NR	**NO**	**UT [n= 8]**	**ST [n=6]**

Informal development	5	6	3/8	2/6
Poor CPD	5	5	3/8	2/6
Good CPD	4	4	1/8	3/6

Personal development (n=5) represented participants' own efforts in developing their own qualifications and skills. For example ST5 indicated that*: "trying to be the first teacher to implement an online society to share new idea was a challenge for me; I had to develop my knowledge to start the online society."* UT5 reported spending time in learning new technologies online: "*I try to do it myself, but in general most of the time I used YouTube videos to understand how to use it."* Similarly UT3 who completed some training online stated: "*I attended training on class management and INTEL trainer course."* However, these individual attempts at personal development were not seen as necessarily in tension with the availability of training offered by institutions, although by doing it for themselves teachers were addressing gaps in the training opportunities offered.

Five participants' responses referred to poor CPD experiences. Experiences were seen as negative for several reasons, including: repetition of content, need of training, and availability of facilities. For example ST4 pointed out: *"I attended a blackboard training but there is no need if you don't have one in your school, right?"* Similarly UT5 pointed out: "*No one is going to waste his time and he knows he will never use the lab, so why the training then?"* In these examples the training offered was not based on the participants' needs and were not applicable, as classrooms were not equipped with the necessary tools. Some of the participants' responses further indicate that training was poor and difficult to relate to their teaching. Some indicated that there was a tendency in the university context for the training to be more focused on theories of learning and teaching (e.g., learning behaviour, teaching approaches) rather than being practical, particularly in relation to technology.

Good experiences of CPD were reported (n=4). Good CPD carried qualities such as: relevance to teaching, knowledge and content, time and availability. ST4 pointed out that good training was: *"Focused on classroom management, time management and teaching methods which helped me manage my classes better."* In the university context, UT4 stressed: "*One training was on learners' behaviour and I made good use of it, and I can relate it to my classroom as well"*

The general picture was that in both contexts the participants could develop their own skills and knowledge through informal and formal training opportunities. There was a difference in the training offered by the institutions. University teachers seem to be offered more theoretical training opportunities and were under less pressure to attend the training events; schoolteachers were more pressured to engage in formal training offered by the Ministry of Education. In the university context, the training was focused on learning theories, which was seen as a good CPD opportunity by some and poor by others, whereas the technology related CPD opportunities were seen by some as not realistic and not applicable to the context. On the whole, school CPD was better received than university CPD.

5.1.5 ICT Use

Participants' responses to interview questions regarding their ICT use are outlined below. Their responses were grouped into eight codes: pedagogy use, consequences of use, ICT tools, personal use, positive and negative access, negative attitudes towards technology, students IT capabilities.

Pedagogy use referred to any single use of ICT for teaching purposes. **Consequence of use** referred to the value of ICT use in the classroom. **ICT tools** covered the full range of applications used by the participants' in their classroom teaching. **Personal use** meant any

use of ICT out of school and non-teaching related use. **Positive access** covered cases where the participants' had access to technology facilities. **Negative access** referred to the constraints related to access when using technology in the environment. **Negative attitudes towards technology** referred to doubts about the use of technology. **Student IT capabilities** referred to the background skills needed to use ICT in the classroom.

The most frequently expressed code was pedagogy use (n=12), followed by consequence of use (n=9). ICT tools was coded (n=8), followed by participants' personal use (n=6); positive access was coded (n=5), followed by negative attitudes towards technology (n=5); and negative access was coded (n=3), while student computer level was also coded (n=3).

Table 5.5. Frequency with which each code was applied in respect to ICT use

	NR	**NO**	**UT [n= 8]**	**ST [n=6]**
Pedagogy use	12	26	7/8	5/6
Consequence of use	9	32	5/8	4/6
ICT tools	8	12	5/8	3/6
Personal use	6	9	5/8	1/6
positive access	5	6	2/8	3/6
Negative attitudes towards technology	5	11	3/8	2/6
Negative access	5	8	2/8	3/6
Students IT capabilities	3	3	1/8	2/6

The most frequent code was pedagogy use, which represented the participants' use for technology in teaching activities and was applied in interviews (n=12) with UT2, 3, 4, 5, 6, 7, 8 and ST1, 2, 3, 4, 6. All of the respondents indicated using OHP devices in their teaching for displaying or explaining new information but also used other software with other pedagogic rationale. ST3 for example used ICT for peer-editing activities and student collaboration: "*I have used wikis for my classes and it does help with my students writing tasks";* ST4 commented on using Facebook for communicative purposes with his students*: "I have used*

Facebook and it works with my students perfectly, they enjoy making comments and posting videos." An example of pedagogical use in the university context was UT4's comments about ICT providing learners with individual learning opportunities: "*Using blogs with my advanced classes was a good idea; it gave them space to write and be individuals."* In the school context, ST1 mentioned: "*The forum is a good start for our school and my students enjoy using it."* Participants' responses, however, did not tend to cover 'admin' use of ICT, though one commented: "*I send their graded assignment by e-mails and they return it to me if they have any questions or comments."* (ST6). Participants also explained how pedagogy use developed on a trial and error basis. They pursued this through using different tools until they found the 'right' tool or learned to use a tool in an appropriate fashion. For example UT4 explained: "*I had to use blogs and Wikis to see which is suitable for my classes and my students' language requirements."*

Consequence of use (n=9) referred to what the participants saw as the value of using ICT in their teaching and in nearly all cases ICT use was seen as having positive consequences. Most of the participants in the university context felt that their use of such technologies was to compensate for the lack of "authenticity" in the Saudi context. For example UT4 saw the value of using ICT as: "*It presents my students with real life situations to see the language in its real use,"* and UT7 pointed out*: "It is a good source for real language input for the students to see the language in a real life situation."* Another example was that UT6 reported using ICT in his teaching as it provided him with rich multi-media material: "*In most of classes I use videos from YouTube so my students can practise live translation in the class."* However there were at times negative consequences of using ICT, as UT6 shared: "*Most of the time they keep getting distracted by their Facebook and are not involved in the classroom at all."* Another example was ST6's comments about students and technology: "*They can learn and see videos and song lyrics that are not appropriate."* This would imply that,

throughout the course of this training, individual participants' would form new experiences by using ICT in their classroom, which in turn would highlight possible negative and positive attitudes towards technology use.

ICT tools (Twitter, Facebook, Wikis, Blogs, YouTube) were coded (n=8) from the participants' responses. Their comments generally portrayed their knowledge of different applications and tools that can be used in the language classroom.

Personal use of ICT tools was coded (n=6) with UT3 for example reporting: "*I use Facebook to keep in touch with friends here and there,"* but he also pointed out that: "*I like to keep my private life separate from my work, so I have two accounts, one for myself and one I use with my students."* Another example of personal use was reported by UT2: "*I use Skype to call my family [back] home and check up on them."* Participants' responses indicated that their use of ICT tools for personal life was differentiated from their pedagogy use, and some of them tried to draw a line between social life and work life.

Access was stressed in the participants' responses, and was seen both positively and negatively. Positive access to facilities in both contexts was mentioned (n=5), with university teachers reporting less positive access (occurrences=2) compared to schoolteachers' (occurrences=3) (see environment). As discussed earlier, access to facilities was seen as a constraint to ICT use by the participants in both contexts. However, most of the participants pointed out that their potential use of ICT tools was related to access to facilities. It was understandable that the availability of hardware was important for using ICT, unfortunately use of ICT meant using the lab and it was difficult to reserve a lab.

Negative attitudes toward technology were reported (n=5), and in both contexts participants stated that technology use should be supplementary to classroom instruction. For example,

UT6 reported that "*using technology in general and ICT should not be taken for granted; it should not be used in all activities*," and UT8 also shared similar feelings. However, three participants (UT6, ST5, 6) agreed that using technology could result in students being distracted from learning. For example, ST6 pointed out "*when using technology in teaching and especially any social media platform is that you are inviting your students to be distracted from the learning context and directing them to focus on something else*." ST5 shared similar feelings and added, "*Yes you can control your classroom and ask them to pay attention but they will soon lose interest and get carried away by doing something else*."

In general students were seen as IT 'literate' in that nearly all students were frequent users of ICT, and the availability of smart phones developed their ICT skills and this was increasing particularly among university students. However, at times, lack of IT capabilities was seen as a barrier to ICT use in the classroom in that if you had students who were not experienced with ICT, even only one or two, they could hold up class activities. This was, however, more reported in the school context. ST2 for example stressed: "*I had to make hand out on how to use computers before I even thought of using them with my students as not all of them have computers";* in the university context, UT5 shared similar concerns: "*Not all my students are good users of computers, I must understand this before I begin introducing activities that involve using computers."*

In summary, issues regarding ICT were reported through two main streams: ICT use and constraints on use. Participants from both contexts showed signs of personal and pedagogy ICT use for different language teaching activities with more focus on communicative language strategies. This could have implications for the study in that participants might engage in social life activities and be less engaged in language teaching activities, an example of such was the participants' frequent use of Twitter for social reasons and less for

educational reasons , social-network-based tools were to be covered in a third of the training content, with the remaining tools being more teaching oriented. Another implication was that the participants might be more focused on tools that served their immediate teaching strategies and not benefit from the more discursive element. As for constraints on ICT use, the general picture was that attitudes towards using ICT, access, and students' IT capabilities contributed to the level of ICT implementation in the classroom.

What we can understand from this section is that there was regular use of ICT among the participants in both contexts, with more focus on communicative tools and visual presentational equipment. The general picture was that ICT had been used with different pedagogical justifications. In both contexts, the availability of an OHP device was taken for granted and used for explaining and presenting class material. The participants from both contexts justified using ICT tools pedagogically for collaborative language activities, online peer editing, and for individual learning. Also, ICT tools had been used for the visual presentation of material through different multi-media tools such as YouTube and as an authentic source of language material. ICT was viewed positively on the whole for its value in the classroom, for its impact on engagement, and motivation. However, it could also be seen as a source for distraction in the classroom, and as a source of undesired learning input. In some cases students lacked ICT skills, which in turn had a negative impact of participants' view of ICT in the language classroom. Moreover, there was need for trial and error in relation to the 'right' tool to be used in the classroom, which consumed time and effort. Generally, both contexts shared similar constraints to ICT implementation, with more attitudinal and access constraints in the university context and students' IT capabilities in the school context. This all implied that there was no easy solution for ICT implementation in the classroom, but it was, however, a basis for trying to benefit from what technology has to offer in the language classroom.

5.2 During-Course Interviews

The data presented in this section referred to during-course interviews and are presented according to the levels of the evaluation framework: context, input, process, training satisfaction/enjoyment, learning outcomes, and change. The first five levels were addressed by the during-course interviews, while the last level of evaluation (i.e., change) was addressed by the post-course interviews and group discussions. In the following sections, each level of evaluation was reported through different codes, while some code had positive and negative annotations. It should be pointed out that this stage of data collection was carried out after the presentation of two tools/application in the training.

5.2.1 Context

Participants' responses regarding the context of their teaching is outlined below. These responses are grouped into: students' language level, facilities, support, class size, students IT capabilities, class time, and teaching hours. It should be pointed out that these codes sometimes covered positive and negative aspects, which were combined under one code.

Students' language levels referred to the students' language ability as a barrier to ICT use in the classroom for specific activities. Responses tended to highlight the difficulties that the participants encountered in introducing and choosing different ICT tools intended for use in the classroom. **Facilities** referred to available equipment for using ICT in the classroom including hardware, software, IT technician, and sufficient Internet connection. Responses coded under facilities drew attention to the availability of computer labs. **Support** referred to any managerial and administrative help provided by the institute to encourage and foster ICT use. Responses coded under support highlighted the institutional attitude towards implementing ICT. **Class size** referred to the number of students in each class being a barrier

to ICT use. Large classes were seen as a barrier, because not all students could have their own computer. **Students IT capabilities** referred to the background skills needed to use ICT in the classroom. Responses under this code covered both positive and negative comments, for example students' creative use and mobile use. Unfamiliarity with IT was a barrier to ICT use (negative) but familiarity allowed creative ICT tools use (positive). **Class time** referred to the allocated time for each lesson/lecture. Responses under this code drew attention to time as a barrier to ICT use in the school context but less of an issue in the university context. **Teaching hours** referred to the participants' allocated teaching hours per day as being a barrier to ICT use. It should be pointed out that responses under this code were only negative.

The most frequently used code was students' language levels (n=6), followed by facilities (n=5). Support and curriculum constraints were coded (n=4) each. Class size, students IT capabilities and class time were coded (n=3). Finally teaching hours were coded twice. There was similarity in the coding applied to university and schoolteachers, although Time was noticeably more of an issue for schoolteachers as was students IT capabilities.

Table 5.6. Frequency with which each code was applied in respect to context

	NR	**No**	**UT (n=8)**	**ST (n=6)**
Student language level	6	7	3/8	3/6
Facilities	5	7	3/8	2/6
Support	4	4	2/8	2/6
Curriculum constraints	4	6	2/8	2/6
Class size	3	4	2/8	1/6
Students IT capabilities	3	3	1/8	2/6
Class time	3	3	1/8	2/6
Teaching hours	2	2	1/8	1/6

The most frequent code was students' language level (n=6), which covered both positive (2/6) and negative (4/6) dimensions in both contexts. The participants indicated that they had

to choose ICT tools/applications in relation to their students' language level and the use of some tools was not appropriate for learners at particular levels, for example in the university context, UT4 pointed out "*Using wikis for my advanced writing class was very fruitful, some of my students were very creative with their writing tasks."* However, he also reported students at a lower language level could not engage in discussions and collaborative work: *"It was very difficult to use blogs with my students in the reading and writing course, it is their first term and most of the activities are very simple."* Similarly, ST3 pointed out "*The language task are very simple so I could not use Edmodo discussions, I had to make it a class activity."* However, it should be mentioned that in both contexts five participants stressed that they saw their students' lack of language skills as a major constraint to ICT use. An assumption was made that students with low language levels of English also had low competence of ICT tool use. An example of such an assumption is shown in comments by ST2 and UT5, who both saw the need to begin the process of ICT implementation for English language teaching with an introduction course for the students, ST2: "*I think we should start with our student and tell them how to use every application."* UT5 pointed out that there should be a hand out on how to use each tool and it should be given to the students before the training course: "*We need to make a manual for the students, a how-to for the tools that we are going to use."*

The second most frequent code was facilities (n=5). In this code positive (2/5) and negative (3/5) comments were provided. In the university context, UT1 pointed out that access to facilities was a barrier to his ICT tool use: "*I tried booking the lab in the IT department but it wasn't available and I had prepared the material already, so I had to print it before the lecture and I could not use it."* In the school context, ST3 pointed out too that it was relatively difficult at the beginning as most of the English teachers wanted to book the computer lab: "*Imagine we all wanted to use the lab but we had to divide time between us,*

each one has the lab five times a week." However it should be pointed out that university lecturers mentioned that they had access to a computer lab in the English clubroom in the English department, which is allocated to serve 13 staff members and all students. There was, however, less support from the IT department to accommodate lab bookings for the English department, which will be discussed later in Support.

Support was coded (n=4) and in the university context UT1 felt there was a lack of support from the IT department in lab bookings, and this department was inflexible in timetabling, leaving some labs empty: "*It is difficult if you can understand what I mean, only two labs for the whole department, and when you ask for labs from another department they say it is not available, what should we do then?"* As for UT6, he reported that facilities were less maintained because of the shortcomings in the support process: "*I have asked them maybe 4 times to replace the projector in my class but they keep saying next week."* Similar comments were mentioned in the school context, where ST5 pointed out that there was a lack of enthusiasm and encouragement from some of the administration staff in respect to his use of the computer lab: "*I am not sure, but I think he (the head teacher) is not very happy that I am using it with the students."*

Curriculum constraints were coded (n=4), and always in negative contexts with both university teachers and schoolteachers raising similar concerns regarding the flexibility of the curriculum in regards to using ICT. In the university context UT2 said: "*The issue is that we must finish the course as future courses are built on the previous ones, so we have to try and finish and there is no room for technology frequent use."* Another example from the university context was UT6's comments about extra material: "*We just don't have any room to develop our own material or use extra material, we are given the syllabus and we have to finish it";* he also pointed out: "*It is difficult if you have two staff members teaching the same*

course, so you can't add anything to the syllabus." As for the school context, similar comments were made by ST1 and ST3. They both commented on the inflexibility of the syllabus to include extra material. For example ST1 commented: "*you can't add any resources to the syllabus, we have one exam at the end for all the students and it is just not right that your students may know more than the other students because their teacher did not use extra material"* ST3 agreed with his comments.

Class size was coded (n=3), and both contexts had negative connotations. In the university context, UT7 and ST1 and 4 agreed that class size was an issue for their ICT use in general and computer lab visits in particular as there were not enough computers for students' individual task. In the school context however, ST4 points out that: " *it is very difficult to use ICT when you have a larger class as it is very difficult to manage all students".* ST1 also pointed out: "*in larger classes I just use presentations as it is less demanding".* It should be pointed out that in the university context and especially with introductory modules the number of students can exceed 50 students per class.

Students' IT capabilities were coded (n=3), and in particular in the context of students' lack of IT skills to get started on ICT-supported learning quickly. As ST1 pointed out: "*A very small number of students in each class are not that good with using computers and they just lose interest in the class and it is difficult to keep them out."* In the university context, students' IT skills were seen as more advanced and contributed to their use of ICT tools. Skills were seen as contributed by student use of smart phones and tablets. UT4 noted: "*One of my students kept using Twitter during the class and sending tweets about the lecture and it was just great to see that."*

Class time (n=3) was reported as a barrier to ICT use in the school context by ST1 and ST6 but was not reported as a major barrier in the university context (UT6). In the school context, ST1

stressed that the class time was not enough for his ICT use: "*I just can't manage to fit everything in only 45 minutes, I had to start sending them the work online so they come prepared for the discussions";* similar comments were made by ST6. However, in the university context UT6 pointed out that: "*Most of the courses are three hours a week, so I use the one hour class for the presentation and the two hour class for the discussion and activity."* Thus university teachers perhaps had more flexibility and opportunity to use ICT tool in their teaching.

Teaching hours were coded (n=2) with UT6 and UT1 sharing similar views about their work load being a barrier to their use of ICT in teaching. They stressed: "*You can't if you teach 25 hours a week,"* and "*I have to teach 14 hours a week and make 12 visits to teacher trainees a week, it is just impossible."* It was pointed out earlier in Chapter 2 that teaching hours were allocated to staff members in relation to their qualification, with teaching assistants teaching 20 hours a week, lecturers 18, assistant professors 16, associate professors 14. In the school context teachers were allocated 25 hours a week, 5 lessons a day.

The general picture was that a number of barriers and constraints to ICT use in both contexts are encountered, with each context presenting different patterns of constraints. In the school context, class size was seen as a less important barrier than in the university context. In the university context facilities were more likely to influence the participants use of ICT than the school context, which could be seen as a result of the number of students and language teachers in both contexts. There were more positive comments about students' IT capabilities in the university context than in school. IT skills were assumed to be related to experience of technology attitude and to some extent to background in language learning.

5.2.2 Training Input

Participants' responses to the training input are outlined below. Responses coded under the training input are grouped under positive and negative input. Responses coded under **positive input** (n=11) and covered participants' views about the tools and applications presented. As for **negative content**, (n=5) responses represent the participant negative views on the tools and application presented.

Table 5.7. Frequency with which each code was applied in respect to training input

	NR	**No**	**UT [n=8]**	**ST [n=6]**
Positive content	11	13	6/8	5/6
Negative content	5	6	2/8	3/6

Positive content was coded (n=11) and covered comments about the appropriateness of the tools/applications to their real daily practice. ST2 for example stressed that: *"It is what we needed and asked for before,"* it should be pointed out that the content of the training was based on the participants' responses to the needs analysis questionnaire, which was administrated before the beginning of the training. Other comments about the content of the training are in relation to the relevance to their daily use of the tools/applications. UT4 pointed out: "*What I enjoy is that we can use the tools daily; they are not demanding to set up or use every day."*

Negative content was coded (n=5), and covered participants' comments about the lack of theory in the sessions and the fact that the sessions were technology driven rather than being balanced between the two. UT2 pointed out that: "*We should have at least a session on theories of e-learning so we can understand fully why we are doing this and not that."* Other

comments had to do with the lack of examples of how and when each tool could be used, as ST5 pointed: "*I think I should know why I am using this tool for this purpose in advance, and not leave it to me to find out."* In relation to the tools presented, the participants' comments emphasised that the training was: "*Focused on social media and presentations and online classes,"* and "*the order of the application was not ideal, we should start with the applications that need more time to understand."*

The general picture was that the training content (i.e., tools/application) was appropriate and appealed to a number of the participants. However, it was also reported that there was a lack of theory in the training, and this was also raised in the next level of the evaluation (i.e., training process) within the future development theme. There was no major difference between teachers in the university and school context; they held the similar view that the training enhanced their everyday teaching and was not a waste of time and effort.

