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**Exploring the Readiness of Students and English Teachers to Use E-learning for
English as a Foreign Language in Saudi Arabia**



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Abstract

In an era of increased global investment in the use of technology in education generally, Saudi Arabia has intensified its quest to incorporate E-learning as a supplementary tool for English as a Foreign Language (EFL) at the high school levels. The benefits of this paradigm shift are obvious because the growth of the Internet and the proliferation of computers appear to have had a direct impact on the steady increase in popularity of E-learning, especially for EFL, in Saudi Arabia. This research is premised on the assumption that the successful implementation of E-learning in Saudi Arabia will require the readiness of students and teachers in particular, ahead of the adoption and use of the technology for teaching and learning.

This study adopts a mixed method approach using both qualitative and quantitative methods at three stages in order to achieve distinct research objectives. The first stage of the research involved qualitative interviews with students and teachers that explored the underlying factors of readiness of students and English teachers. The second stage of the research involved surveys with students and English teachers that examined their current level of readiness, as well as any age and/or gender differences in their readiness to use E-learning as a supplementary tool for EFL in Saudi Arabia. The third and final stage involved in-depth qualitative interviews with national and regional government officials as well as heads of families in order to develop a deeper understanding of the current level of readiness for students and English teachers.

Overall, the present study provides an alternative perspective to understanding the readiness of students and teachers to use E-learning, particularly in the Saudi context. The study establishes that in developing societies where institutions are less established and considered thinner, the introduction of E-learning in such societies will require more than the availability of financial resources and political will. The research outcome demonstrates that the readiness of students and teachers for E-learning in Saudi Arabia is indicated mainly by a set of underlying personal factors which are influenced by a set of external factors. In terms of the current level of readiness of the respondents, there is a mixed outcome. Further, there are also some differences and similarities in the readiness of respondents to use E-learning for EFL based on age and gender. Finally, this study contributes to the existing body of international literature on E-learning readiness by proposing an expansive new framework

that takes into account both personal and external factors in exploring readiness. More so, the propose new framework incorporates the significant role the wider cultural and social context plays as well as the importance of gender issues and their particular centrality in the Saudi context in relation to individual and organisational E-learning readiness.

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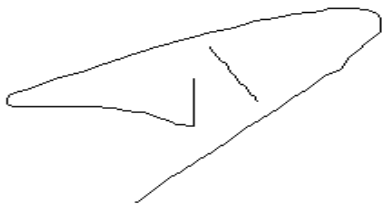
Special thanks to my extended family in Saudi Arabia and my immediate family, especially, my parents (Mohammed Mutambik and Aysh Awaji), wife Amnah Hakami, children (Mohammed, Awsaf, Elaf and Mazen) and brothers and sisters (Bander, Fatmah, Amal, Hassan, Ayshah, Abdulraman (may Allah bless his soul), Shrifah, Hunan, Khalid, Majid and Almas).

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Declaration

I declare that this thesis is of my own composition based on an original piece of research work with due acknowledgement of other sources cited. This thesis also has not been submitted for the award of any other degree or professional qualification.

Ibrahim Mutambik

A handwritten signature in black ink, consisting of a series of connected loops and lines, positioned above the 'Signed:' label.

Signed:

Date: **27/08/2018**

Dedication

To my Dad, Mum, wife and children, Mohammed Mutambik, Aysh Awaji, Amnah Hakami, as well as Mohammed, Awsaf and Elaf, thank you for all the support during my studies. I love and appreciate you all.

Publications and proceedings arising from the thesis

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2. Mutambik, I. and Lee, J. (2018). Refocusing the theory of planned behaviour and the technology acceptance model: towards an E-learning usage model. (Submitted to International Journal of Modern Education and Computer Science).

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1. Mutambik, I., Lee, J. and Foley, Y. (2018). Identifying the underlying factors of students' readiness for E-learning in studying English as a foreign language in Saudi Arabia: Students' and teachers' perspectives. *In Proceedings of the Computing Conference 2018, 10-12 July 2018 IEEE Xplore*.
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List of abbreviations

CFA: Confirmatory Factor Analysis

EFA: Exploratory Factor Analysis

EFL: English as a Foreign Language

KMO: Kaiser-Meyer-Olkin

MoE: Ministry of Education

OLRS: Online Learning Readiness Scale

PBC: Perceived Behavioural Control

PLATO: Programmed Logic for Automated Teaching Operations

TAM: Technology Acceptance Model

TPB: Theory of Planned Behaviour

TRA: Theory of Reasoned action

TROLM: Teacher Readiness for Online Learning Measure

Terminology

Ease of use: It is defined in this research to mean the extent to which participants believe that using E-learning as a supplementary tool for EFL in Saudi Arabia will require less effort and be easy.

E-learning characteristic: E-learning characteristic factors is defined in this research to mean the extent to which participants perceive the combined effect of E-learning usability (that is, ease of use and usefulness) and E-learning functionality (that is, flexibility and interactivity) as being available or not for their use of E-learning as a supplementary tool for EFL in Saudi Arabia.