5.2.3 Training Process

Participants' responses to the training process and modification are outlined below. Responses coded under training input are grouped into online training and future development. Responses coded under **online training** (n=10) covered participants' views about the training being online. Responses coded under **Future development** (n=7) represented the participants' ideas of modifying the training and allowed doubts and tensions to be raised in a socially acceptable manner.

Table 5.8. Frequency with which each code was applied in respect to training process

	NR	**No**	**UT [n=8]**	**ST [n=6]**
Online training	10	10	6/8	4/6
Future development	7	14	4/8	3/6

Online training was the most frequent code (n=10) in which the participants' responses indicated that there was a relatively general agreement that the training model was appropriate and suitable for their needs. An example of their agreement was UT2's comments about the model of the training: "*The best idea was that the training is online, we can take it anywhere."* The comments were largely positive about the training being online, including: "*I don't have time to attend courses, so online training is perfect in my case."* UT4, *"It is more suitable in your case, you can be in the UK and still deliver the course"; "I am sure if we had a traditional training we would not agree on a time for it."* However, one of the future development suggestions made by the participants was to deliver the course in a mixture of face-to-face training and online training. In the university context, two participants agreed that there should be a similar mix, as: "*I can't just keep taking knowledge without discussing it face-to-face with you, yes it is a useful model now, but for the future I think we should have face-to-face meetings as well."* (UT6). This suggests that for some direct interaction was missing online. UT2 commented about the training timing and how it should be delivered before the start of the academic year: "*We should have the training in the summer term, so we can have time to see what does each one help in."* Another development suggestion had to do with the time between sessions, which was raised by participants from both contexts. Other suggestions were made to develop the course content, these suggestion are mainly to deal with the order in which the tools/application were introduced. For example, UT3 pointed out " *I think we should have planned the content so that the order of the tools was better, in my opinion Edmodo should have been introduced first".* Similarly in the school context, two participants agreed that the training should have a mix of settings and not be exclusively online.

The general picture was that almost all the participants from both contexts agreed that the online model was a suitable and appropriate model for training with suggestions to deliver some face-to-face sessions. Development suggestions included having the training in the summer term to allow for some evaluation to be carried out in regards to what each tool/application could do if implemented in the language classroom. What we also can understand is that there was a general approval of the training and a positive attitude towards the training.

5.2.4 Reaction to Training

The participants' reactions to the training were coded under positive and negative reactions. Responses coded under **Positive reaction** (n=11) covered the participants' thoughts about the training as to whether they felt it was needed as a professional development opportunity. Responses coded under **Negative reaction** (n=3) represented the participants' levels of appraisal towards the training.

Table 5.9. Frequency with which each code was applied in respect to reaction to training

	NR	**No**	**UT [n=8]**	**ST [n=6]**
Positive	11	19	6/8	5/6
Negative	3	6	2/8	1/6

Participants who enjoyed the training indicated that they: "*have enjoyed the training so far";* (ST1) *"It is very good and I am glad I took part in it"* (ST2). Others commented on the event as: "*I think it is more than enough to get teachers started to use technology in their classrooms"* (UT4), other participants shared similar views about the training. However, three participants reacted negatively to the training timing. For example, UT5 stated that: "*I think it in the wrong time now, everyone is not sure if he is going to be here next year and no*

one is really interested now," as an indication to the lack of stability of the department staff structure. It should be pointed out that during the course the English department went through a transformation stage in which all the Saudi staff members were transferred to a different department in the main university campus and non-Saudi staff members were let go. Clearly this was a big issue for non-Saudi staff (UT2, 3, 4, 6) see introduction. One consequence was that they might lose interest in the training as a result of the university's new policies although this was balanced by a greater extrinsic motivation for CPD. However, this also might suggest intrinsic interest or even a career interest. Other negative comments about the training were reported by UT6 and ST6, in which they state that the time of the training was not appropriate, as it began two weeks into the academic term, and that some tools should have been introduced earlier than others. The general picture was that almost all the participants were satisfied with the training event and saw it as an opportunity for development, while three participants' had a negative reaction to the timing.

5.2.5 Training Satisfaction

Participants' responses regarding the delivery, content, and design of the training course are outlined below. Their responses are grouped under **positive and negative delivery**, which included their comments about the training being based online; **positive and negative content**, which included their comments about the tools presented through the training; and **positive or negative design**, which included their comments about the overall structure of the training.

The most frequent code was positive delivery (n=11), followed by positive design (n=10) and positive content (n=9). Negative design was coded (n=4) and finally negative delivery and negative content were coded (n=3) each.

Table 5.10. Frequency with which each code was applied in respect to training satisfaction

	NR	**No**	**UT [n=8]**	**ST [n=6]**
Positive delivery	11	15	6/8	5/6
Positive design	10	18	5/8	5/6
Positive content	9	11	7/8	4/6
Negative design	4	7	3/8	1/6
Negative content	3	3	2/8	1/8
Negative delivery	3	3	2/8	1/6

The most frequent code was positive delivery and covered participants' views about the process of delivering the training. Almost all the participants agreed that the course was delivered in an acceptable manner. For example, UT1 believed: "*The course being online was very appealing to me and you can say it was an encouragement for me to take part in it";* it is worth mentioning that this code was related to online training in (section 5.3.2). However, this code presented comments about the discussions that took place online after every training session, which enriched the program. An example of such comments was stated by UT4: "*What is great about it is the discussions that follow, it gives you space to reflect on how you saw the tool in practice."*

Positive design was coded (n=10) and covered participants' responses about the structure and rigor of the training sessions. UT6 for example stated that: "*You have a variety of tools for each use, which gives you control over how you want to present the content."* In the school context, ST3 thought that: "*The balance of the session timing was very good."* ST1 also shared similar views about the rigor of the training: "*The time we have for the next training was ok for me, you had a week to discover each tool."* The training sessions were introduced on a weekly basis, where each tool was given one week for discussion and one week for practice. However, this was developed after the participants commented on the rigor of the sessions.

Positive content was coded (n=9) and covered responses that indicated a general agreement on the value of the tools/applications introduced. For example, UT8 reported *"The content was generally good and covered different tools";* also UT7 claimed that *"Content wise it was very interesting to know a lot of different tools."* In the school context, ST1, 2, 4 also made similar comments about the content of the training being for a specific purpose. For example, ST4 explained that *"It is very good to have a training that you had a say in the design and content of it, this is what I wanted to be trained in and I did not think it would be like this."* ST2 also praised the content of the training, as being based on their reported training needs, "*What I liked the most is that we choose the content of this training."*

Comments on negative design were coded (n=4) and covered negative comments about how the training was designed. For example, UT6 pointed out that *"There should more than different training groups for teachers with different skills."* In the school context, ST6 made similar comments regarding the training design *"I think it did not take into account how I would like to be trained."* As for comments coded under negative content (n=3), participants reported that the content did not address issues with context clearly, for example UT3 pointed out that *"Although the training content is very useful but it took for granted that every student had access to a computer at home and that he can use the tools,"* and in the school context ST1 made similar comments. For him the content of the training *"was very useful but some parents would not allow their students access all the time to the Internet and that would limit their participation."* UT5 on the contrary indicated that the training content was very interesting, but added *"I think the training missed one aspect of why one should use technology in the first place, yes we discussed it before the training but I think it should be introduced in every session."* As for the negative comments coded under negative delivery, the participants (n=3) pointed out that there should be a focus on face-to-face interactions rather than the "*human to computer interaction [which] is not that good when starting*

training for a new thing" and the introduction of one-to-one training for specific purposes: "*We also should have private sessions, I mean not for everyone to take part, just me and you so I can ask you freely."*

The general picture was that the training delivery, content, and design were all praised by the participants with nearly all of them agreeing that the delivery of the training was a factor for their participation in the training. The nature of the training was very well received. It meant that they could participate when they liked and felt a sense of control over the pace of their development. It also was seen as problematic by some participants, as they felt they were dealing with a computer rather than a trainer. The content was also almost agreed upon in both contexts as being appropriate and relevant to their daily ICT use. As for the design of the training sessions, almost all the participants agreed the structure of the training was suitable for their needs. However, some saw it as an issue, since it did not take into account students' personal access to computers and Internet at their homes. Generally the intervention was suitable for the participants' potential use and focused on their needs, and it was delivered in a medium that they approved.

5.2.6 Take up of ICT

Participants' responses regarding the impact of the training on their uptake of ICT is detailed below. Their responses are grouped into: ICT use, acquisition of ICT skills, personal use, and positive and negative attitudes.

ICT use referred to the participants' use of the tools presented in the training as a result of attending the training. Responses under this code presented all the tools/applications that the participants' used as a result of attending the training. **New skills** referred to the participants' acquisition of skills needed to implement ICT in their classrooms. **Attitudes towards ICT**

use covered changes as a result of the training, and both positive and negative change in attitudes were coded. **Tool personal** and **instructional use** presents the participants' use of the tools as a result of the training; such use is defined here as the use of ICT tools for EFL teaching purposes.

The most frequent code was ICT use (n=13) followed by acquisition of ICT skills (n=9) and positive attitudes (n=9). Personal use coded (n=6) and finally negative attitude (n=2).

Table 5.11. Frequency with which each code was applied in respect to take up of ICT

	NR	**No**	**UT [n=8]**	**ST [n=6]**
ICT use	13	30	7/8	6/6
Acquisition of ICT skills	9	23	5/8	4/6
Positive attitude	9	18	6/8	3/6
Personal use	6	12	4/8	2/6
Negative attitude	3	6	2/8	1/6

ICT use was coded (n=13) and covered the tools used by the participants in their language teaching as a result of the training. There were eight tools/applications presented in the training (Facebook, Twitter, Edmodo, Udutu, Prezi, Wikis, Blogs, and Google groups), and all of these tools/applications were used by one or more of the participants at some time. Other tools were also used, as the participants who were stimulated wished to find something different from the tools presented, such as Empress, a presentational tool. A fuller account of each participant use of the tools is given in the discussion chapter.

Acquisition of ICT skills was the second most frequent code (n=9), and often overlapped with the above code. For example ST2 reported: "*I wasn't aware of how to mention someone on Twitter so I can get his attention, sometimes we lose interest because of such difficulties"*;

also UT2 reported that: "*I have avoided using blogs before as [I thought] they were very complicated to make, I had no idea that they are this easy."*

The participants also showed positive attitudes (n=9) towards ICT during and after the completion of the training. Out of 12 participants, nine indicated that they had developed better understanding of technology use and that they were more willing to use it in their teaching. Comments such as: "*I am convinced that technology will aid me in a way that is not possible with any other tool,"* and " *I think it is clear what technology can and can't do, and I am sure the advantages are more,"* were recorded by the participants. Some positive comments were also raised regarding the online learning platform, for example a number of the participants argued that the online medium allowed them a space to reflect on their tools use in the language classroom. UT4 commented: "*It was very useful for me to reflect on how I have used different applications, when we discuss it in a group, it confirms the way and tools you have used."* A comparison of pre- and post-course attitudes towards ICT will be outlined and discussed in the final chapters to shed more light on possible changes.

Tools for personal use were coded (n=6). This referred to any use of the tools that had been introduced for participants' personal use. Four participants indicated that they had used tools such as Facebook, Twitter, and Blogs for social purposes only as they thought it was important to keep their personal life separate. UT1 for example pointed out: "*I can't have my students around my social space, it is not acceptable for me really."* In one particular case, UT5 indicated that he had two different accounts where he kept his private account for his social life and one for his teaching: *"I have two accounts, one for teaching and one for socializing."* Socially, teachers are looked up to, and some saw the need to draw a distinctive line between their social engagements and their teaching responsibilities.

Negative attitude was coded (n=3). In the university context UT6 was very sceptical about the technology use in EFL teaching, as he believed it had a novelty effect that would soon pass. He felt colleagues would lose interest in new tools/applications. However, he did intend to try and use the tools/applications in his teaching but could not see the point and has dropped out of the remaining of the training course. In the school context, ST6 shared a similar attitude; although he had trialled some of tools/applications; he lost interest in technology use after these first attempts and refrained from completing the training.

The general picture was that almost all the participants made use of the tools presented in the training, with almost all presenting signs of use in both contexts. The tools were used by the participants to address different language activities and tasks. What should be stressed is that the one schoolteacher had a negative evaluation of using ICT and one university teacher reported negative content and possible undesired exposure of material when using a certain tool/application.

5.3 Post-Course Interviews

Data presented in this section referred to post-course interviews and are presented through the last level of the evaluation framework, which is change. It should be pointed out that the post interviews were brief since they were followed by the group discussions. The data from the post interviews was valuable, as it showed any changes on practice due to attending the training. The codes tried to capture such elements of change, as they represented adoption of ideas, attitudes to ICT use, ICT use, and future strategies of implementation. As we will see later, positive and negative attitudinal annotation were distinguished as they represent clear contradiction of the impact of ICT CPD.

5.3.1 Change

Participants' responses regarding any changes in their teaching as a result of the training are outlined below. Their responses were grouped into: adoption of new ideas, positive and negative evaluation of use, and strategies. In this section as with the previous sections, more than one code was applied to the same unit of text when appropriate. It should be pointed out that UT6 and ST6 had dropped of the study prior to the post course interviews and were not included in this stage of data collection.

Adoption of new ideas for using ICT referred to the participants' use of technology in their teaching practice and how they had adopted such technologies in their EFL classrooms. **Strategies** referred to the participants' plans for implementing ICT tools in the classroom and the mix of tool use. **Positive evaluation of use** referred to the participants experience when teaching with the tools/application. **Negative evaluation of use** referred to undesired outcomes of using tools/applications in teaching. Responses coded under positive evaluation of use included examples of the participants' use of the tools presented through the training in their daily language teaching. Responses coded under negative evaluation of use highlighted undesired avoidance of using the tools in the participants' teaching.

The most frequent code was adoption of new ideas (n=12) followed by positive evaluation of use (n=10). Strategies were mentioned (n=8) and finally negative evaluation of use was coded twice.

Table 5.12. Frequency with which each code was applied in respect to change

	NR	**No**	**UT [n=7]**	**ST [n=5]**
Adoption of new ideas	12	22	7/7	5/5
Positive evaluation of use	10	21	6/7	4/5

Strategies	8	14	5/7	3/5
Negative evaluation of use	2	4	1/7	1/5

The most frequent code was adoption of new ideas (n=12). This referred to taking a new approach to technology and extending what use 'normally' covered in a lesson, for example collaboration, use of games, and multimedia. Almost all of the participants reported adopting one or more new ideas in their teaching. In the university context UT2, UT3, and UT5 showed signs of frequent tool use. For example UT5 explained: "*I use one or more tool for each class, the students and I are more connected now and it became simpler to address issues";* in the same vein UT3 pointed out: *"Most of my sessions are 2 two hour session, in the teaching sessions we use Prezi and Power Point for the practice session we use wikis for collaborative work."* He also pointed out that he tries to keep the class engaged in learning out of class time: "*I found that most of my students have Facebook and Twitter accounts, so I keep the learning process [going] even outside of the classroom."* As for the school context, ST2 and ST4 reported adopting new approaches for teaching. ST2 reported using Twitter to practise vocabulary: "*We have started this game where I start with a word and send the tweet and wait for replies from my students."* What is evident here was that many participants were able to adopt and use tools in ways that were appropriate to teaching. UT4 also reported using YouTube and online news channels as a source for multimedia: "*In my translation classes we used YouTube for live translation, it gives me a large source for material, and the students enjoy using it."*

Positive evaluation of use was mentioned (n=10). An example of such an evaluation is UT1 comments about using Twitter for the first time for his teaching states: "*When I started using Twitter for the first time with my students for grammar correction I wasn't sure that it [would] work, but it did and they enjoy it."* A similar comment about using Twitter was

raised by ST2: "*Using twitter for spelling games is very engaging and my students reacted well to it."* Another example of this code was stressed by UT3: "*If it wasn't [for] the training I wouldn't have known about Edmodo."* The participants pointed out similar examples.

Strategies was coded (n=8) to signal the participants' intentions and plans for new implementations. Again this code overlapped with adoption of new ideas and acquisition of ICT skills but has a distinctive focus on how participants planned to use the tool and for what purposes. For example, UT4 reported: "*I plan on using different tools every session to keep my students engaged."* UT2 also reported: "*I am going to use Facebook video chat service for my final interviews with my students."* In the school context, UT1 and UT2 both reported intentions to use Edmodo to engage the students more, since they were very active socially on Facebook. UT1 commented, "*I was shocked of the amount of time spent using Facebook, and using a similar platform will be very promising";* ST2 reported: *"My students were very frequent users of Facebook, and Edmodo provides the same feature so it was appealing for them and it will maximize their engagement."*

What was interesting is the negative evaluation of use of the tools/applications in the training. Negative evaluation of use was only coded 2 times, once in each context. In the school context, ST5 pointed out that he had only used Prezi twice in his teaching, and has failed to make use of the other training provided. He stated: "*I tried using Prezi maybe two times, but I don't want to rely on it that much it; is too complicated and distracts some of the students,"* and when he was asked about using other tools, he pointed out: "*Maybe I will use them sometime this term."* In the university context UT6 pointed out some issues with some of the tools, namely Twitter and Facebook, as they could have a negative impact on the students' attention during the classes, stating "*Students get disturbed"* and noting the possible

unwanted content of both tools: *"Sometimes it's shocking what you can see in Facebook, very difficult [content] for you in your class."*

The general picture is that there was some tangible evidence of the uptake of tools/applications and an appreciation of their value for teaching and the acquisition of IT skills. However, some showed signs of more frequent use of technology than others and were more likely or capable to use technology in their teaching. There were clear similarities between the two contexts in adoption of new ideas and the personal use of tools/applications, indicating shared opportunities and constraints for ICT use. As can be seen in the figure (6.2), teachers were likely to use presentational and communication tools as opposed to VLE'S. This suggests that participants from both contexts were more likely to use "one-off" tools rather than integrated systems, indicating a lower threshold in terms of ICT use or experimental 'testing the water' approach. However, small differences between the contexts were observed in adoption of new ideas and negative attitudes in particular. This indicates that university teachers were slightly more positive and more likely to use ICT tools in their teaching. It should be pointed out that the general picture will be much clearer in the discussion chapter.

5.4 Observation

As pointed out in the methodology chapter, five online observations took place during the delivery of the ICT CPD course. The participants were encouraged to share their online class links (blogs, wikis, Facebook, etc.) in the online platform. Some participants were more responsive than others and provided the group with more than one link. In the school context, for example, one participant provided links to his classes and links to the school discussion forum that he maintains. As detailed in the methodology chapter, a structured schedule was

used to identify tool or application use, teacher role, purpose of using applications, students' engagement, and the relationship between the application and teaching objectives of the class. In the following section, a reflection on observations is provided around the issues observed.

5.4.1 Tool/Application Use

In the five observations carried out, different applications and tools were used by the participants. As we will see later in figure (6.2), all the tools/applications were trialled by the participants during the training. As for the value of using different tools/applications was concerned, in one of the online classes observed the teacher directed his student in a debate and discussion module to discuss the issue of using technology in teaching EFL, and different groups were asked to collaborate and produce a convincing argument. Later he posted that argument and asked another group to debate. In another class, a teacher used a YouTube clip as a source of information in a blog about Shakespeare's Hamlet and asked the students to watch the clips or read the play. However, not surprisingly, some teachers used the tools to support their traditional teaching methods too. For example, in one wiki observed, participants uploaded photocopies of the textbook material for their students, while others asked students in online classes to look for material and sources about a certain topic. As far as communication was concerned, some participants used Twitter as a medium to communicate with their students, while others created Google groups for individual modules. Some of the participants justified their use by asserting that sometimes it was difficult to separate personal and professional life and using social media platforms with students impacts their privacy. On the other hand, other teachers reported using Twitter as students were more engaged in that social media more than any other platform. What can be understood from reflecting on the participants' tools and applications use is that there were some changes in their attitudes and perspective on using ICT in the EFL context. However, as

we will see in the following section, some participants were still sceptical of the value of using ICT in the EFL teaching context.

5.4.2 Teacher Role

In the online classrooms observed, the participants negotiated different and new roles in the teaching and learning context. In one of the online classrooms, a participant engaged his students in discovering the subject at hand as he asked them to look for online sources and material on a certain subject. Pedagogically, he asked the learners to be responsible for their learning and directed them to being autonomous in their choice of what, how, and where to look for the information. Other participants chose to act as the source of information and guided their students' interaction in an online medium. In an Edmodo online classroom shared by one of the participants, the teacher posted the topic that was scheduled for the following week's class and asked his students to look for online sources and prepare for a discussion that would take place next class. As can be seen, there were different teacher roles adapted by the participants to engage their students in discovering and looking for information in their own time and at their own pace. However, not all participants shared this view, as we will see later in the group discussion, where some of the participants believed that they should be responsible for providing for their students, especially in the context of EFL teaching.

5.4.3 Students' Role

During the online classes observed, students took different roles as compared to the typical "passive learner" role in a traditional classrooms. In blogs observed, language learners were encouraged by their teachers to engage in discussions by the target language and respond politely and formally to each other. While in wikis, they were tasked to collaborate and produce different forms of the target language, such as stories and debate discussions. As far

as communication was concerned, language learners tried communicating with their teachers through different mediums and in different forms of the language (i.e., verbally and written). Learners' autonomy was encouraged and fostered by the participants. Different tasks allowed them to be in charge of their learning in terms of how, what, and when to learn. As for their learning styles and in the online classrooms observed, the participants allowed more flexibility in their teaching to include different forms and format of the information, by either supplying different formats or allowing students the ability to choose their preferred style.

What we can conclude is that the online classrooms observed provided an insight into the participants' use of the tools and application, allowed the researcher to check for irregularities that participants could not have said freely in an interview and provided valuable trigger questions that can be followed in the group discussions. What do we understand from this is that the participants made good use of the tools and applications with varied justifications and limitations. The general view is that there was a good understanding of how and why different tools can by adopted and implemented.

5.5 Group Discussions

Four group discussions were conducted after the completion of the course. The main reason for the group discussion was to exchange ideas about the training course and the participants' implementation of the tools presented in the training, and to inform the data collected and analysed in the post-course interviews. There were three primary questions raised in these group discussions:

- What is your overall view of the training?
- Which tools have you implemented in your teaching and why?
- Has your attitude towards ICT use for EFL teaching changed?

It should be pointed out that there were two group discussions in each context; in the university context UT1, UT4, UT7, and UT8 shared their ideas and thoughts in one group; and UT2, UT3 and UT5 formed the second group. In the school context there were two group discussions; ST1 and ST5 in the first group. ST2, ST3, and ST4 formed the second group (see methodology). However, UT6 and ST6 declined to take part in these discussions as they had dropped out of the training before it was completed

5.5.1 University Group Discussions

As stated previously there were two group discussions in the university context. The discussions are presented together as they were complementary sources of data.

As presented earlier in this chapter, the general view was that the programme was a good training intervention addressing necessary developments. The same positive impression was given in the group discussions. For example, UT2 commented: "*As I said before and I think we all agree, the training was a good first step."* UT5 agreed to this view and added: "*It was really good. . . . We all truly agree.*" However some criticisms and suggestions were put forward. In particular some participants wanted face-to-face sessions as UT7 pointed out: "*It was the strength of the training, if it was face-to-face no one would attend, let's be honest we can't agree on a time for it."* As UT3 put it: "*But if we had at least one or two sessions it would have made a difference to me."* When he was asked to elaborate on his point, UT3 responded: "*It felt that there was something missing from the training, the content was good, the design was also good, but it only missed a face-to-face session, just to make us the training."* However, the general understanding of the training was presented by UT1: *"I think the training allowed most of us to discuss and reflect on how we have used all the applications in our teaching, and I believe this was very valuable for me."*

As for the tools used as a result of the training, there was a tendency among the participants to label some as difficult to use with students' having low English language levels or for their complexity to use. UT5 commented: "*You can't use the tool [in the way] that you imagined it would work, I had to base some of my tool use on my students' language level; wikis for example do not help with my students from the first term, they can't discuss task."* UT2 also agreed that students' language level was a barrier to his tool use: "*I wasn't that happy when my students did not engage online, but I found out that they are not ready to express themselves."* However, UT4 did not agree with the previous comments and noted: "*The students are not to blame for their low language level. I think what is important is that online tools allow them to start exploring the language in real context, which is a benefit in my opinion."* During the course the participants felt better able to match tools with their pedagogical goals. As UT1 pointed out: "*Before I choose the tool I want to use, I first identify what I would like to achieve, for example is it information presentation or is it a written collaboration, and then I choose the tool that serves my goal."* UT5 explained his interest in Edmodo as emerging from a desire to promote communication: "*What I found very interesting is that my students are very active in Edmodo, it became like Facebook for them, they communicate in English, and I think this is difficult in any other way."* He also raised some issues with Udutu " *it s very difficult to set up and use and I think it will not be helpful in out context".*

When asked about their attitudes towards ICT use for EFL teaching, the general view was that it enabled them to teach in ways that were difficult otherwise. UT8 expressed: "*Using the tools helped me be more connected to my students and this allowed me to see how I can direct their language learning not only here but after they graduate and be teachers."* Some found the programme more knowledgeable and more positive in teaching, for example UT1 said: "*I wasn't aware that there are such ways to help my students in their language learning,*

and I think every language teacher should be made aware of them." UT4 pointed out: "*I think the training made me more aware of what technology can do in the language classroom, I didn't have a negative attitude before but now I am more convinced of what it can do to the language learner and language teacher."* However, other participants reported that the nature of EFL teaching makes it difficult for them to rely on using ICT technologies for the majority of the time. For example UT8 pointed out *"English is a foreign language in Saudi and I think using too much technology will not help the students learn the language; the students can be exposed to negative input online if they are left to learn by themselves."* However, UT1 disagrees with the previous comment and sees technology use as "*using technology in the classroom is important now; we as non-native speakers should encourage students to look for more authentic sources of the language, of course we could provide them with that, but they need to look for themselves as well."*

5.5.2 School Group Discussions

In the school context, similar views were offered regarding the content and delivery of the training. Overall, participants felt that they enjoyed and learned from taking part in the course and as ST3 commented: "*If I did not take part in this training I wouldn't have known about these tools and I would still be unsure of technology use."* They also felt that they had developed a more open mind to technology as ST1 believed that: "*Language teachers should be up to date with such technologies so that they can try them, they should approach it with an open mind to the idea of changing their teaching methods."* As with university teachers, school teachers would have wanted some face-to-face interaction. ST1 and ST4 both felt that: "*I think we should have had a mix of face-to-face and online training sessions."* ST4 felt that while online training was useful it made it much more difficult to cope "*I felt that I am interacting with a computer screen rather than a human being and it made me feel*

uncomfortable at some times." In describing further parts for development one teacher stressed the importance of introducing some theoretical aspects related to technology use in the language classroom: "*I believe that we needed some evidence before beginning to discover by ourselves what works and what doesn't work, I mean sometimes I did not know why I am doing such and such, if we had theoretical knowledge just to back us up*" (UT2). Similar comments about the lack of focus on theoretical frameworks for ICT implementation were raised in the mid-course interviews.

As with university teachers' tool use, school teachers were able to match their pedagogical goals through the tools used, and ST1 justified his tool use by indicating: "*One of the main reasons for me choosing focus on tools that make the student practice writing is that they need to try and communicate in the language outside of the school, and Edmodo, blogs, and wikis do the job really well rather than using the text book which I think is not that practical";* ST4 also agreed and added: "*What makes me use a tool over the other is what I intend to do with it, present information or engage the students to collaborate."* However, ST2 and ST5 both agreed that: "*Using the tool for language activities should be challenging for the students so that they can push their language level; there is no point of repeating the same text online unless it challenges them more."*

5.6 Summary

To sum up this chapter, the training was seen as having an impact on the participants' teaching practice as it has resulted in forming new skills and understanding of ICT tools. Furthermore, new pedagogical skills were observed and discussed by the participants as a result of the training. We can say that the intervention was successful in that it had an impact on the participants' attitudes towards ICT use in the language classroom. Participants

reported being more positive of ICT use in their teaching context. It also can be said that there was an impact on the participants' tool use for teaching purposes as a result of attending the online sessions. Through such sessions, the participants were able to develop an understanding of how and when ICT tools/applications can be used and for specific pedagogical goals. They were also able to develop strategies experimenting with tool use through trial and error. In terms of content, the training was relevant to the participants' language teaching context. The online delivery of the training was thought to suit the nature of the group of the training and was praised for being interactive. However, it was also criticized for being based entirely online and lacking face-to-face interaction. A paradox in interpretation was that they may well have preferred face-to-face training but may not have turned up for the actual events. As for the tools used, there was a focus on communicative and presentational tools. Motives for tool/application use was to promote collaborative and individual learning, multimedia use, and authenticity. There was a consistency among the participants and across contexts in regard to the impact and general evaluation. There were similarities in both contexts in terms of uptake of ICT with slight differences, in that university teachers were more prepared for communicative activities for pedagogical justification. Participants in both contexts shared similar concerns and challenges. However, the university context presented more constraint in regards to facilities whereas class size was the most important constraint on ICT use in the school context. One interesting finding was that participants associated ICT use with level of English language. One small criticism of the programme was that it was unsuccessful in striking a balance between technology and theory and thus it was more technology driven.

CHAPTER 6: DISCUSSION OF FINDINGS

This chapter addresses the research questions as outlined in the methodology chapter and provides a description of the evaluation framework. It begins by outlining some methodological tensions and moves on to address the findings of this study. The first sub-research question is addressed first through a reflection of the three initial stages of the evaluation levels, followed by the second sub-research question where reflections on the impact of the ICT CPD on teachers' attitudes, knowledge, and behaviour. Following discussion of the sub questions, the main research question of this study will be addressed. The chapter concludes with a summary.

The research began with the aim of examining the impact of training on participants' uptake and use of ICT tools in their EFL teaching. It however evolved to pose two sub-questions that were much related to the main research question. In addressing each question, the findings were compared and contrasted with the wider literature to draw attention to similarities and inconsistencies and to contribute to a wider debate about ICT CPD. The first sub-research question, How was the ICT CPD designed and implemented? addressed design decisions and implementation issues. The second sub-research question, What was the impact of the ICT CPD programme on the participants' knowledge, attitude and behaviour? addressed the participants' reaction to ICT and use patterns. The interpretations and discussion of these two sub-questions led to examining and addressing the overarching question that this study was set to answer: Can an ICT CPD programme have an impact on EFL teachers' in KSA?

Data were collected through a mixed method approach, including (28) pre-questionnaires; 14 pre-, during, and post-interviews; five online observations, and four post-training group discussions. The data were mainly qualitative although descriptive quantitative methods were used to analyse questionnaire data. All of the participants of this study were male EFL

teachers who participated voluntarily. Two participants withdrew from the study half-way through the data collection. This study can be seen as a sequential mixed method case study, as it began with a quantitative data collection that informed qualitative data collection. However, only needs analysis survey questionnaires were administrated to inform the design of the ICT CPD intervention.

As we saw earlier in the methodology chapter (see page 94-95), different methods were used to collect data in the three stages of delivering the ICT CPD. Pre-interviews were conducted with all the participants in the study to evaluate their current use of ICT and what factors enabled or restricted them from such use; that was followed by during the ICT CPD interviews. This stage of data collection was to evaluate the impact of the training on the teachers' use of tools and adoption of new ideas. Also in this stage, online classroom observations were conducted to pinpoint what the participants' actual tool/application use is, and served as a credibility check. The final stage of data collection was conducted through post-course interviews and group discussions. Both of these methods offered a wider view of the ICT CPD and how it contributed to the participants' uptake of ICT.

The data generated from the survey questionnaires; interview data and observations addressed the issue of triangulation. Although reported as a problematic concept, triangulation can improve the credibility of findings through comparing different responses and drawing similarities. Triangulation of data has been assumed to imply consistency, but this is not necessarily the case, and some inconsistency arose when comparing the responses from the pre- and during interview responses on the use of ICT. Similarly, there was inconsistency in responses between data from observations and during the course interviews. For example, one participant claimed that he was a frequent ICT user in the pre-interviews, however when followed up later he reported less frequent use of the new tools than I was

expecting. This suggested that he found it difficult to 'step outside his comfort zone' or may have pointed to unexpected short-term constraints. One source of inconsistency was a change of attitude toward the use of ICT through participation in the programme. For example it might be that teachers developed a more realistic sense of what ICT could do in comparison to their earlier, more optimistic, but less-informed view. Rather than viewing this inconsistency as a methodological problem it helped mark out the developing impact of the training on the participants' attitude and behaviour.

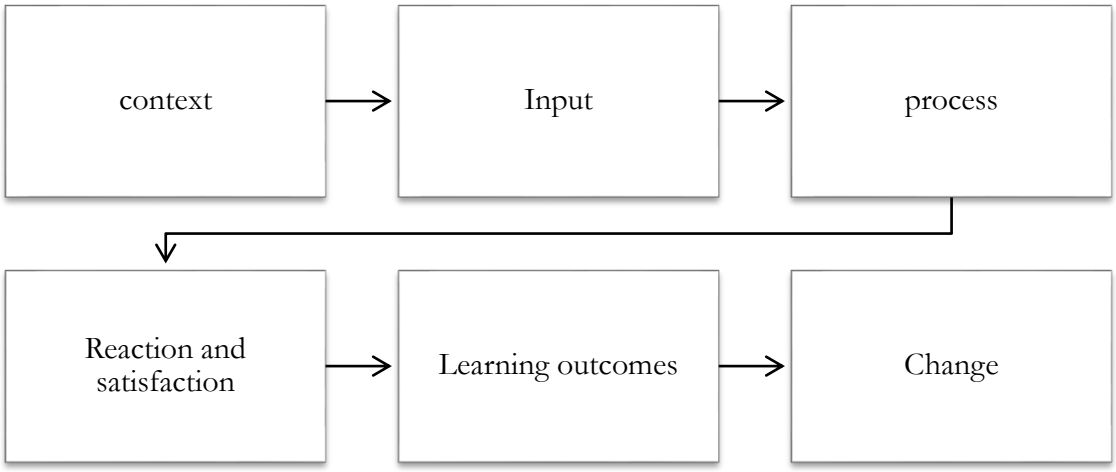
6.1 The Research Questions and the Evaluation Framework

The first sub-research question, How was the ICT CPD designed and implemented? addressed design decisions and implementation issues. The second sub research question asked, What was the impact of the ICT CPD programme on the participants' knowledge, attitude and behaviour? and this addressed the participants' reaction to ICT and use patterns. These two questions as seen in the literature review chapter map onto the framework for evaluating the ICT CPD adapted from Stufflebeam (1983) and Kirkpatrick (1976). Stufflebeam's (1983) framework focuses on four main elements: context, input, processes, and product. In this model, context refers to the identification of problems, needs, and opportunities that can guide programme planning. Input evaluation refers to allocation of resources to the evaluated program, and also allows for the evaluation of alternative strategies to achieve programme goals. Process evaluation focuses on implementation, while product evaluation focuses on teaching outcomes. Stufflebeam's (1983) framework has been adapted to overlap with Kirkpatrick (1976), who developed a four-level framework for evaluating training programs to measure changes that occurred as a result of training. This focused on: participants' reactions to and satisfaction with the training; participants' learning including new knowledge, skills, and

attitudes; changes in behaviour as the extent to which participants adopted ideas, practices, and strategies.

The evaluation framework (as can be seen in figure 6.1) proved to be useful in evaluating all different levels/stages of implementing ICT in the language classroom. It offered a lens on examining: 1) context: which led to examining opportunities and constraints; 2) input: which referred to the content of the training; 3) process: which informed the implementation stage; 4) reaction and satisfaction were an indication to the participants' feelings towards the training and; 5) learning outcomes: which fall into cognitive and affective learning outcomes, where cognitive learning informed changes in knowledge and affective learning informed changes in attitudes to ICT, and 6) change: represented change in practice. One advantage of adopting this hybrid framework was that it shed light on every stage of the intervention and ensured a systemic way of evaluating the training. This offered a means of connecting the research questions to a more established research evaluation methodology. In effect the two sub -questions were asking how was the ICT CPD designed and implemented in light of ICT CPD design literature, and had the ICT CPD impacted on the participants' attitude, knowledge, and behaviour in relation to ICT use. Thus, the first sub-research question covered how the literature and the needs analysis informed the design of this ICT CPD and how ICT CPD was implemented within the two contexts. The second sub-research question covered how the participants felt about the ICT CPD in terms of the content, delivery, and design, what was the impact of the training on the participant learning of ICT and their attitude towards ICT use, and how has that knowledge impacted on their classroom practice. The ICT CPD programme was also evaluated by the participants during the training. Their evaluation was based on their feelings about the training content, delivery, and design; experience of using the tool in teaching settings, where they reported on ease of use, students' reaction and different methods of application.

Figure: 6.1: Levels of the valuation framework.



6.2 RQ1: How Was the ICT CPD Designed and Implemented: Context, Input, and Process

This section discusses the findings of the first sub-research question of this study, which was, How was the ICT CPD designed and implemented? As seen in the evaluation framework, this requires a discussion of context: for what is designed has to fit the context in terms of opportunities and constraints; input: teachers' reported training needs and process: the model appropriate for the training based on the context conditions and participants' reported needs.

6.2.1 Context

The context of the study was Saudi Arabia, which encompasses some unique characteristics. Firstly, as seen in the introduction Saudi Arabia is a developing country with a traditional culture existing in parallel with a more modern one. It has often been seen as culturally a country with a of high power index and uncertainty avoidance, and such cultural drivers in relation to Hofstede (2009) indicate a tendency to accept hierarchical order and to avoid the

unknown; but this does not give credit to the dynamics of Saudi culture and changes in the education sector towards a more responsive system (see introduction). A key point of reference for understanding Saudi Arabia is the changing demographic make-up. For example, the latest reports from the Central Department of Statistics and Information indicate that almost 25% of the country's population is in the age group of 15 to 24 and nearly half were under the age of 25. This has put pressure on developing a more learner centred/ responsive education system. The second aspect of the context of this intervention is that it involved both sectors (HE and school). The comparison of sectors is under-researched as an area and it is often assumed that they are very different and even at one time required a different word, 'andragogy,' to differentiate adult learning from child learning. However I found the problems of teaching and learning similar if at times they played out differently. In both, teaching English was described as a subject with many challenges, though many learners showed a recognizable motivation to learn and appreciation of the value of learning English. However, teachers in the school context stressed that English was a compulsory subject and pupils were in their view less intrinsically motivated than in the HE sector. In contrast, in the university context achieving a good grade in English studies was viewed as a means to securing a future in the teaching profession. In terms of opportunities to ICT use, both contexts presented similar conditions, although the school context could be seen as more flexible in that the number of computer labs available was high and teaching in general was less demanding. As for support, both contexts were relatively similar in that adequate levels of support were available from leaders and encouragement to ICT was present. One variation, however, was teachers' professional development programs. In the school context, teachers were required to attend some CPD courses for a number of reasons. Firstly, teachers were tasked with attending a number of professional development courses counted for their career promotion. Secondly, as part of teachers' formal evaluation carried out by the Ministry of

Education, teachers might be tasked to attend further professional development courses. In the university context, however, teachers were less directed to formal CPD and according to them CPD was less relevant to the teaching practice and did not attend to their training needs. I now turn to design issues and the model this ICT CPD adopted based on literature recommendations regarding effective CPD and successful ICT CPD approaches.