E-learning functionality: E-learning functionality is defined in this research to mean the extent to which participants believe that the use of E-learning as a supplementary tool will provide flexible and interactive access to instructional and assessment material to facilitate teaching and learning EFL in Saudi Arabia.

E-learning usability: E-learning usability is defined in this research to mean the extent to which participants believe that adopting E-learning as a supplementary tool will be easy or not, and whether or not it will be useful for learning and teaching EFL in Saudi Arabia.

E-learning: the term E-learning is defined in this research to mean, a web-based learning management system that provides different supplementary educational tools including Virtual School, e-Tests and Self-evaluation Tool, e-Homework Assignments Tool, Question Bank Tool and Lesson Planning Tool, for students and teachers (Tatweer 2014).

External factors: These involve a combination of what are considered as social factors, E-learning characteristic factors and in-school factors that influence individuals to use E-learning as a supplementary tool for EFL in Saudi Arabia.

Flexibility: It is defined in this research to mean the extent to which participants believe that using E-learning as a supplementary tool for EFL in Saudi Arabia will offer them options in their learning and teaching in relation to time and/or place.

In-school factors: In this research In-school factors are the extent to which participants perceive the combined effect of the technology required, management support and technical

support as being available or not for their use of E-learning as a supplementary tool for EFL in Saudi Arabia.

Interactivity: It is defined in this research to mean the extent to which participants believe that using E-learning as a supplementary tool for EFL in Saudi Arabia will provide a platform that offer them the opportunity to exchange ideas in their learning and teaching both among students themselves and with their teachers.

Jazan: an administrative province divided into six educational districts namely: office of education in Jizan (Jizan is a city in Jazan province), office of education in Abu-Arish, office of education in Al-Arethah, office of education in Ahad-Almsarh, office of education in Samtah and office of education in Farsan.

National Level Officials: These are officials at the national level designated to see through the planning, implementation and evaluation of the E-learning programme in Saudi Arabia.

Native speaker: This is defined by an individual's ability to use English in communication as his/her mother tongue.

Personal access to tools: In this research access to tools is related to the availability of equipment, i.e. computer and internet access, at home.

Personal drivers: In this research personal drivers involve the ability of an individual(s) to develop a positive attitude towards E-learning, and be motivated and prepared to commit time to using it.

Personal factors: In this research personal factors are considered as those factors that indicate the readiness of individuals to use E-learning as a supplementary tool for EFL in Saudi Arabia, which comprise of self-efficacy, personal access to tools and personal drivers.

Preparatory year: This is the first year in the university where all students from different areas of study attend in order to prepare them for studying at the university level.

Readiness of Student and English teacher for E-learning: The readiness of students and English teachers manifested as a composition of personal factors, which are also influenced by the external factors as well as the wider socio-cultural factors.

Regional Level Officials: These are officials at the regional level designated to see through the planning, implementation and evaluation of the E-learning programme in Saudi Arabia.

Self-efficacy: In this research self-efficacy is defined as students' and teachers' perceptions of their own individual abilities, knowledge and skills to use E-learning as a supplementary tool for EFL in Saudi Arabia.

Social factors: In this research social factors are the extent to which participants perceive the combined effect of family support and peer support as being available or not for their use of E-learning as a supplementary tool for EFL in Saudi Arabia.

Usefulness: It is defined in this research to mean the extent to which participants believe that using E-learning as a supplementary tool for EFL in Saudi Arabia will enhance their learning and teaching.

Chapter One: Research background

1.1 Introduction

Increasingly, English language as a lingua franca has become the dominant language throughout the world. Globally, English language is currently the most common language of communication amongst people of different first languages in the field of business, commerce and the sciences as well as in academia. This increasing importance of English language within the Saudi context can also be felt in educational systems and many employment sectors (Elyas and Picard 2010). Considering this increasing significance in the use of English in the Saudi context, the Saudi government introduced a new language policy that requires all students both at the intermediate and high school levels, that is ages 12-15 and 15-18 respectively, to study English as a compulsory subject (Alkhatnai 2011). Furthermore, English is now used as the medium of instruction by many universities in Saudi Arabia (Al-Kahtany et al. 2016). In spite of this effort on the part of the Saudi government by way of policy and spending, reports suggest that students' English language skills remain at a basic level upon completion of their early education – intermediate and high school levels (Al-Nasser 2015; Al-ahdal et al. 2014; Alharbi 2015). The lack of improvement in the level of students' language skills despite the current efforts of the Saudi government seems to have exacerbated the already herculean challenge of using English as a medium of instruction in universities, and impacts negatively on students' successful completion of their programmes. Taking this into consideration, the Ministry of Education (hereafter, MoE) has proposed the introduction of E-learning as a supplementary tool for English as a Foreign Language (hereafter, EFL) at the intermediate and high school levels (Al-Hamidi 2013).

By definition, the term E-learning in the context of the present study means a web-based learning management system that provides different supplementary educational tools including Virtual School, e-Tests and Self-evaluation Tool, e-Homework Assignments Tool, Question Bank Tool and Lesson Planning Tool, for students and teachers (Tatweer 2014). The above provides a restrictive definition for E-learning and excludes all other approaches that are off-line and not web-based – that is, the use of other technologies such as DVDs or CD-Rooms. The main classificatory tools are described in Table 1.1 below.