6.2.2 Input

The design stage of this ICT CPD took in consideration Loucks-Horsley (2009) recommendations in the designing of professional development programs. Loucks-Horsley (2009) provided four steps in the process of designing CPD:

1. Knowledge and beliefs: the CPD offered should build on existing knowledge base and consider previously formed beliefs.
2. Context: unique features of the context should be understood and taken into account when designing professional development.
3. Critical issues: immediate conditions that could influence the success and failure of the intervention should be considered.
4. Strategies: taking into account different perspectives of professional development need to be aligned with goals of the professional development and participants needs.

Such remarks also confirm existing literature of effective CPD design; for example, Hammond (2010) and Pickering et al. (2007). As far as the context is concerned, Hansson (2006) addressed the issue of contextual factors such as an existing ICT policy, and Scrimshaw (2004) reported institutional support as an effective element to the success of CPD. Loucks-Horsley (2009) further asserted in order for CPD initiatives to be effective and make an impact they should be relevant to teachers' context and their daily practice.

The design of this ICT CPD addressed such recommendations through examining the participants' previous training opportunities and identified their previous attitudes regarding professional development through the needs analysis survey and pre-course interviews. It also built on their existing knowledge regarding the use of ICT in the EFL teaching context. Therefore, it took into account their existing teaching practices and addressed their training needs accordingly. As far as the content was concerned, the ICT CPD addressed the participants' felt and expressed needs by providing a training event based on what they wanted and believed that they could use in the classroom. Such steps were also recommended by Pachler et al. (2010) in designing ICT CPD initiatives.

In relation to Day (1996)'s definition of CPD, which implies that training requires more than a single model, the design of this training intervention did not adopt a single approach/model of design, rather it was based on readings of different models of CPD; for example (Bell and Gilbert 1996; Kennedy 2005; McKinney et al. 2005; Pachler et al. 2009) and the data from the needs analysis. The design can be best seen in terms of the literature as a hybrid-model designed to suit the context of the study and addresses the issue of ICT training. As Darling-Hammond (1998) suggested CPD is most effective if it relates to the teachers' daily practice so that this training was work-based and context based, which allowed the participants to relate tool use to their teaching practice. It can be said that the training had a transformative agenda, with the intention of presenting the participants with an opportunity to adapt and develop their attitudes, knowledge, and behaviour towards using ICT in EFL settings, CPD models with such agenda have been seen by Kennedy (2005) as supporting a transformative practice. However, it was intended to be in the reach of all participants and offer immediate opportunities to address problems of practice too. Discussions about using different tools based on practice were encouraged by the tutor and experiences shared by the participants, in that the training was intended as individualized but within a collective context. This

collective knowledge sharing space offered to enrich the CPD by giving participants access to different ideas about implementation.

The design of the training took explicit note of the concept of TPACK (Technological Pedagogical Content Knowledge) in that TPACK gave an indication to the nature of the knowledge needed for successful integration of technology. In particular TPACK as a model highlights not simply the skills needed to use the tools (TK); but the possible application of the tools in the classroom and an evaluation as to how the tools might contribute to teaching and learning. The impact of the training, as we will see later can be evaluated in relation to the participants' developing a technological content-knowledge base to equip them with the necessary knowledge to guide their application/tool use for different teaching contents. In respect to the participants' technological pedagogical knowledge element of this training, there were some tensions. For example, technological knowledge was clear enough through examining the participants' reported use prior to the training taking place, and it was clear that the participants had varied degrees of motivation and attitudes towards ICT use in EFL contexts. Content knowledge (e.g., knowledge of English as a subject domain) on the other hand was largely not inspected, as the participants were all EFL teachers for a minimum of four years, and it would not have been acceptable for them to be interrogated on what they knew about the English language. I could see however that their competence levels were varied and that content knowledge might be an area for future CPD. The case of pedagogical knowledge was a little more complex, as with content knowledge I could not set myself up as a CPD pedagogical leader; pedagogy was not the course they had signed up for, and it was not clear that they would have accepted my expertise in this area.

At the start of the intervention a strategy in the design of the CPD was to create a kind of community of inquiry (Garrison & Archer, 2003). Such a community is felt to have three

key elements: a) cognitive presence, which refers to the learners ability to construct meaning through reflecting and evaluation; b) social presence, which refers to the learners' ability to represent themselves socially and emotionally and c) teaching presence, which concerns the design and facilitation roles of the teacher. To some extent this was achieved, for example in light of Garrison & Archer (2003) modelling of cognitive presence in an online inquiry process; a four stages-reflective model includes:

1. Triggering event: which represents an issue or a problem that needs inquiry. The fortnightly introduction of tools/application that can be adopted in the EFL teaching context can be seen as an inquiry opportunity. The design of the course allowed for variety, as the weekly interventions allowed the participants to focus their inquiry on one tool, which made it possible to sample a range of tools and increase the possibility that there was something that would capture participants' interests. Each week a tool/application was introduced and participants were encouraged to try using the tool presented and report back to the online group on the use of the tool/application (an example of this is in appendix 5). In total eight applications/tools were introduced as triggering events.
2. Reflection: which Garrison et al (2001) see as the individual or collective critical reflection undertaken by the learners through the exploration of the issue. This was expected to be achieved in the participants' discussion in the online groups and in the during-course interviews. Participants were negotiating meaning in pairs, groups, and with the researcher, which helped establish a high level of social presence. Individual and group support was also provided through the training platform, which allowed the participants to communicate openly or privately. The participants also established one-to-one dialogues through interaction with each other resulting in shaping their social presence and forming communication patterns. An example of this can be seen in

appendix 5 in which participants can be seen reflecting on their use of Edmodo. This showed the sharing of experiences of, using the tool within the teaching context. One participant in particular reflected that his student saw the tool as useful in their learning and he also reported receiving approval by his supervisor in implementing the tool. As for my role as an instructor of the training intervention, the training platform allowed me to maintain an active teaching presence, in the sense that, it allowed me to engage in discussions and provide constant support.

3. Integration: which refers to the construction of meaning through the reflection stage. In other words the value of the CoI is that it mixes a situated learning approach with an opportunity for individual reflection on practice. Participants were given one week for using the tools/application and another week to discuss their implementation within the online platform. This was achieved as seen in the participants' discussions. Most of the participants reported that they had trialled all the tools / applications for themselves and used some to address their teaching objectives. An example of integration can be seen in appendix 7 in which we can see a participant describing how he had used the tool to serve his pedagogical goals by promoting students' online interaction.

4. Resolution: the learners' ability to apply the constructed knowledge in an educational context. At this stage, and as pointed out above, teachers' resolved to use tools/applications that served their pedagogical objectives better. This can be seen in the participants' reported use of the tools and applications in the EFL context. As can be seen from the different examples provided (see appendices 5,7,8,) participants reported using different tools/application for different language activities and for a range of pedagogical purposes.

Social presence was categorized in the community of inquiry model into: affective expression, open communication, and coherence of the group. These categories capture how freely learners could communicate with other members of the online community and to what

degree can they trust other learners and develop personal relationships and participants represented themselves socially and emotionally through their interaction. For example as seen in appendix 8 participants invited responses and showed disagreement when presenting their evaluation of different tools/applications. However there were clearly limits on the extent to which participants did take part as can be seen in particular in the table summarising number of contributions on pages (243-245). A fuller account of the participants' reaction and satisfaction with the online nature of the training is presented later on pages 202-204.

6.2.3 Process

The process of delivering the training was through an online platform. The purpose of delivering the training online was that it allowed the participants access the course in the first place and the interactive features allowed them to engage in discussions and reflect on their practice. Such reflective practice has been reported as fundamental in the change process.

The online delivery allowed the participants to engage in the training in their own time and at their own pace. This was also confirmed as an element of effective online CPD by Smith et al. (2009), where they report that online CPD allows more teacher 'autonomy.' Pachler et al. (2010) also reported that a collective, knowledge sharing, collaborative ICT CPD design is linked to successful outcomes. The participants confirmed such remarks as they reported that this medium of interaction contributed to their participation in the training, as it offered them a training opportunity that was not bound by a specific time or place and that they could fit around their teaching schedules. The use of online medium was also valuable in that the participants reported in the pre-course needs analysis that they would have not liked to or would have been unable to attend a small number of intervention sessions with classroom support, since they were overloaded with teaching hours.

In implementing the training, each week a new tool was introduced via a video tutorial, with a discussion to follow. Participants were encouraged to engage in discussions and reflect on their tool use to promote learning of new skills and tool use. The participants were also allowed one week for trialling the tools/application and provide feedback and share their experience. The teachers generally reported a trial use for the tools/application presented and provided feedback about ease of use and students' reaction to the tool. Such an experiential approach was reported by Guskey (2002) and others, for Guskey believed "change is primarily an experiential learning process for teachers." The discussions also provided the teachers a space to discuss different methods of using the tools and for different learning objectives. The platform allowed participants to send me an email when I was logged off, so that I would know to log on again. Video Skype/face time was also available, although this was not used during the training perhaps because of greater comfort with asynchronous communication. As for direct communication with the participants, a number of Skype calls were established for interview purposes, in which there were discussions about the training content, design, and relevance of training to the context. Palloff (2010) has seen collective interaction and discussion as a corner stone for establishing a community of practise. It was through this reflective and interactive online learning intervention that this community grew and engaged in thinking and sharing the issues and constraints of using ICT for language teaching purposes.

What can be said about the process of delivering this ICT CPD is that it, firstly and most importantly, provided the participants with access to a CPD intervention that portrays their reported training needs. Secondly, the online platform allowed the participants an opportunity to reflect on their teaching and question their practice in regard to using ICT in the EFL context. It also allowed a community of inquiry to grow and establish a change process that is based on classroom observation of using technology in general and ICT specifically. Finally,

the cost effectiveness of the training made it possible to carry out the training at two contexts without increasing time or efforts and that was valuable especially in observations and interviews carried out.

6.3 RQ2: What Was the Impact of the Training on the Participants' Attitude, Knowledge and Behaviour: *Reaction and Satisfaction, Learning Outcomes and Change*

This section discusses the findings of the second research question, which asked, What was the impact of the training on the participants' attitude, knowledge and behaviour? This question, firstly, addressed the participants' attitudes, reactions and satisfaction towards the training. Secondly, it addressed the participants perceptions of the learning outcomes through examining their ICT tools/application use, growing knowledge, and any changes in attitude towards ICT. Thirdly, it addressed the impact of the ICT CPD on the participants' practice through highlighting changes in adoption of new ideas and strategies. In the following sections, the ICT CPD impact on attitudes will be discussed through examining the participants evaluation of the design and delivery of the training; whereas impact on knowledge will be addressed in light of their evaluation of the content of the ICT CPD and the different tools/applications presented, ICT acquisition, personal and educational tools/application use and impact on behaviour will be discussed through examining the participants' adoption of new ideas, and strategies of use that depicts changes in practice.

6.3.1 Reaction and Satisfaction

This level of the evaluation framework highlights the participants' reactions to the training and satisfaction with the content, design, and delivery of the training and the overall perception of this professional development opportunity.

In terms of reaction to the training, the participants' initial response to the ICT CPD was positive, indicating a positive attitude towards the use of ICT and to the idea of professional development in general. Although the training was not award bearing or directed, their initiative to volunteer highlights the agency of the teachers in wishing to attend the training and develop their skills and knowledge. The needs analysis questionnaire showed that the participants' were aware of an opportunity to use ICT to enrich their classroom teaching experience, and the interviews prior to the initial training gave an overview of teaching practice and role of ICT in providing access to authentic, real-life situations and up-to-date material. As seen in chapter 5, a sample of teacher responses also confirm this positive view; for example, ST1 pointed that he was very glad that he took part in the training, while UT5 thought that the training contributed to his professional development. One point that should be raised, as pointed out in the methodology chapter (see page 98), is that almost all of the non-Saudi staff members who participated in this ICT CPD were engaged in the training, although their job security was very low, indicating an intrinsic motivation to attend the training or even an opportunity to develop their professional skills in case they had to look for any other place of work.

As for satisfaction with the training content, the ICT CPD was praised for showing a variety of tools that could be applicable in the language classroom. The participants' showed in their willingness to take part in the training a sense of control over their learning. Such attitudes can be attributed to the design being fit for purpose and addressing reported needs and interests. However, the content of the training was also criticized for assuming that all students would have access to Internet and computer resources at homes. For example (see page 171), three participants reported that some of their students could not engage in online activities as a result of limited resources and parents refusing access to the Internet. In the same vein, other participants felt that access to the Internet could expose students to

undesired content online (see page 175) which suggests some teacher attitudes were cautious and averse to risk.

As far as the delivery of the ICT CPD is concerned, there was an agreement that the training met the participants' expectations, and the online platform was seen a contributing factor for participating. This correlates to existing research on effective CPD design, for example Cordingley et al (2005) and Pachler et al. (2009) recommended the use of Web 2.0 technologies/online medium for delivering CPD as an effective design approach. However, a number of participants reported that the training lacked face-to-face interaction, which was seen as hindering the overall impact of the training, though this should be seen in a general picture where all indicated that if the training sessions were face-to-face they would have not attended. Different reactions to the online design can be attributed to different contexts of work; for example participants with busy schedules might have preferred an online model while teachers with less busy schedules might have preferred face-to-face interaction. For example, UT4 pointed out that: "I don't have time to attend courses, so online training is perfect in my case." The knowledge-sharing discussions that the participants engaged in were appreciated. This is consistent with a wider literature, for example Chitanana (2012) reported that teachers in a similar CPD valued the sharing of information, and such activity has allowed them to develop a better understating of how technology can be used in the classroom. However negative reactions were also reported. One issue in the delivery of the ICT CPD was the rigor and structure of tools/application presentation and the ordering of the tools/application and time between introducing different tools/application. Some teachers reported that they would have preferred the introduction of some tools/application before others and that they would have preferred the training beginning at an earlier time in the academic year. In the university context, for example, UT6 commented that the training should have been delivered in the summer term, while ST6 pointed out that some tools,

namely Edmodo, should be introduced as the first tool (see page 167). Others also commented negatively on the "human-computer" interaction of the online ICT CPD and viewed the approach as not ideal; for example, UT6 was not satisfied with the online interaction and wanted more face-to-face interaction. These comments are consistent with the findings of Zhan & Mei (2013) who argue that compared to face-to-face interaction, online interaction requires learners to develop high-level social presence. This suggests that online learning is not ideal in itself, but responses were differentiated according to willingness to engage with others.

As discussed by Garrison et al. (2001), social presence requires participants to engage in activities that allow them to express themselves effectively and to engage in open communication with others. In practice there is often a tension or even a paradox that participants want social interaction but are not always willing to do what is necessary in order to achieve it. Constraints on participation might be communication skills or simply a concern for exposing lack of understanding with consequent threats to professional identity. More simply lack of time is a barrier as seen in this and other studies (see pages 49-50)

Reflecting on the participants' reaction and satisfaction with the training and tracing their views during the different stages of data collection, we could say that the general understanding during the pre-interviews was that the online training was ideal for the context, being flexible and accessible. During the training the online nature of the training was still seen as appropriate, although some face-to-face interaction was understood as offering further value. Such change in attitudes can be captured in UT6 comments, that the training should include face-to-face interaction in order to reflect on the tools/application use. In the post interviews, participants indicated that the online platform was useful as it allowed them to reflect on their tools/application use and how it gave them a space to discuss and reflect.

As for the content of the ICT CPD, the general understanding was that the training was based around the participants' felt and expressed needs and a desire to use ICT tools and applications in the EFL context. However, during interviews, it was reported that the training was less organized in terms of the introduction of the tools/applications, whereas it was reported being technology driven in the post interviews. Similarly, in the group discussions the participants reported that the training was less focused on pedagogy than they had thought it would be, and they felt that there should have been more theory and the lack of theory was the missing aspect of the training.

As for the length and intensity of the ICT CPD, different attitudes can be tracked throughout the data collection stages. For example, prior to the training it was felt that the length of the programme was right for the participants to experiment what tools/application can provide in the EFL teaching context. During the training such attitudes changed so that some reported that there was only time for trial use, and later in the post interviews it was reported as allowing experimental use only.

6.3.2 Knowledge

My role as an instructor was to provide the participants with the technological knowledge and pedagogical technological knowledge of each tool/application, in that I would present the tools/application and why it/they could be valuable for teaching in the EFL context. The teachers' role in the training was to experiment with the tools/applications and reflect on their use of different tools/application. This process of negotiation and sharing of information was believed to develop participants' TPACK. This was consistent with other literature, for example Doering et al. (2009) used TPACK as a model for professional development and concluded in their study that teachers participating in their training had developed pedagogy,

technology, and content knowledge through reflection. Impact of the training on the participants' cognitive knowledge was also identified by their uptake of ICT. As for the impact of the training on the participants' affective knowledge, generally and evidenced through different sets of pre-course data, attitudes towards using ICT were positive with some reservations on the frequency of use. The general picture was that almost all the participants developed a more positive attitude towards ICT use, and an explanation for this was that they gained more knowledge and understanding of the variety of tools and their contribution to learning. For example, as can be seen in section (5.5.1) UT4 pointed out, "*I think the training made me more aware of what technology can do in the language classroom, I didn't have a negative attitude before but now I am more convinced of what it can do to the language learner and language teacher."* However, the training can be said to have failed in having an impact on the attitudes of some of the participants, mainly UT6 and ST6, as they both withdrew from the training. However, when asked about why he (UT6) did not think technology was valuable in the EFL classroom he pointed out "*Students get disturbed"* and commented on the possible unwanted content of both tools: *"Sometimes it is shocking what you can see in Facebook and Twitter, very difficult for you in your class."* It should be pointed out that ST6 withdrew from the training as he did not enjoy the overall design of the training, although he had a positive attitude towards using ICT as he manages the school forum were English learners engage and discuss classes.

As for cognitive knowledge and as we can see from (Table 6.1) all the tools were trialled by almost all the participants with more tools (Facebook, Prezi and Twitter) being used than others (Blogs, Udutu). As for the discussions about the tools being trialled, participants reported on how they had utilized the tool in their daily practice and how they had evaluated the tool in terms of ease of use and value to the language classroom. Generally, there was a tendency to use tools that served and addressed issues of teaching and learning. For example,

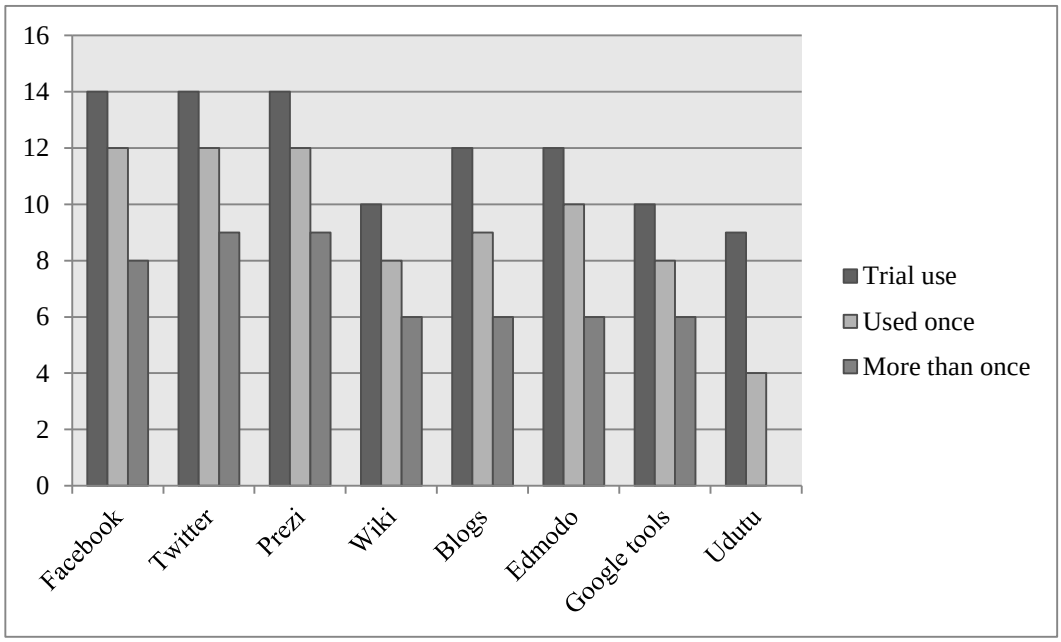
UT3 pointed to the fact that: "I found that most of my students have Facebook and twitter accounts, so I keep the learning process even outside of the classroom." Also, UT5 explained his interest in Edmodo as emerging from a desire to promote communication: "What I found very interesting is that my students are very active in Edmodo, it became like Facebook for them, they communicate in English, and I think this is difficult in any other way." However, when examining the table we could see that there is a focus on tools that promote communication in the target language and tools that aid in information presentation. This was also confirmed by the number of times that these tools/applications were used by the participants. For example, Facebook, Twitter, Google mailing groups, Edmodo, and Prezi were reported being used more than once 38 times by the participants, while Udutu, Wikis, and Blogs were reported being used more than once 12 times.