Table 1.1: Description of Saudi E-learning tools (Tatweer 2014)

E-learning tools	Description
Virtual School	It is an e-school that offers virtual educational solutions for the sake of learning dissemination and sustainability in addition to providing learning to those who have no access to school. It is also concerned with all students with different levels and ages. It provides the following virtual educational services: e-registration, virtual classes, e-tests, e-homework assignments, reports and statistics, educational support, follow-up and e-certificates.
e-Tests and Self-evaluation Tool	It is an interactive e- service that supports the evaluation and assessment of processes that aim to improve the learning process. The e-tests service enables teachers to develop assessment tools and send them to students electronically. Furthermore, the e-tests service enables the student to perform self-evaluation at the level of a lesson, a unit and even the whole course. It is also available, before, during and after learning. The service also provides the tools for self-scoring, entering the grades estimated by the teachers, and providing performance reports on a variety of tests. This enables parents, teachers and students to have access to them and even keep them in the student's portfolio.
e-Homework Assignments Tool	It is an interactive service that enables teachers to assign homework to students, score it electronically, provide reports to parents and follow up on the students' progress.
Question Bank Tool	It is an e-system that allows teachers to write and review questions and homework assignments. It is a huge e-storage that contains e-educational questions prepared in advance on courses, or prepared in collaboration with teachers.
Lesson Planning Tool	It is an e-service that enables teachers to prepare their daily lesson plans electronically. It provides teachers with the best possible guidelines for lesson planning in addition to providing them with the following advantages: syllabus distribution over the year, recommending best instructional strategies, e-guiding processor to plan lessons effectively, guiding tips for teachers, guidelines for smart implementation, a library of e-practical lesson plans and an interactive library for specialised teachers.

In terms of E-learning implementation, it has been suggested that the processes involved need to be looked at from different perspectives (Alkhatnai 2013). Broadly, different schools of thought have emerged over the years, each seeking to emphasise particular element(s) that is/are deemed to enhance the chances of a successful E-learning implementation. For instance, Jebeile (2003), has argued that a successful E-learning implementation requires an understanding of the substantive issue(s) that promote the effective use of the technologies including technological, pedagogical, social and individual factors. This could be either at the individual or institutional level. What is nonetheless required is an understanding of the substantive issue(s) required for a successful E-learning

implementation. Furthermore, Al-Kahtani (2001) emphasises that educational institutions need to address these larger issues that prevent the use of technology so that they can integrate E-learning successfully. Here, the focus is not at the individual level but what institutions need to do in order to boost their chances of a successful E-learning implementation. Additionally, researchers such as Abas et al. (2004) have argued that the successful implementation of E-learning requires educational authorities to measure the readiness of the organisation to adopt E-learning in order to allow students to benefit from its advantages. They have further identified eight dimensions to measuring organisational E-learning readiness. These are: the learner, the management, personnel, content, technical, environmental, cultural, and financial readiness (explored in detail in Section 3.4.1). Other researchers such as Aydin and Tasci (2005) and So (2008) have specifically highlighted the importance of understanding and measuring the readiness of the end-user in particular ahead of the adoption and use of E-learning in order to provide them with the needed support to enhance their readiness.

The present research explores the readiness of students and English teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia. Essentially, the present study argues that the successful implementation of E-learning as a supplementary tool for EFL within the Saudi educational context will depend on the readiness of students and English teachers themselves. This is supported by the long held notion that the sort of investments made in relation to infrastructural development, staff IT training as well as content development alone may be insufficient to guarantee a successful adoption and use of E-learning; students and teachers play a key role (Ndubisi 2004; Henderson and Stewart 2007; Shapka and Ferrari 2003; So 2008; Watson 2001). The research however recognises and acknowledges that although successful implementation might be possible even when the readiness of students and English teachers has not been predetermined, the value addition for doing so is that it enhances the potential of being able to predict the outcome. What is more, the outcome of the research aims to influence policy by identifying the challenges and proposing solutions where applicable.

1.2 Statement of the problem

In recent years the government of Saudi Arabia has introduced a number of reforms in all aspects of life, including reforms in the educational sector in order to maintain its global

competitiveness (Alkhatnai 2013). In line with this, the Saudi government has devoted a huge amount of money (details of government spending is explored in detail in Section 2.3.3.) for the incorporation of technology (particularly E-learning) and other technology-based initiatives in education (Alshumaim and Alhassan 2010). Essentially, the Saudi government's initiative to promote the use of E-learning in schools, particularly, in the teaching and learning of EFL, is premised on the assumption that the appropriate use of technology enhances teaching and learning approaches (Al-Hamidi 2013). Proponents of the use of E-learning in EFL have identified a number of merits including: provision of easy access to useful language resources, communicating directly with native English speakers and appreciating and accepting different cultures, as well as enabling students to independently develop in the four main English language skills (listening, speaking, reading and writing) (Yang and Chen 2007). However, the above stated potential benefits of E-learning may not be fully realised if the users are not ready (Aydin and Tasci 2005; So 2008).