As for the use of presentational tools, two factors were seen as a reason for this focus: First, the ability to use personal laptops and tablets when using Prezi so that the teachers would not be disappointed by the unavailability or working conditions of equipment and facilities available. Secondly, the availability of OHP in each classroom made it possible to project information. Thirdly, the availability of their teaching material on a similar electronic format (PowerPoint), which made the transition to an electronic online version much easier. Of course other factors come into play. Udutu for example was reported as complex and difficult to use compared to Facebook or Edmodo (see page 184).

The ICT CPD can be said to have had an impact on the participants' personal use of ICT tools/applications, namely social media applications. For example, a number of the participants during the training created Twitter accounts, where they followed different personal interests including some EFL teaching and learning-related authors. For example, UT2 followed the official account of Coursera, which is an online platform that partnerships

with global university and education establishments to deliver free online education. Similarly, UT4 followed different online training providers.

Figure 6.2: Tools/applications trialled by the participants



In examining the participants' use of different tools/applications, almost all developed what could be called TPACK in that they had gained the confidence and competence to use technology (T), could use it to convey teaching content (C), develop appropriate pedagogy (P), and reflect on the appropriateness of the tools and impact on teaching and learning. In some cases TPACK could be seen in the decision to not use tools for which they had the skills to use.

For example, as seen earlier UT3 used Prezi and PowerPoint, for practice session and wikis for collaborative work. This shows an understanding of the tool and the pedagogy behind using it, though of course it should not be ruled out that PowerPoint can be used in collaborative settings, which he (UT3) pointed out. Similarly, UT5 commented on using Edmodo to deliver

trigger questions to his students, and this shows knowledge of a pedagogical technique applied and support by appropriate technology. To give a general view of how the participants developed TPACK, each knowledge base will be discussed in more detail:

- Technological knowledge: as we have seen from the table above, all the tools/applications were used by most of the participants in their teaching. In interviews, many reported using tools such as Twitter and Blogs for personal use, which they had not done before. We can say that through the training the teachers were aware of a wider variety of tools/applications and gained the technical knowledge on how to use them. In many cases learning to use the tools was fairly straightforward (see pages 173-174), but others created greater difficulty. Some were especially difficult.
- Technological pedagogical knowledge: this refers to "knowledge of affordances and constraints of technology as an enabler of different teaching approaches" (Mishra & Koehler, 2006) For example, teachers gained knowledge of which tools appeared to support different kinds of activity. Wikis and Edmodo seemed to be better suited to support collaboration at a distance and Twitter and mailing groups were better to support one-way communication. In other comments we can further see that participants were able to reflect on the use of tools; in other words, they were not just using ICT tools/applications but understanding its potential value in teaching. For example ST4 pointed out that: "What makes me use a tool over the other is that what I intend it to do with it, present information or engage the students to collaborate" This can be seen as gaining a new perspective on the teaching and learning context. We have seen examples of participants indicating that they would use a certain tool/application for group discussions to check for gaps of knowledge, and others indicated using Wikis for collaborative tasks. Of course different factors interplay when making decisions to use a specific tool/application, as we have seen in the analysis chapter, the pedagogical value

of a tool/application was the main factor reported in use and this value was based on how it could serve their teaching better. Of course understanding enablers also implies understanding constraints and how these constraints could be overcome. For example UT5 pointed out "Sometimes in translation sessions when using a particular YouTube video that is related to the subject of my lecture, a subtitle is provided, which makes me only use the audio format rather than provide the entire translation experience."

- Technological content knowledge: this knowledge base is defined by (Koehler & Mishra 2009, p.65) as "an understanding of the manner in which technology and content influence and constrain one another". For example some participants reported using Prezi and PowerPoint in ways they had not done before and used Twitter for spelling games (see page 178). Some teachers indicated that they had used videos for presenting plays in literature classes, live translation, and story writing. For example, UT7 pointed out that he had used YouTube to present different plays in his literature classes, while UT5 used videos to engage students in translation classes. ST1 showed technological innovation by using online messages in a grammar correction exercise and point out knowledge gaps in his students' communication. However, although there were some examples of innovative representation of the content through technology by using different tools/applications in ways they were not designed for, the use of Twitter and Facebook in itself in teaching can be regarded as representing content innovatively.

TPACK was considered useful here in offering a clear vision of the goal of ICT CPD, as something that went beyond technological mastery of the tools or unthinking use in teaching. Graham (2009, p.1959) point out that TPACK as a framework "can also provide theoretical guidance for how teacher education programs might approach training candidates who can use technology in content-specific as well as general ways". TPACK was valuable in drawing

out a general picture of ICT integration and the complex nature of ICT use, and the framework was informative as it offered insight into how should ICT be integrated and what knowledge skilful use of ICT requires. This is consistent with a study by Niess et al. (2010), in which the impact of online training on teachers' TPACK is evaluated. This study in particular shows the integrated nature of TPCK.

However, as a framework, TPACK also has shortcomings. It is a descriptive tool of what should be considered when implementing technology in teaching settings; it is not a tool that puts forward a picture of desirable pedagogic practice in teaching, rather it provides a lens on the kind of processes that teachers may engage with in order to use technology to improve learning. This makes it difficult to use the TPACK framework to judge the value of the ways in which ICT is used, it is a kind of shell into which researchers need to bring their own judgments about what makes appropriate teaching and learning.

There has been some tension and confusion in understanding and defining TPACK. Critics report on the unclear definitions of the different knowledge domains and confusion as to the way in which knowledge is assumed to be formed (Cox and Graham 2009, Graham 2011). For example, Cox (2008) reports on findings 89 definitions of TPACK when reviewing studies that adopted the framework. According to Cox (2008) TPACK lacks a clear definition and this confusion has affected the measurement of TPACK. Voogt et al (2012) also report epistemological differences rooted in the basis on which TPACK is founded in that TPACK was seen as an extension of Shulman's PCK as well as a construct about knowledge in its own as well as an integration of three knowledge domains. Furthermore, in its application TPACK, rather than being an analytical tool, sensitizing the research as to what to look for, has frequently been taken literally as both an objective measure of knowledge and furthermore a measure of internally acquired knowledge i.e. something that resides in the head of the

teacher. In doing so, researchers continue to focus on the teachers as individuals and underplay the context in which teachers can use such technologies.

In this study it was fairly straightforward to show an impact on TK, TPK, and TCK as seen above. Technological pedagogical content knowledge itself refers to the whole package, knowledge and understanding of the interplay between CK, PK, and TK, when using technology for teaching and learning. This is extremely difficult to identify. In observing the use of ICT, I could see that teachers were using appropriate tools for an appropriate purpose in support of the curriculum and were engaging in pedagogical thinking. Is this TPACK? One approach might be to contrast TPACK with examples that were not TPACK, for example when inappropriate tools/activities were planned, such as excessive use of multimedia for display purposes, or pushing the use of some tools like VLE when some students could not use that tool/application, but could use Facebook, or when opportunities to exploit learning were not taken (e.g. by failing to prompt and respond to messages). In looking for evidence of TPACK, judgments needed to be made about whether that the tools/application was being used for appropriate pedagogical reasoning, and if not used, could respondents explain why; for knowing that a use of ICT should be avoided also showed development of TPACK.

What we can say is that the general goals set out for the ICT CPD (see page 132) were achieved with varied degrees. For example one goal was for all teachers to experiment using the tools/applications, and some would develop such use to be embedded in their daily routines. As we have seen through examining the impact of the ICT CPD on the participants' attitude, knowledge, and behaviour, this was believed to have happened, as can be seen in the user patterns presented. The second outcome of the training was that the participants would understand the technological pedagogical value of the tools/applications and different ways of their implementation in the EFL classroom. It is believed that this outcome was also

achieved in varied degrees. The participants showed good pedagogical understanding of the ICT tools/applications presented and transferred this understanding into making control of how or how not to present the content of their classes. Finally, it is believed that the last outcome of the ICT CPD was not fully achieved and that a community of inquiry in both groups was limited as only a number of participants were active in exchanging their ideas and reflecting on their practice after the course

6.3.3 Behaviour

The desired outcome of the ICT CPD was for all teachers to experiment using some of the tools/applications presented in the training and some would show frequent use. From the different sets of data (see pages 176-179) we can see the ICT CPD had an impact on participants' behaviour i.e. all used some of the tools some of the time. As we discuss later in this chapter, the training was believed to have had an impact on the participants' daily practice, and a claim that it impacted on technological pedagogical content knowledge is made. The adoption of tools arose out of a perception that ICT would have a positive outcome and out of a willingness to engage with the ICT CPD programme. Experience of tool use enabled many teachers to form strategies for future implementation. For example, a number of the participants indicated that they would experiment using different tools/applications at a time in which there was less pressure, such as a summer term, when teaching hours are reduced and students' numbers were not overwhelming. Such understanding can also be evidence of an appreciation of strategic issues in using ICT in teaching and learning.

To illustrate these in greater depth, the following pen portraits try to capture the participants' evaluation of the tools/applications used and report on changes in the teaching context and tools/application that they adopt in their teaching:

- UT1: We were introduced with UT1 (page 111), who believed that using technology in the classroom was very important in the Saudi context, although he held negative attitudes towards relying on technology for teaching EFL. He took an active role in the training through discussions and knowledge sharing. He reported trying almost all the tools and used Twitter for grammar correction games and was a frequent user of social media platforms in his teaching. He reported using Twitter, Facebook, and Prezi for collaboration, grammar games, and communication.
- UT2: We were introduced to UT2 (page 111) where it was shown that he saw the training as a good first step towards introducing technology use in the EFL department. He managed and maintained the department webpage and Facebook page. During the programme he took an active role through providing different examples of his technology use and led the discussions. He reported trialling all the tools and indicated using a number of tools/applications in his teaching. He discovered other tools/applications to be used in EFL teaching and showed good strategies for future tools/applications implementation.
- UT3: He was presented to us as an accredited INTEL trainer, which allowed him to teach the CALL course at the department. He took a very active role in the training through providing examples of tools/applications use, and was very active in discussions, and initiated debates on ICT use. He reported using Twitter, Facebook, Prezi, Wikis, and Edmodo in his teaching for multimedia presentation, collaboration, and out-of-class teaching.

- UT4: He was presented to us as a very frequent user of technology, as he made technology use part of his daily teaching routine. He reported trialling almost all of the tools/applications presented and took an active role in the training, and reported using Twitter, Facebook, Wikis, Blogs, Prezi, and You Tube in his teaching for providing authentic material, multimedia, collaborative writing, and communication.
- UT5: He was presented to us as a frequent user of social media platforms in his teaching, and he believed that the training contributed to his professional development. He also reported trialling almost all of the tools/applications and took an active role in the training and contributed in the discussions by providing his experiences when using YouTube in his translation classes. Furthermore, he reported using Twitter, Facebook, YouTube, and Edmodo for communication, multimedia, authentic sources of material, and collaborative tasks.
- UT6: He was presented to us as being very sceptical about using technology in the teaching context. He trialled some of the tools/applications presented and reported using Twitter and Facebook for personal use. He reported using YouTube in some of his classes with some undesired outcomes and saw technology use as a distraction for students' learning. He had difficulty in using ICT for appropriate purposes. He withdrew from the training, as he did not believe use of technology could have an impact on the teaching context and had issues with the online interaction of the training.
- UT7: He was presented to us as a frequent user of technology in his teaching. He tried almost all of the tools/applications presented and reported using Prezi, Edmodo, mailing groups, and YouTube. He also took an active role in the training and reported trialling almost all of the tools/applications presented. Furthermore, he saw the use of technology in his teaching as a solution for students losing interest in literature classes.. He also reported using tools/applications for multimedia, presentations, and collaborative work.

- UT8: He was presented to us as a good user of technology, although he only took a slightly active role in the training and did not contribute to the discussions very often. He reported trialling some of the tools/applications presented and reported using Prezi in his presentation of instructional material.
- ST1: He was presented as an optimist of using ICT. He believed technology use enriches the learning environment and teachers should be presented with a number of tools/applications that can be used in teaching EFL. He managed and maintained a school forum and reported trying some of the tools presented and maintained using mailing groups and Edmodo in his teaching. He also took a reasonably active role in the training and provided some examples of his technology use and reported using mailing groups and Edmodo for his teaching, in the context of student communication and error correction.
- ST2: He was presented to us as seeing teaching as a less-demanding job and although he did not take part in the discussions, he showed signs of using ICT in his teaching. He reported trialling some of the tools presented, and used Twitter for grammar games with his students and Edmodo for online collaboration.
- ST3: He was presented to us as one of the most enthusiastic users of technology in the school context. He took an active role in the training and presented examples of use and reported trying almost all of the tools and maintained use of Twitter, Edmodo, and Wikis throughout the training.
- ST4: had a positive attitude towards the training and took an active role, providing some examples of tools/applications use. He showed appropriate use of Prezi and Facebook, although, he did not want to 'rely on technology very much'.
- ST5: He was introduced to us as believing that technology can introduce unwanted input for students in the Saudi context and was not active in the training sessions. However he

did try some of the tools, had reported using Prezi for classroom presentation and Twitter and Facebook for personal use.

- ST6: had a positive attitude towards using ICT in his teaching but withdrew from the training as he did not appreciate the design in particular he did not find online interaction was inappropriate. It was difficult to categorise him and to comment on his TPACK but his decision to withdraw suggested that his enthusiasm was not as deep as he had claimed.

ICT use in the teaching context was examined and evaluated in terms of changes in practice and three user patterns emerged as can be seen in table 6.1: optimistic, cautiously optimistic and sceptical use. These patterns covered both commitment to group interaction and reported and observed use of tools/applications. *Optimistic users* were very keen on trying and using different tools to experiment and seeing how different tools/applications could be employed in their daily teaching of EFL. They were motivated to manage and maintain frequent (daily/weekly) updates on their tool use. For example, we can see UT4 pointing out that he had made using technology a part of his teaching routine: "What I enjoy is that we can use the tools daily; they are not demanding to set up or use every day." *Cautiously optimistic* users tended to trial use of the tools and 'give it a go'. Cautiously optimistic users recognised the value of ICT use but they had worries in particular about over-relying on technology for EFL teaching and put greater limits on ICT use than optimistic users. For example ST4 pointed out that: "I tried using Prezi maybe two times, but I don't want to rely on it that much it is too complicated and distracts some of the students." Although he took an active role in the online discussions, ST4 developed an understanding that technology was not always the right solution to address issues within the teaching context. *Sceptical users* tried some of the tools presented but were not convinced as to the value of using such tools/applications in EFL teaching. They either tried to avoid using some of the tools/applications presented or use one precise tool/application. For

example UT8 pointed out that he tried most of the tools/applications presented, but he had "used Prize most of the time." Also ST5 reported that he had trialled some of the tools/applications but used Prezi twice and reported, "*Maybe I will use them sometime this term."*

Table 6.2: Analysis of user patterns

Types	Attitudes to ICT	Behavioural orientation to ICT	Participation in ICT CPD	Number of Participants
Optimistic	Oriented to use of ICT	Trialled all the tools/applications presented and maintained daily use of different tool/applications	Took a very active role in discussions and provided examples of tools/application classroom use.	6 (UT2, UT3, UT4, UT5, UT7, ST 3)
Cautiously optimistic	Concerned about overreliance on technology use	Trialled almost all the tools/applications presented and used a small number of tools/applications	Took a less active role, reserved about sharing examples of classroom use	4 (UT1, ST1, ST2, ST4)
Sceptical	Often could not see the benefit of ICT use of teaching and learning	Trialled some of the tools/applications presented and used one or two tools, for example for	Low or non participation in the online discussions and provided few or no examples of	3 (UT6, UT8 and ST5)

		presentation of teaching material	tools/applications use	

In looking at optimistic users we can see a close link between attitude towards technology and both level of use and level of participation in online discussion. Optimistic users were more likely to be university language teachers and this could be that conditions were more favourable for using technology in their context, while students were more advanced in language levels. As for cautiously optimistic users they tended more likely to be school teachers and this is explicable in terms of the more controlled curriculum material (see context page 159). As far as sceptic users are concerned, two participants from the university context could not see the value in using ICT in their teaching and reported negative attitudes to such use, as reported earlier in part, as they worried about a lack of control over access to unwelcome material. Two teachers (UT6 and ST6), one from each context, withdrew from the training and reported dissatisfaction with the online nature of the CPD.

When analysing the consequences of participation, it can be argued that optimism is not the same as pedagogical knowledge of ICT even if enthusiasm for ICT leads to use and that use helps develop such knowledge. TPACK was introduced earlier as shining light on teacher knowledge of ICT. TPCK was not itself defined by level of enthusiasm but rather it is argued that a participant with a good TPACK not only uses ICT but uses it reflectively. In particular he or she:

- knows how to use different tools/application.
- is able to make informed case of use/non use of tools/application.
- reflects on tools/applications use.

- is able to integrate tools/application into curriculum aims.
- is able to innovate in tools/application use, e.g. use new tools/applications for new ways of teaching
- is able to integrate all the above skills and dispositions into classroom teaching.

It is not straightforward to report on levels and development of TPCK as it covers a range of both internal cognitive elements and more observable behavioural ones. However it was possible to categorise each participant making best fit judgements based on an analysis of the their comments, observation and reports of use and reflection of ICT use in interviews and focus groups. For example, ST3 can be described as having a very good level of TPCK in that there was sufficient evidence in his use of ICT (interviews and observation) and his explanation as how and why he used tools/application (interview and forum discussions). While it is not possible to say that the quality of his TPCK grew through the programme (i.e he could make informed decisions about ICT before the programme), the 'domain' in which he exercised his TPCK grew (i.e. he used and could reach informed judgments about more applications) and this was acknowledged in interview data. In contrast UT6 showed a much lower level of TPCK in that he was able to trial some of the tools/applications presented and used Twitter and You tube in a number of his classes. However there was less evidence in interviews or in discussions that he was able to consider carefully the pros and cons of ICT use and had difficulty relating any use to specific pedagogic objectives.

Table 6.3: Break down of TPACK analysis.

Constituents of TPACK	Examples	Participants
Knows how to use different tools/application.	Technical knowledge eg knows that to use Twitter the user must set up an account and can follow and invite followers, knows the limits on number of characters.	UT1, UT2, UT3, UT4, UT5, UT7, UT8. ST1, ST3, ST4 show good knowledge in the context of tools presented on the course. UT6. ST2 and ST5 show less understanding and ST6 little understanding in that he rarely used any of the tools.
Is able to make informed case of use/non use of tools/application.	Can appreciate how the tool may impact on teaching, for example makes a decision to use Twitter because it can be used to enable game like interaction between	UT1, UT2, UT3, UT4, UT5, UT7, UT8. ST1, ST2, ST3, ST4 were able to explain the decision to use or not use a particular tool. There was less evidence

	learners; rejects the use of Prezi as his particular learners find it distracting	this was the case for UT6, ST6.
Reflects on tools/applications use.	Able to make a judgement about tool use, for example will decide to continue with the VLE as most students find it easy to access and valued the resources contained.	Evidence of reflection in UT1, UT2, UT3, UT4, UT5, UT7. ST3, ST4 but little in UT6, ST6
Is able to integrate tools/application into curriculum aims.	Can signal when and where the tool will be used to cover curriculum aims, for example planning ahead to include an induction to Twitter into schemes of work.	Repeated evidence of integration for UT2, UT3, UT4, UT5, UT7. ST3, ST4. Less for UT8, ST1, ST2, ST5. Little or none for UT6,ST6.
Is able to innovate in tools/application use,	Is able not just to use familiar tools but new	Repeated evidence for UT1, UT7. ST 2, ST3.

e.g. use new tools/applications for new ways of teaching	ones as well, for example, a decision to use an online forum for the first time for teaching purposes	Less for UT2, UT 3, UT4, UT5, UT8. ST 4. Little or none for UT6, ST6
Is able to integrate all the above skills and dispositions into classroom teaching.	Is able to regularly to follow a cycle of gaining familiarity with a tool, use it and reflecting on its use, leading to a decision about further use based on an adaption of initial use	Repeated evidence for UT1, UT2, UT3, UT4, UT5, UT7. ST1, ST2, ST3, ST4. Less for: UT6, UT8. ST5. None for: ST6.

Evaluating TPCK should not be mechanistic and the approach taken here is of value in that it shows the range of dimensions to impact and the kind of evidence needed to support judgements. However while the domain in which TPCK is exercised could clearly be seen to expand (all were now using and evaluating some tools with which they were not previously familiar) it would be difficult to say just how each dimension of TPCK had developed. This is a cautious approach but one that is methodologically justified. It can be contrasted with other studies in which more 'objective' measures of TPCK were used: for example Sahin (2011) developed a survey to evaluate and measure pre service English teachers TPACK; Yurdakul et al (2012) developed a scale to measure pre service teachers' TPACK; Schmidt et

al (2009) who developed an instrument to statistically measure pre service teachers TPACK. In these studies TPACK has been used as an objectively measured variable, very often relying on teachers' self-reporting. This is oversimplistic. Baxter & Lederman (1999) argue that PCK and TPCK by extension is both an external and internal construct, as it is constituted by what a teacher knows, what a teacher does, and the reasons for the teacher's actions thus making it complex and difficult to evaluate, casting doubt on the use of self report and scales. This study supports such a view by trying to capture the complexity of TPCK as a concept and its measurement.

What we can conclude is that this ICT CPD event seemed to have had an overall impact on both enthusiasm for using ICT and in developing TPCK. It did so to varying degrees and while all engaged with the same programme outcomes were differentiated due to different contexts, for example some had easier access than others to technology and were teaching different language material. It also seems that in looking for difference between teachers, the key characteristic of enthusiast users was that they were more likely to have positive attitudes towards technology and looked for, and valued ways of engaging learners in more interactive learning.

6.4 RQ3 Can an ICT CPD Have an Impact on/for EFL Teachers in KSA?

This research reaches the overarching conclusion that ICT CPD interventions can have an impact on EFL teachers in general and in KSA in particular; however, this impact was differentiated in terms of uptake and use of ICT tools and was mainly at an introductory level. One way of appreciating the impact of the training is through a suitable modelling of the factors and actions that lead up to an outcome. A number of models are available. However the FIT model was chosen as it proved to offer a good mix of agency and

contextual conditions, allowing us to see the participants as actors creating, strategies to generate a phenomenon.

As we have seen in the literature review chapter (see page 83), this model was adapted and developed by Cartwright and Hammond (2007). The model was developed from a grounded theory paradigm (Strauss & Corbin 1998) though there is considerable debate within the grounded theory as to its compatibility with the original idea of grounded theory. In fact the model itself alongside the publication by Strauss and Corbin is much more a general book of qualitative data analysis, rather than one predicated on grounded theory. The key value of the model is that it sets out casual, contextual, and intervening conditions that contribute to a phenomenon, the strategies undertaken by 'actors,' and the consequences resulting from the phenomenon. Thus, it offers a hierarchy of 'factors' which point out that some conditions are essential, without which the phenomenon would not have been possible to be formed, while pointing out other contributing factors that deal with contextual and intervening conditions. As seen earlier, it allows actions undertaken by actors or strategies that had developed to be included, though as it happened in his original work (Strauss 1987) was often interested in how people coped with illness, in other words something that happened to people rather than, as here, something they made happen. Any model provides a focus on the key issues in a phenomenon. It does not capture an objective truth but provides a lens on that phenomenon; it rather simplifies it so that generalisations can be made across cases. In modelling there is always a balance between fidelity and abstraction.

As can be seen on page 230, figure (6.2) the phenomenon being addressed in this study is the experimental uptake of ICT in the classroom by the participants in both contexts. In this case the key element is to be captured in the phenomenon of the participants' experimental use of tools within their teaching context. This experimental use of ICT can be contrasted with the

everyday or routine integration of technology as it is often a one-off use in order to evaluate its potential usefulness. Such use is also differentiated in that even if all who stayed with the course did use ICT, they have used it to different degrees and levels.

Casual conditions as defined by Strauss and Corbin (1998) refer to "events or happenings that influence phenomenon," and the casual conditions that were imperatively important for the uptake of ICT tools in this study, were the availability of a training course in the first place, as without such course experimentation was not impossible but highly unlikely. The online design was also very crucial, as it gave the participants access to triggering events and to discussion with others, and it enabled them to engage at their own convenient time and place. Almost all participants reported that if the training had been designed differently they would have not taken part in it. Another causal condition was the action-based form of training, which gave the participants space to experiment with different ICT tools individually and as a group. Access to technology within each teaching context was also a necessary element as this enabled the use of ICT tools presented in the training and their application in teaching and learning.

As for the contextual conditions that influenced the uptake of ICT, most importantly was the teaching and learning context in the university or school. The findings show much in common in respect to these two institutions but there were some differences. In particular in the university the training took place at a time when job security was low; this was a double-edged condition, as it gave encouragement to undertake training to be more employable but may have undermined some morale and commitment. In school the conditions were less complex and participants had more support and encouragement. The training could be seen as a good opportunity for them to develop professionally and reflect an intrinsic interest in ICT and teaching and learning. Regardless participation was self-motivated.

Access and language levels were seen as barriers to ICT use. On an institutional level, access and time were very influential on the participants' uptake of ICT. All of these conditions contributed to the avoidance of using such ICT tools. In terms of content and planning this intervention was coherent as it took in consideration the participants' needs and preferred training methods as echoed in the interviews. It was also, whenever possible, delivered and presented to them informally and they were allowed adequate time to use and discuss different ICT tools. Mostly, the participants conceived it as a good opportunity for professional development and it received high appraisal in terms of satisfaction and enjoyment. However, the intervention was weak on an institutional level as the participants reported lack of time off and few rewards for using technology in the classroom. Lack of organizational support has been widely reported in the literature as a key element hindering professional development outcomes as well as a key constraint on ICT integration. As for context, in both participants' reported that insufficient training opportunities were available and that training was mostly focused on pedagogy.

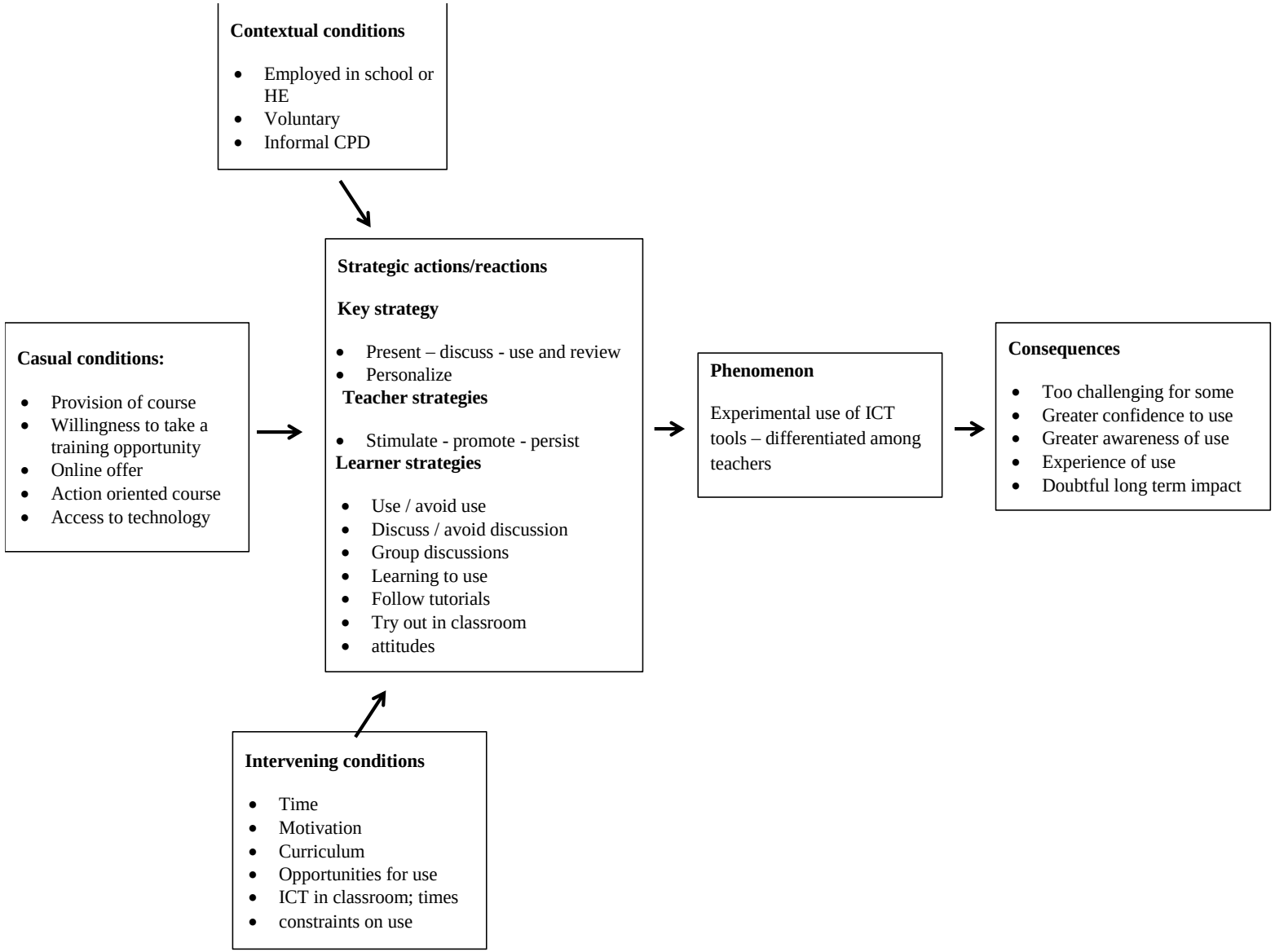
Other informal training opportunities were available to teachers through online providers, however these were not favoured, as they were not recognized by their institutions. Participants also reported lack of internal support for training needs that would meet their needs. The ICT CPD tried to encompass these needs (felt and expressed) by presenting the participants with a training opportunity that addressed the issue of ICT use and worked around their available time, and concerns for relevance to their teaching and level of support. Other issues regarding training provided were access to available resources and materials and students' language level. Both of these constraints played a major role in the adoption and use of ICT tools.

As for intervening conditions, these sets of conditions affect teachers' choices and adaption strategies of the phenomenon. Time, motivation, curriculum, and opportunity to use tools were the most influential intervening conditions that shaped the teachers' adoption of the tools presented. In regards to time, in both contexts the participants perceived time to be a constraint to technology use, though more so in the school context as classes were much shorter compared to the university context (see introduction). Some participants adopted strategies to use tools out of class time while others avoided tools that would take too much time to introduce within the classroom. Through the online environment, participants' motivation to use a tool was clear through their discussions, where some of them were more motivated to use different tools and experiment than others. The key strategy of the training was to present a certain tool, discuss how it might be used in the teaching context, use the tool in the classroom, and finally review how useful the tool was. The strategy was to stimulate interest in tool use by presenting the participants with a tutorial of how to use the tool and promote the tool use in different settings and prompt for feedback and sharing of experience. Not all the participants were keen on sharing their experience during the group discussions and thus discussions were underdeveloped. A variety of tools was offered in the hope that some of the tools would appeal to the participants and they would be able to exercise choice.

Generally two weeks were allowed for each tool to be experimented with and reviewed by all the participants. Learning strategies involved engaging in a discussion regarding a tool and then trialling the tool and report on how the tool assisted them in the teaching context. They developed strategies to use tools that would serve their teaching objectives and avoided using tools that were complex and that would require a higher threshold of ICT knowledge. While discussing reported use and experimentation of the tools, learners were not easily motivated to discuss their tools' use and refrained from being the first participants to report such use.

Engagement within the discussion was reached with persistence and only through asynchronous communication.

A major consequence of this experimental uptake of ICT was impact, but with questionable long-term impact. As we will see later in the limitations of this study, the training was evaluated during a three-month period and uptake could be a response to innovation and novelty, participants could lose interest in using tools/applications in their future teaching. However, confidence and awareness had been achieved by the training, which could be a potential early sign of future commitment.


Contextual conditions
Employed in school or HE
Voluntary
Informal CPD
Casual conditions:
Provision of course
Willingness to take a training opportunity
Online offer
Action oriented course
Access to technology
Strategic actions/reactions
Key strategy
Present – discuss - use and review
Personalize
Teacher strategies
Stimulate - promote - persist
Learner strategies
Use / avoid use
Discuss / avoid discussion
Group discussions
Learning to use
Follow tutorials
Try out in classroom
attitudes
Intervening conditions
Time
Motivation
Curriculum
Opportunities for use
ICT in classroom; times
constraints on use
Phenomenon
Experimental use of ICT tools – differentiated among teachers
Consequences
Too challenging for some
Greater confidence to use
Greater awareness of use
Experience of use
Doubtful long term impact

The value of the model presented earlier is that it enables us to think through impact issues and rethink what could be changed to make the CPD more effective. The model helps us understand what might happen as conditions change, for example if the causal conditions remain the same while contextual and intervening conditions were changed. In terms of contextual conditions, these are given and provide opportunities for use of ICT but also come with constraints. If teachers were allowed more curriculum control, would their use of tools change? Intervening conditions can be managed with support and a higher awareness of the potential value that ICT can add to the language classroom. However, changing these conditions would have little long-term impact if the casual conditions remained the same. This modelling has showed how people create strategies and produce a phenomenon but always in context; in other words it helps us see CPD in a larger context and in this sense impact is necessarily limited.

As for the training itself, it would be difficult to imagine what could be changed as the key issue was not the training but the context in which ICT was expected to be used. In fact there was little in the programme that could be changed. For example, some participants raised the issue of face-to-face interaction as opposed to the training being entirely online. Some would have preferred more face-to-face interaction, while others indicated that if the training was not online, they would have not had time to attend a traditional face-to-face training sessions. A second issue had to deal with offering more pedagogy on using technology in EFL teaching but that would not have made a difference if teachers had a negative attitude towards such use. Offering a considerably large number of tools/applications was intentional, in the likelihood that some would appeal for the participants, but would less tools/applications and more time make a difference in the uptake of ICT. Finally, the entire ICT CPD could have been a more formal intervention and that could have made a difference. For example offering

teachers more flexible kinds of curriculum assessment and different kinds of rewards for innovation may have led the intervention to have had more impact.

6.5 Reflections

Stepping back from the main research question and looking at how EFL teachers change their practice after attending an ICT CPD training leads to a number of reflections. Firstly, what can be expected from CPD in terms of impact on participants' practice is often exaggerated, even if change in practice is always seen as a desired outcome of any CPD initiative. Fullan (2001) argues that change is always difficult to achieve, as it involves changes in conception and behaviours; he also points out that participants who are expected to change must truly understand the change in order to implement it. It is always difficult for teachers to shift their teaching routines as a result of a CPD initiative. Having said this, training can have an impact by addressing, or working around, constraints and providing opportunities. As a result of this training there was a reported impact in the form of acquisition of new ICT skills as evident in the participants' tool use; formation of new knowledge as can be seen by the participants' use of tools; change in attitude towards technology, which can be seen from the participants' views and practice before and after the training; and change in behaviour as demonstrated by the participants' adoption of ICT tools.

Secondly, ICT has been introduced in education with an over-romanticised view of its impact and an assumption that it could lead to curriculum change. However this is not always or indeed often the case. Policymakers and decision makers' assumptions have come up against classrooms in which computers are not used or utilized and teachers use technology to reproduce material for teaching in the same pedagogical approach. Cuban (2001) argues that technologies have always been "oversold" by policy makers, while being

"underused" by the teachers or the students. He suggests that in order for computers to have the impact it offers, teachers should be involved in the planning stage, while being offered adequate training opportunities and sufficient administration and technical support throughout the implementation stage. Such involvement in planning could make teachers aware of the potential value of using such technologies that could lead to change in practice. As for training and support, ICT CPD interventions have been problematic for similar reasons and their impact has not been evident.

Thirdly, what kind of impact can we reasonably expect from ICT CPD initiatives? As discussed in the second sub-research question, it is clear that there was some impact through the ICT CPD training, with teachers using and reflecting on different ICT tools in their classroom and some development of TPACK. However, such impact is differentiated. When examining the impact of training through a TPACK framework, we could see the complexity of ICT use, it involves much more than changing technical knowledge of tool use. As addressed by Rogers (2003) the diffusion of innovation needs time for individuals to make decisions and to adapt to an innovation (in this case ICT technologies) and responses are differentiated in any system. Surely, similarly can be said in regard to TPACK in relation to participants' awareness and adoption of technology, in the light of the technology acceptance model (TAM). The model developed by Davis (1989) and Bagozzi, Davis, and Warshaw (1992) gives an insight into what factors influence when, how, and why an individual might use technology. What can be said about TPACK is that it shows how complicated, difficult, and complex it is to describe the skilful use of ICT.

What we can conclude is that ICT CPD initiatives can have an impact on the participants' attitudes, knowledge, and behaviour. ICT CPD initiatives can develop TPACK on an individual level and individuals can show different degrees of control over their own CPD, if

they are engaged in the planning and implementation stage, while being fully supported on different levels, with a degree of freedom to alter and change curriculum if needed. However policy and decision makers must have reasonable expectations of such interventions and take in consideration that change is difficult, takes time, and has limited results.

6.6 Summary

In this chapter we have highlighted and discussed the findings of the research questions that this study was set to address. We looked at how the ICT CPD was designed and implemented and evaluated the impact on the participants' attitudes, knowledge, and behaviour. The chapter concluded on examining how an ICT CPD can have an impact on teachers' classroom practice and a reflection of these findings followed. The next chapter will address recommendations and further research.

CHAPTER 7: CONCLUSION

This chapter concludes the thesis by providing a summary of the work carried out and points out the main findings and methods used to address the research questions. This is followed by a discussion of how has the thesis contributed to the wider literature in relation to conditions that allow ICT use in the EFL context, and teachers' uptake of ICT through online CPD. This is followed by a presentation of the weakness of this thesis and recommendations for practitioners, policy makers and future research. Finally, a personal reflection of the work carried out will be presented.

7.1 Summary of the Thesis and Main Findings

The study was set out to explore how an ICT CPD in-service training could impact on EFL teachers' practice in an EFL department and at a secondary school in Saudi Arabia. The study further developed to consider the considerations made in the design and implementation of the ICT CPD and what was the impact of the ICT CPD on the participants' attitude to professional development, knowledge of ICT, and behaviour in teaching practice. The thesis began with an introduction to Saudi Arabia's educational system, ICT use in education, and teachers' professional development and looked at both contexts (university and school) in more detail. Relevant literature was reviewed including, ICT use in education, CPD and educational development, EFL teachers' development and ICT CPD initiatives were examined and highlighted. A mixed methodology approach was used to address the main research question of the study, which was: Can an ICT CPD have an impact on EFL teachers' practice in Saudi Arabia? The study evolved to address two sub-questions as follow:

- Sub RQ1: How was the ICT designed and implemented?

- Sub RQ2: What was the impact of the ICT CPD on the participants' attitude, knowledge, and behaviour?

The methods used to collect the data were detailed in chapter three. A needs-analysis questionnaire was conducted and pre-course interviews were carried out to collect data to inform the design of the ICT CPD. During and post course interviews, online observations and group discussions were carried out to evaluate the impact of the ICT CPD. Triangulation of the data collected allowed me to check for and discuss consistencies/inconsistencies thus increasing the trustworthiness of the conclusions reached.