Internationally, the major challenges usually confronting users of E-learning include: the non-availability and lack of access to technology (Byrne 2002); the lack of technical skill, attitudes of students and teachers toward technology; teachers' ability to control teaching through technology (Baylor and Ritchie 2002; Selim 2007); and user reluctance to embrace and use innovative technology, even if such technology offers them better solutions or advantages (Liaw 2002). Within the Saudi context, these challenges are narrowed down into three broad thematic areas: social, cultural and religious beliefs of the Saudi society (Alkhatnai 2013). Although these collectively shape the Saudi educational system, religious beliefs in particular act as a major influence in determining the Saudi culture thereby playing a significant role in shaping the norms, traditions, responsibilities and practices of the individual as well as the society as whole (Al-saggaf and Williamson 2004). The socio-cultural norm of gender segregation, for instance, is one of the distinctive characteristics that shapes social interactions both in the public and private spheres of life in Saudi Arabia. As a conservative country, it is likely that the introduction of E-learning in schools will be interpreted to be in breach of the boundaries of its strict gender-segregated nature in a way that western researchers and educationalists perhaps find unusual. This nonetheless provides justification for the present research which seeks to explore the readiness of students and English teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia. Furthermore, it is to be understood that within this study, the underlying assumption was that in order to explore the readiness of students and English teachers it was essential to consider

how the wider socio-cultural context influence this process of their readiness as this would offer better insights into how the needs of students and teachers are to be met. The overarching aim is therefore to have a better understanding about those factors that promote the successful deployment and adoption of E-learning in gender-segregated schools in Saudi Arabia.

1.3 Significance of the study

Current studies on E-learning readiness are largely limited to the study of business organisations (e.g. Aydin and Tasci 2005; Chapnick 2000). The few studies that have touched the educational sector are almost limited to higher education – that is, colleges and universities (e.g. Abas et al. 2004; Hung et al. 2010), rather than primary and secondary schools (So and Swatman 2006; So 2008). Across the board, these studies on E-learning readiness are also generally done in Western countries (e.g. Warner et al. 1998; McVay 2000; Hung et al. 2010; Hung 2016). It is therefore suggested that the existing models derived from the existing research outcomes may not be appropriate if at all applicable to contexts where there is significant difference in social as well as cultural orientation. This research therefore explores the readiness of students and English teachers to use E-learning as a supplementary tool for EFL in schools in Saudi Arabia. The present study assumes that the successful implementation of E-learning as a supplementary tool for EFL within the Saudi educational context will depend on the readiness of students and English teachers themselves.

It is hoped that the outcome of the research will help fill the existing gap and enrich the existing literature with perspectives from the Gulf region. Finally, it is hoped that the inclusion of students and teachers will fill the existing gap in the Saudi literature, which until this research has overlooked the importance of eliciting the views of students and teachers prior to policy formulation and implementation.

1.4 Research aims

Given the current situation in education reforms in Saudi Arabia and the commitment to implement E-learning for EFL, it is assumed that the immediate potential of using E-learning as a supplementary tool in this quest cannot be fully realised if the readiness of students and English teachers is not known. The primary aim of this research is therefore to

explore the readiness of students and English teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia. The specific objectives of the study include the following:

1. To explore the underlying factors affecting students' and English teachers' readiness to use E-learning for EFL in Saudi Arabia;
2. To explore the current level of readiness of students and English teachers to use E-learning for EFL in Saudi Arabia;
3. To explore any age and/or gender differences in students' and English teachers' readiness to use E-learning for EFL in Saudi Arabia.

1.5 Research questions

The main purposes of the present research are to explore the readiness of students and English teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia. The main research question seeks to explore the **extent to which students and English teachers are ready to use E-learning as a supplementary tool for EFL in Saudi Arabia**. The specific research questions include the following.

1. What are the underlying factors affecting students' and English teachers' readiness to use E-learning for EFL in Saudi Arabia?
2. What is the current level of readiness of students and English teachers to use E-learning for EFL in Saudi Arabia?
3. What are the differences in the readiness of students and English teachers to use E-learning based on selected demographic characteristics (gender, and age) for EFL in Saudi Arabia?

1.6 Structure of the present study

The thesis is written in ten chapters in order to articulate the entire story of the present study. It is structured as follows. Chapter One provides the background to the study. Specifically, the chapter presents a brief introduction to the study, statement of the problem, significance of the research, aims of the study, and research questions. Chapter Two provides a detailed description of the research context including the social, cultural and educational

system of Saudi Arabia. The aim is to provide a background that facilitates understanding of subsequent chapters by contextualising the discussions. Chapter Three provides a review of the relevant literature which focuses on areas relating to the research questions. In particular, the chapter reviews the relevant literature associated with E-learning and E-learning readiness. Chapter Four describes the research methodology and design. It also discusses the rationale behind the selected methodological approach and illustrates the research sample, and the techniques for data collection, analysis and presentation. Chapters Five, Six, Seven and Eight present the findings of the study. Chapter Nine provides an extensive discussion of the present research outcomes and considers some of its implications. Chapter Ten provides a conclusion to the present research by recasting the findings and stating its contributions as well as making recommendations for policy and practice. The limitations of the research and what this means for future research in the area are also highlighted.

Chapter Two: Research context – Saudi Arabia

2.1 Introduction

This chapter seeks to accomplish two main objectives. Firstly, it provides general information about Saudi Arabia including its history, geo-political landscape, demography, economy, culture, religion as well as language. Secondly, the chapter provides general information about the educational system in Saudi Arabia. Specifically, an attempt is made to trace the history of education, education policy, government's expenditure on education, the teaching of EFL and the current role played by information technology in the Saudi education system. The significance of the chapter lies in the fact that it might be problematic interpreting the data outside, or without an understanding of, the research context. The chapter therefore helps to contextualise and facilitate understanding of the overarching narrative the research seeks to tell given that context often mediates perceptions.

2.2 Saudi Arabia: Country profile

Following the period of Ottoman suzerainty, the Kingdom of Saudi Arabia was officially founded in 1932 by King Abdulaziz Al-Saud when he succeeded in merging a number of autonomous sister provinces in the Gulf region into one country. This took around 30 years (from 1902 to 1932), during which period the King laid foundations for the development of the Saudi education system (the education system will be discussed in more detail in Section 2.3). Saudi Arabia is governed by an absolute monarch, in which the King is the Head of the State and government (Al-Sadan 2000). Geographically, it is part of the Arabian Peninsula and located between two continents, Africa and Asia. As the second largest country in the Arab world, Saudi Arabia has an approximation landmass of 2,250,000 square kilometres (868,730 square miles). It borders Kuwait, Iraq and Jordan to the north; towards the east are the Arabian Gulf and Qatar, Bahrain and the United Arab Emirates; the Sultanate of Oman and Yemen are to the south; and the Red Sea is to the west (Alosaimi 2013). Currently, Saudi Arabia consists of 13 administrative provinces with over 6,000 cities, towns and villages (Al-Sadan 2000). The 13 administrative provinces are Makkah, Medina, Riyadh (which includes the capital, Riyadh City), Jazan, Northern Province, Eastern Province, Al-Baha, Asir, Al-Jouf, Hail, Tabuk, Najran and Al-Qassim (see Figure 2.1 below).



Figure 2-1: Map of Saudi Arabia (Samirad 2018)

Demographically, the Saudi population consists of Saudis and expatriates. The estimated total population per the last population census conducted in 2018 was 32,552,336 million. This signifies a huge increase since the 1974 census which estimated the Saudi population as 7 million. Notable reasons for this considerable increase in population include a very high birth rate and significant increase in migration (General Authority for Statistics 2018).

Economically, Saudi Arabia is finding its own place in world affairs. This is as a result of vast oil reserves (its main source of income) it supplies to the global economy. Since the discovery of oil in 1933, there has been continuous rapid socio-economic development in the country. The oil is used to fund the government development work of all the ministries, with the largest share directed to the MoE and Health. Based on its oil revenue, Saudi Arabia is considered a major developing world economy which contributes an enormous amount to the world economy (Ramady 2010). In terms of language, Saudi Arabia has Arabic as its official language and the mother tongue of the indigenous people, although nowadays English is increasingly popular in academic life and in multilateral co-operations such as the big companies in the oil and gas industry.

Culturally and religiously, Saudi Arabia is the birthplace of Islam and contains the two Holy Mosques of Makkah and Medina, which have given the country its special standing

in the Muslim world. Society in Saudi Arabia is strongly influenced by Islam, and all Saudis are deemed to be Muslim (Almalki 2011; Al-saggaf 2004). There are also other nationals in Saudi Arabia some of whom are non-Muslims. Al-saggaf (2004, p.1) states that “Islam plays a central role in defining the culture, and acts as a major force in determining the social norms, patterns, traditions, obligations, privileges and practices of society”.

The fundamental laws and principles governing the country are based on the Holy Quran (Koran) and Islamic law known as Sharia (Al-Sadan 2000). Furthermore, Saudi Arabia is a very conservative country that is predominantly defined by Islam, and the social and cultural lives of the people are focused on the Muslim religion as their religious identity. This means that religious morals come first and foremost in Saudi social life and extend from personal relations to tribal or family values, which are part of the intricate network of commitments and tasks given to the people by the Quran (Alosaimi 2013). Additionally, the Islamic religion shapes all aspects of the daily lives of everyone in the country although it focuses particularly on their education; learning is a religious duty for both males and females (Alosaimi 2013). However, males and females are separated in the workplace and strictly segregated in education after nursery school; a constraint necessitated by the culture of the people. There is an exception to this gender segregation in Saudi hospitals, particularly when emergency services are needed (Alosaimi 2013). Unrelated males and females are not permitted to meet under any circumstance, unless they are married. This is extended to online interactions and meeting in chat rooms (Almalki 2011; Al-Alhareth 2014). Based on cultural and political constraints, as well as the geographical nature of the country and the high birth rate, the government of Saudi Arabia invests a huge amount of money in education. Education in Saudi Arabia is described in more detail in the next section.