The findings which were presented in chapter six, addressed the research question in relation to the evaluation frameworks levels (i.e., context, input, process reaction/satisfaction, learning outcomes, and change). In addressing the main research question of the study, and from different sets of data, it was found that the take up of ICT through CPD is differentiated. However, a number of conditions interplay to enable or restrict teachers' adoption of ICT in their teaching.

In relation to the casual conditions that enabled the ICT CPD training to lead to greater use of ICT, it was found that the CPD needed to be tailored to the participants' training needs. A casual condition for ICT use in the classroom was for teachers to have access to technology in both contexts, although a number of constraints restricted their use of ICT, including: working hours, support and lack of particular facilities. Although the training was 'informal' in the sense that it did not lead to formal accreditation, all the participants showed enthusiasm by volunteering for the training in the first place and almost all of them completed the training. From different sets of data, it was shown that the online offer of the training and the action oriented content contributed to the interaction among the teachers and reflections on ICT tools/application use is believed to have lead the change process.

As for contextual conditions, from different sets of data it became clear that both contexts offered limited and restricted CPD opportunities and that this ICT CPD had to some extent addressed lack of opportunity. Although employment security at the university context was not high at the time of delivering the training, it was seen as an opportunity for professional development by making lecturers more employable in other contexts. Participants did show genuine intrinsic motivation by signing for the course.

In regards to intervening conditions that allowed or restricted participants' use of ICT during the training, it was reported that class time, motivation, and curriculum restricted some ICT use. From different sets of data, participants indicated that class time restricted their use of ICT especially in the school contexts, as the length of each class was shorter when compared to the university context. In the same vein, curriculum restrictions were seen as a barrier to their use of ICT in general, and as we have pointed out in the introduction, this barrier was expected to cause tensions in teachers' use and adoption of technology. Low motivation to use ICT was also reported as a barrier to ICT use, although teachers showed varied degrees of motivation. Almost all of the participants had positive attitude towards using ICT in their teaching, some showed negative attitude to such use. For example, the participants in accordance to their negative attitudes mentioned how ICT use could allow access to undesirable and unwanted content.

As for the ICT CPD strategies, it was confirmed by the participants that the discussions about the tools/applications presented on the online platform, and reflections on the tools/applications use was valuable; interaction allowed them to view, discuss, review, and use the tools/applications presented. Thus, the experiential learning context allowed the participants to test and share their use experiences of the tools/application presented, even if the levels of activity of individuals on the online platform discussions were varied. My role

was to provide a stimulus, promote the use of the tools/applications, and persist through motivation and encouragement, the sharing of experiences and evaluation of the tools/applications used. This strategy worked to a degree.

As for the consequences of these conditions, the ICT CPD was believed to have enriched the participants with greater awareness of the value of ICT, even if adoption of ICT was challenging for some. It was also clear that the participants' use of ICT tools/applications reflect their greater confidence in introducing technology to the EFL classroom and for experimenting in teaching. However, having said this, although the impact of the ICT CPD could be seen in the participants' teaching practice, it may be that this impact is short term, and long-term impact may be doubtful, unless sustaining conditions are introduced.

In regards to the first sub-research question, it was found that a bottom-up design of CPD was appropriate when addressing EFL teachers' ICT development, as it allowed them to exercise agency over the content and delivery of the training. As for the content of the training, although it was based around the participants' expressed and felts needs, issues of some tools/application were challenging for some, while others showed a great deal of control over their tools/applications use. The online delivery of the course was believed to have offered access to ICT and was seen as appropriate for both contexts. However, it was shown from the different sets of data that some participants would have favoured a mixed approach of online and face-to-face interaction. Although this mixed approach was seen as appropriate by some, the majority of participants reported that if the training had been face-to-face they would have not signed up for it. It was later found that teaching hours and schedules were the main factor for the preference of online delivery of the training. It was found that the overall evaluation of the ICT CPD design, content, and delivery was positive with some negative comments. Negative evaluation as we have seen in (Chapter 5) was mainly in respect to the

mix of face-to-face and online approach, timetable of tools/applications presentation, and professional development perspective.

As for the second sub-research question, it was found that the ICT CPD had a differentiated impact on the participants' attitudes, knowledge, and behaviour. From the pre-course data collection, it was found that the participants had a positive attitude towards their professional development and that some had attended a number of courses in both contexts. It was found that the school context offered EFL teachers more CPD opportunities, as it was mandatory for their promotions, while the university context was found to be less demanding in terms of EFL teachers' professional development. In terms of how these CPD opportunities addressed the EFL teachers' needs; it was found that almost all courses provided lacked a link between classroom practice and training needs, something that this course addressed. As for the participants reaction and satisfaction with the ICT CPD offered, it was found that their overall reaction to the professional development opportunity was positive as they saw it addressing their training needs, flexible in terms of commitment and was linked to their daily teaching practice. As for their satisfaction with the design, content, and delivery, it was found that the overall satisfaction level was high with some development suggested. It was clear that the participants felt a relatively high level of satisfaction with the training being online and the number of tools/applications presented, though the timing of introducing the training and the order of tools/applications presentation did not suit everybody. Moving on to the impact of the training on the participants' knowledge, the training helped develop the participants' knowledge of how can ICT enrich the EFL classroom in terms of students learning and presentation of material. From different sets of data, it was found that the participants' awareness of ICT tools/applications that can be used for EFL teaching/learning was high and that the training had developed some of the participants' attitude to ICT use. As for their uptake of ICT, participants had utilized tools/applications that served their teaching objective

indicating a concern for integrating use of ICT into teachers' routines and/ or as a support for the curriculum. Although TPACK levels were differentiated the ICT CPD had shifted some of the participants' TPACK as they demonstrated relatively good levels of TK, TPK, and TCK. It was found that there was a tendency to use tools/applications that promoted communication and presentation in the EFL classroom. It was also found that some participants had developed some innovative ways of engaging and interacting with their learners outside and inside classrooms. As for impact on participants' behaviour, three user patterns were found to exist in both contexts. It was found that optimistic users tended to make ICT use part of their daily teaching routines and were positive about the value of technology in teaching EFL. They were active participants in the online platform and experimented with all the tools/applications presented and provided examples of such use. Cautiously optimistic were found to be less active in the online compared to optimistic users but trialled some of the tools/application presented. They valued the use of ICT in their EFL classrooms but were tentative on over relying on technology and held positive attitudes towards the value of ICT but were cautious about overuse of ICT. Sceptical users were found to be fairly active in the training and saw the value of ICT in teaching. However, they were reluctant to adapt its use in the EFL classrooms. Their attitudes towards ICT were relatively positive but saw ICT as a potential distraction and exposing learners to unwanted online content.

Thus, the overall conclusion of the study is that ICT CPD can have an impact on EFL teachers' practice if the appropriate conditions are met and provided. However, it was found out that prior teaching attitude towards ICT and enthusiasm play a crucial role in teachers' uptake and adoption of ICT in their teaching. As seen in this study, a number of conditions were met to facilitate teachers' uptake of ICT through a CPD initiative, but the outcomes were differentiated as there were different levels of willingness to experiment with ICT in

real teaching contexts, and differentiated impact on attitudes towards ICT and teaching and learning practice.

7.2 How This Thesis Was Organized

This thesis is composed of seven chapters. Chapter one provided a general overview of the study and explored the context of Saudi Arabia in more details. The educational system was reviewed and some insights on the teaching professional were given. The introduction and adoption of ICT was also presented and both contexts of the study were reviewed in that a general introduction was given, a brief introduction of ICT use, and CPD opportunities were highlighted.

In chapter two, a literature review was presented where the value of ICT use in education was reported with an overview of constraints and opportunities that allow/restrict ICT use in education. CPD models, perspectives, and evaluations were also provided in the literature review. In addition, international ICT CPD initiatives were reviewed, and a number of guideline recommendations were presented. The chapter finally reviewed theories that were reported in theorizing the use and adoption of ICT.

In chapter three, the methodology and data collection methods were illustrated. The mixed methods framework was presented and qualitative and quantitative methods were discussed and outlined. The chapter also provided a description of the two contexts, and pen portraits of the participants were provided.

In chapter four, the design of the ICT CPD was outlined. The use of TPACK as a framework that explicitly informed the evaluation of the impact of ICT CPD was broken down to different domains. The analysis of the needs questionnaires that informed the content and delivery of the ICT CPD was presented, and the outcomes of the training were highlighted.

The chapter concludes by presenting an observation of the online interaction of the participants and a number of reflections on the design and delivery of the ICT CPD.

In chapter five, the different sets of data were analysed in relation to the evaluation framework adapted in this study. The chapter started by highlighting the pre course interviews that informed the design of the ICT CPD and moved to exploring the contexts of the study and moved to the evaluation of the input followed by an evaluation of the process of the training. Later it highlighted the participants' reactions to and satisfactions with the training and evaluated their ICT uptake and examined their classroom behaviour. The chapter concluded by reporting the group discussions data and provides a summary of the chapter.

In chapter six, a discussion of the study findings was presented, the evaluation framework was outlined, and the three research questions were discussed in relation to the evaluation framework. The chapter concluded by presenting some reflections and a summary of the main findings.

This chapter (seven) has offered an overview of the main thesis and pointed out the main findings. It outlined the thesis and offered a summary of the work presented. It will now highlight how the thesis has contributed to the academic field, to be followed by an examination of the weaknesses of the study. The chapter will also provide some recommendations and a personal reflection on the study carried out.

7.3 Contribution to knowledge

This research has contributed to the literature in a number of different ways. First it has contributed a case study to the under-researched area of the impact of CPD on teacher take up of ICT. There are a number of features of the case which make it distinctive and particularly valuable:

- It is a multiple case study and this provides a greater level of trustworthiness in regards to the findings.
- It is an example of ICT CPD being carried out online and shows that such an approach is possible and welcomed by many, but not all teachers.
- It takes place across two settings (school and higher education) that are fairly similar, more so than often presented, but with differences. The study lends support to the idea that there are general issues in teaching, but specific differences in contexts.
- It takes place in the under reported context of Saudi Arabia. It finds that conceptual frameworks do cross contexts but again that there are specific contexts that need to be taken into account.
- It offers a relatively encouraging example of the impact of ICT CPD in a literature that is often pessimistic. It argues that a key reason for this impact was the learner focused design process.
- It provides some support for the Garrison & Archer (2003) community of inquiry framework and illustrated how this framework could be used to evaluate online activity.

Second, the study explored the complexity of design and evaluation of ICT CPD initiatives and provided a framework that addressed both systemically. In particular it described the complexity of TPCK as a concept but showed that it could be a useful tool in considering design issues and in measuring impact. It argued against mechanistic approaches to TPCK but presents an alternative, and more supportable, approach to its evaluation.

Third, the study succeeded in modelling the impact of ICT CPD. This was a holistic model which covered both conditions, context and as well as the agency of teachers. This model is relatable to both teachers and designers working in other context and sensitises them to likely

impact and what needs to be put into place to maximise impact. The model can be used by other researchers to further explore ICT CPD as a phenomenon, particularly in seeking to understand how agency is supported / constrained by contextual conditions.

7.4 Limitation of the Study

Despite the strengths of the study presented above, the study had a number of limitations. The number of tools/applications presented was relatively high, which might have risked the ICT CPD being technology driven. User patterns indicated that a few of the tools/applications were not used. A more focused introduction to a smaller number of tools might have caused less tension in the participants' user patterns and in the process given a more in-depth focus for the research. A further point is that the ICT CPD was partially delivered during my stay at Saudi and due to time restrictions, classroom observations, beyond the analysis of online archives of classroom use, were not possible. Thus, ICT use reported in this study was largely based on interview data. The threat here is whether deliberately or not, teachers may have ended up over reporting their use of ICT. To address this, archived messages gave further reported evidence of classroom use, and interview questions probed teachers' use of ICT and would, at the least, have uncovered major inconsistency.

A limitation of evaluation was that post course evaluation was carried out near the end of the delivery of the course, and a longer perspective would have enriched the study and uncovered sustained or unsustained ICT use. Thus the study could have developed a longitudinal element if more time was given. My future research in this area will take a longer period of time and include more classroom observation. It can also be said that more research is needed in the Saudi context as this, to the best of knowledge, was the first study that addressed the issue of ICT CPD for EFL teachers.

7.5 Recommendations

The overarching question of this study was whether ICT CPD could have an impact on EFL classroom practice. This thesis has addressed this question by reviewing the literature on how can ICT enrich the teaching/learning experience of an EFL classroom and how can teachers developed such use knowledge through continuous professional development programmes. We provide the following recommendations for:

Policy makers:

- Provide more CPD opportunities that reflect the training needs of teachers.
- Include teachers in the designing and planning of CPD offered.
- Assign a number of mandatory accredited CPD programs.
- Offer support and encouragement for CPD opportunities offered by different providers.
- Facilitate more support for practitioners using technology in contexts.
- Allow practitioners more control over curriculum while providing general teaching objectives.
- Develop facilities to allow greater access and use.
- Support suitable environments for community of inquiry to be established within different contexts.
- Build on the ground work of teachers, some of which will not be known, give them opportunities to disseminate ideas and lead development.

For practitioners:

- Be open to new teaching methods, pedagogy, and try new instructional techniques.
- Engage in more formal or informal CPD opportunities to enrich ICT knowledge base.
- Include ICT in daily teaching routines as to develop new teaching experiences.

- Engage in reflective discussions of practice with colleagues or other practitioners.
- Consider greater use of ICT tools/application to overcome access barriers such as Edmodo, blogs and Wikis.
- Develop time management skills to balance technology use in classrooms and other activities.
- Continue to pursue professional development by engaging in online communities of practice.
- Focus development on a contribution to teaching; do not use ICT for the sake of it.

7.6 Personal Significance

Pursuing both of my degrees in the UK has enriched my experience as a language teacher and as a researcher. This research has allowed me access to discover the literature on using technology in general and ICT specifically for EFL teaching. It uncovered the value of ICT use for language teaching at a deeply personal level, as I am a language learner who has benefited from my online activities to develop my English. During my studies, I was able to feel first-hand how the teaching experience is distinctive in my own country. Merging both strengths and eliminating weakness of both UK and SA systems, I feel empowered to deliver better learning/teaching experiences for my students. As a researcher, this journey has enriched my understanding of how teaching traditions, values and worldviews interact to form a teacher identity that is unique to each person. Thus, such understanding demands me to look at individuals' objectivity and not to impose values from my own understandings and interpretations of the world. Having said this, this research has uncovered new aspects of the Saudi context that I did not know before. For example, I was not expecting to see such interest in developing teaching and to enriching the quality of teaching. Finally, living in the UK has been like a first home for me, as I grew up in Manchester and spent almost half of my

life in the UK. Overall carrying out this research has helped me personally and professionally and I look forward to continuing my research in this area.

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Appendix 1: Needs Analysis Questionnaire

Dear colleagues,

This survey is part of a PhD research on ICT (Internet Communication Technology) in-service training program. The aim of the study is to implement and evaluate a training course. In order for the course to be designed based on the participants needs, your response to this survey is highly valuable and appreciated. The data collected through this survey will be used for research purposes and will be dealt with complete confidentiality.

Section 1: please tick what is appropriate:

Age	
20-30	
31-40	
41-50	
51-above	

Qualifications	
Bachelor	
Diploma	
MA	
PhD	
Others (please specify)	

Teaching specialty	
Language skills	
English Literature	
Pedagogy	
Linguistics	

Years of Experience	
0-5	
6-10	
11-15	

20-above		
Courses		
How many hours do you teach in a 'normal' week	0-4	5-9
	10-14	15- above

Computer personal use				
Do you own a personal computer?			Yes	No
In general, how familiar are you with computer	Very familiar	Slightly familiar	Fairly familiar	Not at all
Where do you have access to a computer	At work	At home	Do not have access	
What is the average number of hours that you spend using computers	0-2	3-5	6-9	9- above
What is the most common activity that you use computers for	Personal interests	Work based research	Administrational work (e.g. grading, exam writing)	teaching

Section 2 : Please respond to the following statements:

Applications Skills	**Not at all**	**Slightly confidant**	**Fairly confidant**	**Very confident**
a. Generic skills (e.g. save, edit and print a file)				
b. Sending, receiving, storing email and managing email groups				
c. Accessing information over the internet (e.g. using search engines, bookmarking)				
d. Creating presentations				
e. Creating and maintaining a Blog				

ICT use	**Never**	**Rarely**	**Sometimes**	**Always**
a. Research purposes				
b. Teaching (e.g. creating Blogs)				
c. For students in class use (e.g. quizzes, presentation, access				
d. For students out of class use (e.g. discussion forums, Blogs, Wikis)				

Section 3: To what extent do you agree or disagree with the following statements:

Opportunities	**Strongly disagree**	**Disagree**	**Neither agree or disagree**	**Agree**	**Strongly agree**
a. My teaching is more interactive using ICT					
b. I would like to use technology more in my teaching					
c. I can present idea more clearly using ICT					
d. ICT enables my classes to be more engaging					
e. ICT use distracts students					
f. ICT should be used only to supplement teaching					

Section 4: To what extent to you agree or disagree with the following statements:

Constraints	**Strongly disagree**	**Disagree**	**Neither agree or disagree**	**Agree**	**Strongly agree**
a. It is difficult to book a computer lab for my lectures					
b. Computer lab equipments are not reliable					
c. There is not enough class time for me to use ICT					
d. Most entry level classes are too large to fit in computer labs					
e. There is a limited number of computer labs to be used					
f. I takes too long to develop ICT teaching material					
g. There is too little support for ICT use					
h. I cant use ICT with the curriculum					

Section 5: Please respond to the following accordingly:

ICT Training		
Have you attended any ICT training courses?	Yes	No
What type of course was it	● Hand on workshop ● Demonstration ● Lectures ● Online –self access	
Using a single sentence, can you say what you liked or did not like about the training	Liked:	
	Did not like:	

ICT training opportunity		
Would you like to attend a training course on using ICT for EFL teaching?	Yes	No
If answered Yes, please provide your Facebook and email account: ……..……		
What would you like it to cover	● Using Google services (e.g. Blogger, mail groups) ● VLE's (e.g. Edmodo, Udutu) ● Authoring applications (e.g. Discussion forums, Blogs, Wikis) ● Social media platforms (e.g. Twitter, Facebook) ● Online presentation tools (e.g. Prizi) ● Others:……..	
How would you prefer the training to be conducted	● Hands-on demonstration ● Self-access online and classroom support ● Lectures ● Others:……	
How long would you like the training to be	● Single event ● A number of events ● Small number of event with classroom support ● Longer accredited hours	

Appendix 2: ICT CPD Participation Email

Dear All

Thank you for agreeing to take part in the ICT CPD opportunity offered. As I have pointed out earlier, the training is informal and is not accredited although it is hoped that you all benefit from the training provided. Below is an outline of the training content and also the potential value of using each tool. I will start by setting up a Facebook group for us to interact and it will be only accessible by participating staff. Generally, I will introduce one tool each week and feel free to discuss the tool or application presented, I will provide support for setting up any accounts or any other technical issues. The time framework allows you a week for starting to set up the tools or applications and find your way through them and then another week for using the tools. Feel free to start using tools as soon as you are ready. The second week is usually dedicated for discussion and reflections on how you have used the tool and how did it go with your teaching. Feel free to share and do not hesitate to discuss any issues. Wish you all the best.

Tool/application	**Pedagogical value**
Twitter	Twitter is a social media platform that allows you to send 140 characters per message. It is completely individualized in terms of profile picture and biography of the account holder. It allows you to follow individuals, public figures, institutions or groups you find interesting. The value of using twitter is to promote communication and collaboration. You can use it to post important dates, role play, games and you can link it to a Blog.
Facebook	Facebook is also a social media platform that allows you to connect to other individuals across the glob. You can also find individuals, institutions and groups of interest online. In teaching using Facebook you can create a page for your different classes and guide the interaction in different fronts. The value of using Facebook is in its ability to promote communication and collaboration and the fact that you can present multimedia content on you group page. It also supports out of classroom learning as students can log into their account and access material anywhere they like.
Prezi	Prezi is an online-based presentation application. It allows you to create interactive and engaging presentation. Some of the feature including zooming out and in to emphasis on a certain point. One of the main benefits of using Prezi is that you can create a mind map of material presented and direct learners through the map. The value of using Prezi is that it allows you to present the material you wish in an engaging and interactive way. It also aids in enabling the presentation of different multimedia forms of the material you want to present.