2.3 The education system

In Saudi Arabia, religious belief and the Islamic code of conduct dominate all aspects of life including the educational system. For instance, all Saudi schools, colleges and universities are gender segregated in accordance with the strict Islamic law. Similarly, teachers are employed and allocated teaching responsibility according to their gender. Nonetheless, education remains a religious obligation for all Muslims, male and female (Alosaimi 2013). The Saudi educational policy is also controlled by the government, in line with Islamic law, and the curricula, syllabi and textbooks are unified for all schools in the

country, private and public. The next section focuses more on the history of education, education policy, government expenditure on education, English language as a subject and information technology in the education sector in Saudi Arabia.

2.3.1 Development of education in Saudi Arabia

Historically, education in the Arabian Peninsula, of which Saudi Arabia forms 80 per cent, started in the 7th century in small schools for teaching the Quran and Islamic studies; this was known as *kuttab* (Alosaimi 2013). In the specific case of Saudi Arabia, the first emergence of modern education systems occurred with the establishment of the Directorate of Education by King Abdelaziz in 1924 when the country covered only Najd and Hejaz (now Riyadh and Mecca respectively). It served to lay the foundation stone of the education system, for boys only. In 1926 the first formal schools were established in Mecca for the teaching of both religious and fairly general subject areas including the sciences and humanities (Ministry of Education 2003). Twenty-one years later the number of schools reached 66, with a total of 10,000 pupils, all male. Another ten years later, the numbers reached 326 elementary schools, 75 secondary schools, one vocational school, and eight teacher training institutes (Alosaimi 2013). However, progress was slow because of the poverty of the country as well as the high levels of illiteracy among Saudi people (Al-Hakel 1994). The country began to make progress in its educational endeavours when it discovered oil in 1933 and a lot of money was invested in the educational sector. In 1953, the Directorate of Education was extended and developed in order to establish the MoE, again only for boys' education.

By 1960, girls' education was given a consideration under the General Presidency of Girls' Education, sponsored by the then Crown Prince Faisal and his wife Effat Al-Thunyan. Researchers, for example Al-Salloum (1995) and Bowen (2008) record strong opposition and resistance to this initiative. Hamadan (2005) also recounts armed religious leaders protesting outside of a school in Buraidah in Najd that had begun admitting girls. When the Crown Prince became the King in 1964, he made extra effort in rebutting the protestors and persuaded tribal chiefs to enrol their daughters. King Faisal also encouraged the Ulama (religious leaders) to oversee the education of girls in his effort to convince the general public to accept his idea of female education. Elsewhere, for example in the region of Hijaz, the King's wife was able to open a school dedicated to girls, known as Dar Al-Hanan Private

School (Saaty 2015). Her objective was to, “replace the dry culture of the desert with a more compassionate approach to developing young women” (Saaty 2015, p.36). Simply put, her mission was to promote a culture of female education in Saudi Arabia hitherto which women were left at home. French, music and physical education appeared in the curriculum, alongside religious and secular academic subjects. Throughout the reign of King Faisal (1964-1975), he emphasised the importance of education in general and female education in particular (Prokop 2003). His Five Year Development Plan which increased budgetary allocation for education from £1.6 billion to £17.8 billion at the end of his reign was particularly noticeable and a commendable effort (Roy 1992). King Faisal also initiated the award of international scholarships for Saudi students to study abroad for the first time.

By 1989 Saudi Arabia had 14,000 educational institutions including universities, teacher training colleges, technology training, special needs schools and adult education facilities (Al-Abdulkareem 2001). In 2002, the General Presidency was merged with the MoE (Ministry of Education 2016). In 2008, King Abdullah initiated a General Education Development Project (Ministry of Education 2016), focusing on a skilled workforce of both genders, including proficiency in English language, and greatly expanded international scholarships, including for females. To date, there remain in Saudi Arabia critics of female education and in particular enabling women to study abroad (Al-Ginaier 2011; Al-Alhareth 2014). However, there are now 150,000 Saudi young males and females studying abroad. The Saudi government instituted what is known as the “guardianship system” to allow females to study abroad. The guardianship system ensures that women studying abroad are accompanied by a Mahram (husband or male relative). This practice is still debated openly in Saudi by researchers such as Al-Alhareth (2014), Saaty (2015) and Al-Rasheed (2015). While some argue it is undermining the right and independence of women (see Saaty 2015; Al-Rasheed 2015), others such as (see Al-Alhareth 2014) argue that it is in line with the religion and cultural practices of Saudis. Public opinion however is in favour of it for now.

2.3.2 Education policy

The main policy objectives of the Saudi educational system are to meet the religious, social, linguistic and economic needs of the country and to eradicate all types of illiteracy among all students in Saudi Arabia (Ministry of Education 2016). General standards for Saudi education policy are provided by the MoE, which oversees the planning, administration

and implementation of policies for schools (Al-Sadan 2000). Education in Saudi Arabia is compulsory for children between the ages 6-15 years, although the existing law that compels parents to enrol their children into schools is not enforced (Alosaimi 2013).

There are three types of schools: public schools (the focus of this research), private schools and foreign schools. Public and private schools admit both Saudi and non-Saudi students, and apply a unified curriculum with Arabic as the medium of instruction, which is provided by the MoE. In terms of resources and the demography of students, there is no established pattern in both public and private schools. That is to say that while some public schools are well resourced and attract students from both rich and poor families, others are not. The same applies to schools that are privately owned. Overall, 88% of the student population in Saudi Arabia are in public schools and 12% in private schools. Students in both public and private schools have an equal chance of progression into higher education. Table 2.1 below lists the distribution of students in both public and private schools per gender for the last three years (General Authority for Statistics 2016).

Table 2.1: Numbers of students at public and private school (primary, intermediate and high schools) (General Authority for Statistics 2016).

Year	Public School		Private School		Total by Gender		Total
	Male	Female	Male	Female	Male	Female	
2015	3230532	3372791	543748	303248	3774280	3676039	7450319
2014	3078530	2959035	518465	260085	3596995	3219120	6816115
2013	2968857	2939938	506557	267378	3475414	3207316	6682730

Foreign schools also admit non-Saudi students but apply an international curriculum under the supervision of the Saudi MoE. However, they are also required to teach Arabic language, Islamic studies and the history of Saudi Arabia using curricula that are developed by the Saudi MoE. The requirement is for each subject to be taught at least one hour per week (KACST and Ministry of Economy and Planning 2014). There are 45 educational districts under the supervision of the MoE throughout the Kingdom. Educational district offices work to forge links between the schools and the MoE (Ministry of Education 2016).

Education in Saudi Arabia is free of charge in government schools and universities, relying on state financial support (KACST and Ministry of Economy and Planning 2014). The education systems are centralised, and curricula in both public and private schools are unified under the ambit of the MoE for the whole country. Consequently, there is a specific department in the MoE responsible for the curriculum and for developing subject textbooks. Additionally, there is a separate textbook for each subject and every grade, which is considered to be the national curriculum in all Saudi schools (Ministry of Education 2016).

Education in Saudi Arabia is split into four stages: the pre-school stage, which is for children from the ages of 3-6; the primary school stage which serves children from the ages of 6-12; the intermediate and high school stages, which both last for three years, between the ages of 12-15, and 15-18 respectively (KACST and Ministry of Economy and Planning 2014; Alosaimi 2013).

In the academic year, there are two semesters of 18 weeks per semester including the final examinations which last for two weeks. The examinations are based on the textbooks and do not cover any topic that is not in them. In order to move up to the next grade it is required for students to pass all the subject examinations with at least the minimum pass mark, which is 50 per cent. However, there is a resit examination for students who do not succeed the first time. Students who fail the resit examination are required to repeat the same year until they pass the end of year examination. The repetition of failed students for a year has led to the inclusion of students of varied age groups in the same classroom, some a lot older than others. Assessment in primary schools, however, involves continuous assessment during the academic year without having a final examination.

At the high school level, which is the focus of this research, Arabic remains the medium of instruction. The specific objectives of the Saudi high school education are as follows. Firstly, it is at this level that students can specialise and prepare to study at higher education institutions. Secondly, this level consists of three grades: in the first grade, all the students follow the same curriculum; in the second and third grades, they specialise in one area, such as Islamic and Arabic studies, or natural sciences. Thirdly, students are also given thorough knowledge of each of their chosen subjects. Fourthly, the curriculum is very specific and aligned with international standards with the tendency to develop technology and information resources in order to help build the skills of students in methods of organising

and gathering information. The curriculum is also tailored to develop students' life skills such as self-learning, thinking skills, cooperation and communication skills, teamwork, dialogue and discussion. Finally, the high school education is designed to improve high school outputs including familiarising students with seriousness, timekeeping, and seeking behavioural change (Alosaimi 2013).

Segregation continues to be strictly enforced in Saudi education. Where it is relaxed, for example in medical training in some universities, genders enter classrooms via separate doors and sit separately. It may be that scrutiny of education policies to create the ideal Muslim woman will be challenged and revised in future; for the present, strict segregation is embedded in Saudi education institutions. Linkages between opposition to reducing gender segregation and opposition to teaching English language cohere as an opposition platform in Saudi Arabia. Karmani (2005) for example, argues that teaching English is a forerunner to westernisation, which he opposes. Other scholars draw similar links between teaching English and educating women Saaty (2015). Authors such as Al-Rasheed (2015) vociferously argue the alternative case for internationalisation and gender equality. The present research is not about these debates, instead it notes continued segregation and later draws attention to its influence on E-learning readiness and adoption.