Tool/application	**Pedagogical value**
Google services	Google services are provided for G mail account holders. It is easy to set a goggle account to benefit from these services. Some of these services include mailing groups, goggle drive and Google Blogger. The value of these tools is different. For example, mailing groups allow you to communicate with your students to circulate assignment or important dates and collaborative tasks such as error corrections. Google drive allows you to save, store and retrieve all of your material online using any computer to access you account. As for Goggle Bloggers, it is a blog service provided by Google that is basic and easy to set up. You can format and set up your blog within minutes. You can use the ready-made tablets and customize your interface the way you see fit.
Edmodo	Edmodo is a social learning platform that is similar to Facebook in design but different in principle. As a learning platform, Edmodo allows you to set up online classes for you different modules and enrol students by giving out the course online code. The value of using Edmodo is that it allows you to interact with your students to circulate assignments, grade your students and conduct online polls. It promotes communication, individual and group work, collaboration and multimedia presentation.
Wikis	Wikis are typically online applications that allow users to edit, modify and adjust content posted. The value of using Wikis is to promote collaboration in writing tasks. It can be individual tasks or group tasks as you can set different sub groups within the Wikis. Different pages on a Wiki can include different portfolios of you students learning through a period of time, achievements page dedicated to present good learners or even a parents page were they can discuss and share their thoughts. Wikis can also be valuable in allowing you and your students to share links, presentations and any other content.
Blogs	Similar to Wikis, blogs are an online-based space that allows you to post entries in a reverse chronological order, while allowing individuals to leave comments on your entries. It can be seen as an online diary or journal where you can present different formats of text, audio or video on your blog. The value of using blogs is that it allows you to promote literacy skills and allows your students space to reflect and gives them a larger audience to express their ideas and thought.
Udutu	Udutu is an online e learning authoring application that allows you to create online courses. In principle it is similar to Blogs and Wikis in terms of setting up the content, while being interactive and engaging with your student as an online course. It allows you to use different multimedia formats and is very customisable. The value of using Udutu is that it allows interactivity, engagement and giving students the opportunity to complete the course at their own time and pace.

Hope I have clearly highlighted the potential pedagogical values of the tools/applications that are going to be presented in the training. Please feel free to contact me if you have any other concern or issues either with the content or with technology use in general.

Thank you all

Khalid

Appendix 3: Interviews Schedule

Pre Interviews:

- Introduction
- Description of purpose of interview and ethical considerations
- Setting out the scene

General information:

1. Tell me about you (qualification, background)

2. Tell me about your work here (prompts courses, how long, what liked not liked, which subjects)

3. How did you get into teaching (inspired to teach, long holidays, good pay...)

ICT use:

1. Do you use it yourself very much, for research, for personal use.

2. Tell me about ICT in your teaching. (how did you use it, where did you use it, did it help/ did it not help, why and why not)

- Blogs
- Google groups
- Email
- Presentations text media links
- IWB – at what level
- SNS.
- Audio tapes
- www to access authentic material
- www to access native speakers

Opportunities:

1. Why would you use ICT in your teaching?
2. How would it help you?

Constraints:

1. What do you believe is preventing you from ICT use?
2. Do you believe that the curriculum constraints have an impact on your ICT use?
3. Do you think that the lectures time is enough to use ICT tools
4. Do you believe that the university encourages, discourages you to use ICT? How and what?

A training course:

1. Tell me about any training courses that you have attended?
2. What was goo/not good about them?
3. Di you use/benefit from what you have learnt... why/ why not
4. Have you attended any training sessions on ICT use? How did it go, good/not good/ what was good/ not good
5. What type of training was it? What was your role (active/passive), good/not good
6. Does training matter?
7. Do you believe that a training course is needed?
8. Do you think you could benefit from any sort ICT for teaching course? What kind of training would you seek, and how, where?
9. Do you believe that a training course would benefit you? In what way?
10. What would you look for in a training course?
11. Tell me about courses you have found useful, ones that did not

12. Would you commit to the course if applied in the college? Certain time of the day that you think is appropriate for the training?

13. What would you want to get out of the course?

14. Can I suggest different models:

- **a.** 5 or 6 lectures on how EFL learning and teaching can be supported through ICT.
- **b.** 5 or 6 hands-on workshops to introduce you to ICT applications and how to use them.
- **c.** 5 or 6 hands-on workshops to introduce you to ICT applications and how they can be used specifically to support EFL teaching
- **d.** 5 or 6 workshops which take you through developing a project involving the use of ICT in your teaching

During course interviews:

- Establishing a connection for online interview
- Introduction
- Description of purpose of interview and ethical considerations

1. Context

- **a.** What have enabled you to use ICT in your teaching?
- **b.** Talk to me about the conditions that allowed you use any of the applications?
- **c.** What have prohibited you from using ICT in your teaching?
- **d.** Talk to me about any difficulties that didn't allow you to use any of the applications?

2. Input

- **a.** What do you think of the content of the training so far?
- **b.** How relevant is it to your teaching practice?

c. What did you enjoy about the tools?

d. How would you evaluate the content?

3. Process

a. What do you think of the online delivery of the training so far?

b. Would you suggest any development for the delivery?

4. Satisfaction and reaction

a. What have you enjoyed about the training so far?

b. What about the content of the training

c. What about the delivery? is it OK being online and in face book?

d. How do you feel about design of the course, I mean the nature of training?

e. What do you suggest we do differently if we ran the course again next year?

5. Learning outcomes

a. What could you say about your knowledge of ICT now?

b. what have you learnt from the course that you didn't know before?

c. What is your attitude towards ICT use now?

d. How do you feel about using ICT in your teaching?

e. What tools/applications have you used?

f. from the beginning of the training till now, has any application enabled you to teach in a way that wouldn't be possible without using that application?

g. How did you use them/ in what context/for what goal?

h. Did you se the tools/application for personal interests? How/what tools or applications

Post interviews

- Establishing a connection for online interview
- Introduction
- Description of purpose of interview and ethical considerations

6. Change:

a. what have you benefited from the training?

b. How would you describe your teaching with ICT?

c. What tools/applications have you used now in your teaching?

d. What is the reason for using such applications/tools?

e. How would you rate your technology use now?

f. how do you see the impact of the training on you teaching?

g. Do you have any plans for future use of tools/applications?

Focus groups

- Establishing a connection
- Introduction
- Description of purpose of focus group and ethical consideration
- Outlining guidelines for interaction and discussion

7. Group discussion:

a. What is your overall view of the training?

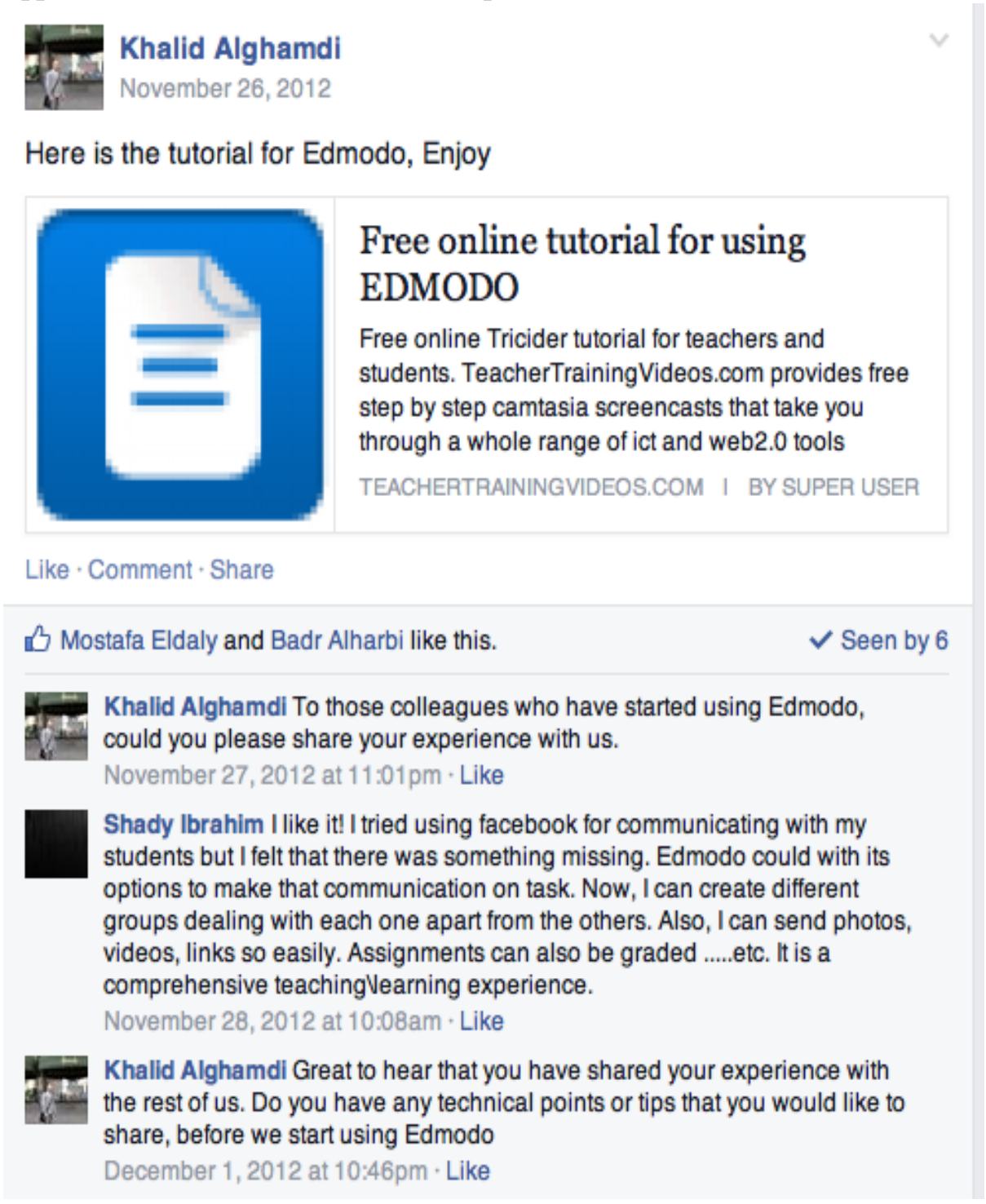
b. Which tools have you implemented in your teaching and why?

c. Has your attitude towards ICT use for EFL teaching changed?

Appendix 4: Observation Schedule

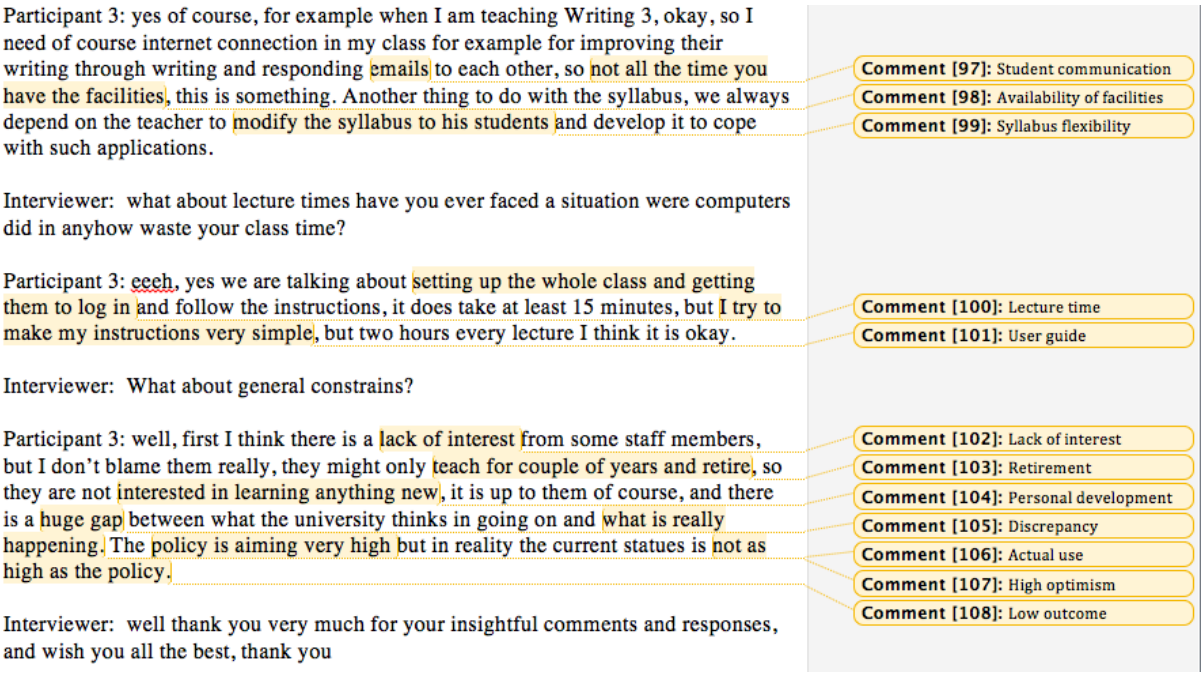
Online class description	Tool/application used: Mode of interaction: Time: Number of students participating:
Students role	Discussion of content: Collaborative engagement: Individual tasks:
Teacher role	Facilitator of information: Provided access to material: Supplied material: Directed students learning:
Use of technology	Communication: Multimedia: Collaboration: Individualisation: Presentation: Group task :

Appendix 5: Screenshot of the online platform

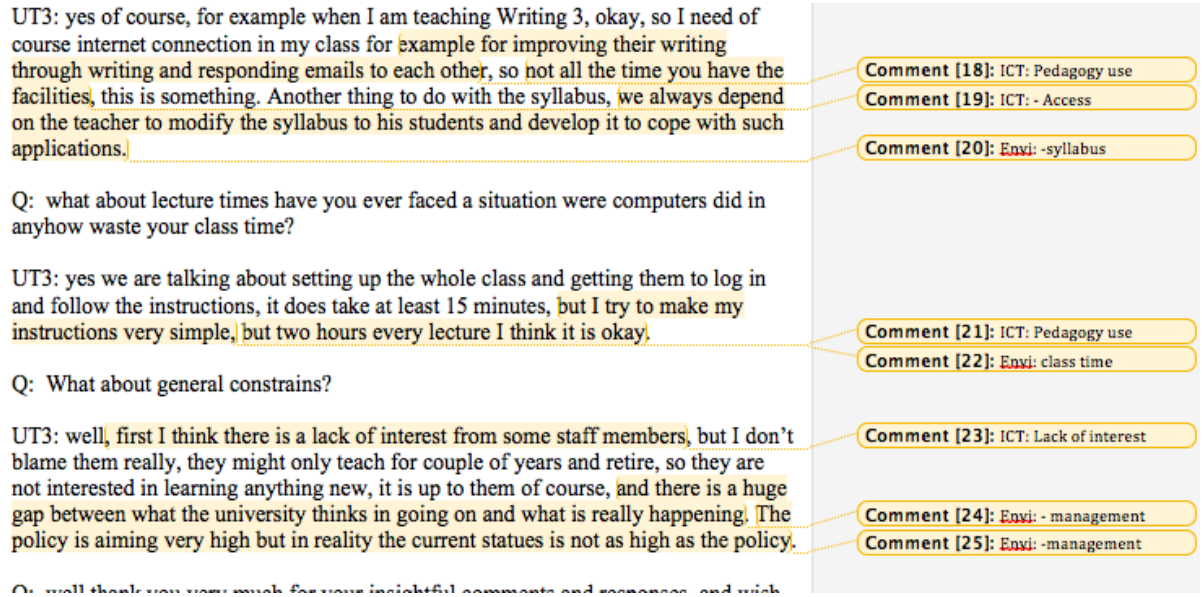


Appendix 6: Open, Closed Coding Sample and Nvivo Coding Protocol

Open coding sample



Closed coding

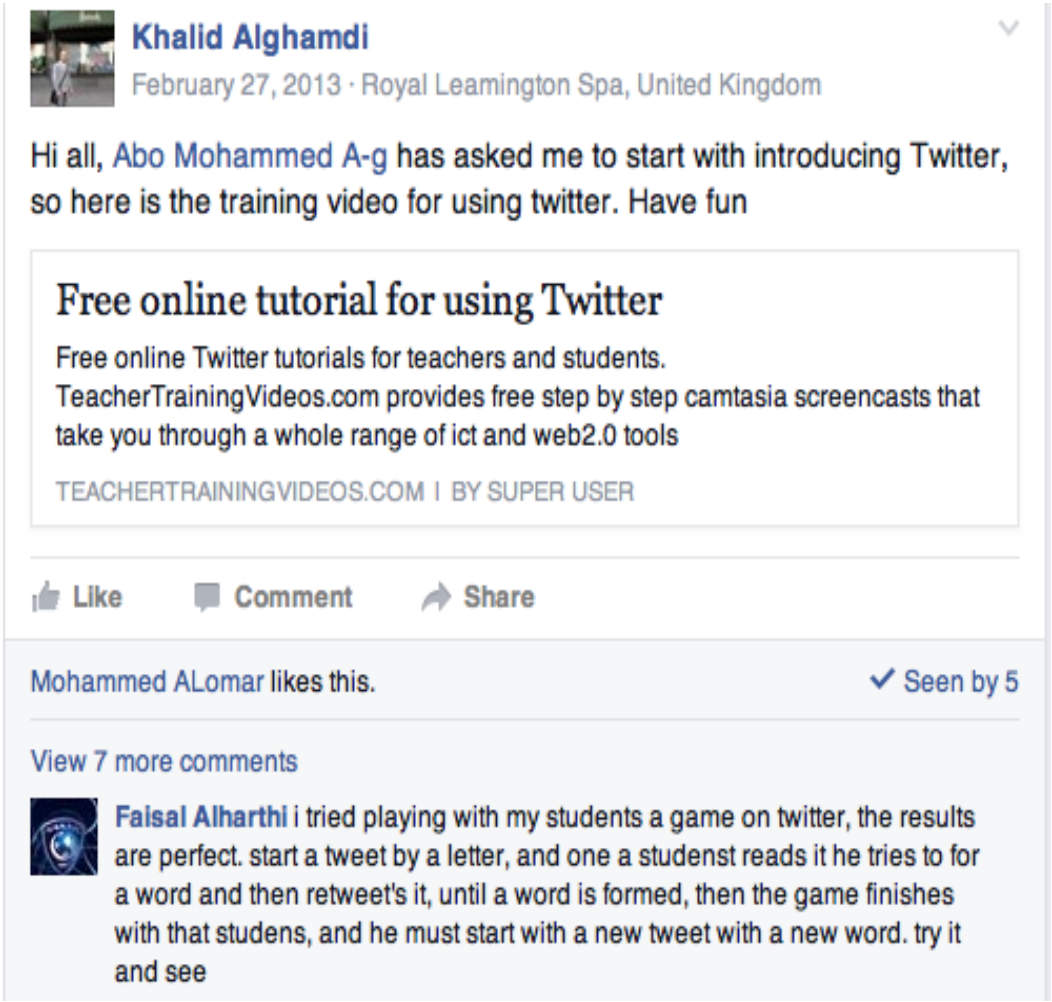


Nvivo

Nodes

Name	Sources	References
Training satisfaction	0	0
Postitive delivery	11	15
negative content	3	3
positive design	10	18
negative design	4	7
positive content	9	11
negative delivery	3	3
Training input	0	0
Negative content	5	6
Positive content	11	13
change	0	0
Adoption of new ideas	12	22
positive evaluation of use	10	21
new startigies	8	14
Negative evaluation of use	2	4
context	0	0
students language levels	6	7
Facilities	5	7
Support	4	4
Curriculum constraints	4	6
Class size	3	4
Students IT capabilities	3	3
Class time	3	3
Teaching hours	2	2
Training Process	0	0
online training	10	10
future development	7	14
Knowledge	0	0
Personal use	6	12
Acquisition of ICT skills	9	23
Positve Attitude	9	18
ICT use	13	30
Negative attitude	3	6
Reaction to training	0	0
Positive	11	19
Negative	3	6

Appendix 7: An example of online integration.



Appendix 8: **An example of teachers' interaction.**