2.3.3 Government expenditure on education

As part of the government commitment to improve education standards including the use of E-learning in Saudi schools, Saudi Arabia has certainly allocated a large portion of its annual budget to education. For instance, in the 2013 fiscal year budget, the government allocated about 204 billion Saudi riyal (54.4 billion US dollars) to school education, higher education and manpower training (KACST and Ministry of Economy and Planning 2014). This is equal to 25 per cent of its annual budget in the same year, an increase of almost 21 per cent on the previous year (see Table 2.2 below).

Table 2.2: Government expenditure on education between 2009 and 2013 (KACST and Ministry of Economy and Planning 2014)

Year	Spending (in billion Saudi riyals)	Increase (in billion Saudi riyals)	Increase (as percentage)
2013	204	35.4	21
2012	168.6	18.6	12
2011	150	12.4	9
2010	137.6	15.5	13
2009	122.1		

This huge amount of government expenditure on education has allowed Saudi Arabia to achieve and develop its national strategy for education, including the following.

- Providing free education for all students at all academic levels (school and university levels). In addition, students at universities are paid financial support estimated at about 1000 riyals per month.
- Spreading education to every part of the Kingdom.
- A high rate of enrolment in primary education. In 2010, the ratio stood at 100 per cent and the enrolment rate of university education was 37 per cent.
- Opportunities to achieve gender parity in education, as the proportion of female students in schools rose from 25 per cent in 1970 to approximately 47.5 per cent of students in 2001.
- An increase in literacy rates amongst men and women (aged 15 and over). The national average was 86.6 per cent in 2010 (KACST and Ministry of Economy and Planning 2014).

In summary, there is a demonstrable commitment on the part of the Saudi government to education as a means of preparing the economy for diversification; however, social pressures continue to insist upon gender segregation. The next section reviews the literature on the teaching of EFL in Saudi Arabia.

2.3.4 Teaching EFL in Saudi Arabia

The specific date as to when EFL was introduced into the Saudi education system is disputed. Alkhatnai (2011), for example, has stated that the teaching and learning of EFL goes back to the founding of the Directorate of Education in 1924 and the introduction of the first primary school. However, there have been many developments since 1924.

In 1943, the decision was made by the Directorate of Education to stop the compulsory teaching of English in primary schools and instead make English a compulsory subject in intermediate and high schools (Alkhatnai 2011). The disadvantages of such a decision has been well documented, notably, a delay in the language learning achievements of children and young people (Baker et al. 2008; Birdsong and Molis 2001). As a result of this decision, EFL has only been taught in intermediate schools from grades 7 to 9, and in high schools from grades 9 to 12, for four classes per week, each class lasting for 45 minutes. However, English language has been introduced again very recently as a subject in primary school (grade 4 to grade 6, for two classes per week, each class lasting for 45 minutes), as an introduction to English teaching in the intermediate level (Mahboob and Elyas 2014). The academic progression of students to the next level does not depend on the grade they achieve in their English examinations.

The majority of teachers working for the Saudi MoE were expatriates mostly from Egypt who teach almost all the subjects including EFL at all levels of general education. The majority of textbooks are also developed by these teachers (Mahboob and Elyas 2014; Al-Ghamdi and Al-Saddat 2002; Alosaimi 2013). Understandably, it was easier to bring in teachers from Egypt because of the common language and proximity. Besides, Egypt is seen to have a long history of well-educated scholars and almost all other countries in the Gulf region depended on Egypt for human resources once upon a time. The flip side of the argument is that Egyptians are motivated to migrate to Saudi Arabia because Saudi Arabia offers better conditions of service – that is, an attractive salary compared to what they are offered in Egypt. The trend has since changed because the Saudi government decided to increase the number of Saudi qualified English teachers through training in Saudi universities. There has also been a creation of a group of English departments in universities and women's colleges across Saudi Arabia for two main reasons: to encourage Saudi society to enter into the English language-speaking community on a large scale in recent times, and

to meet the requirement of using English as the medium of instruction at the university level for all subjects except Arabic and Islamic studies (Alkhatnai 2011). There are also calls for an increase in the number of qualified English teachers, translators and those with expertise in English for certain government jobs (Alkhatnai 2011). As a result of the above measures, all teachers at the school level in Saudi Arabia are Saudi teachers without any foreign teachers. The teacher sample was therefore made up of only Saudi teachers and excluded foreign teachers.

The educational system in Saudi Arabia was (and remains) centralised and planned by the MoE. English teachers at each grade are given a unified syllabus and textbooks with guidelines and deadlines that they have to follow. To this end, there is a department under the MoE responsible for the development of curricula for all education levels (from primary to high schools) called the Department of Curricula. One of its mandates is to prepare and develop the national English education curriculum and textbooks. It is also tasked to review and update the textbooks. The department solicits feedback from a few schools where the textbooks are piloted before the textbooks are then modified based on the feedback and tested again in a slightly larger number of schools. In cases where there is the need for any further modifications, these are carried out and the textbook is then distributed throughout the whole country (Alosaimi 2013).

Consequently, students are taught English only through regular class teaching based on rote memorisation; a common pedagogy used in Saudi schools (Alabbad 2011). The disadvantage of this pedagogy is that not only do students find it difficult to practice what they have been taught, they are also unable to apply what they have learnt flexibly in daily life as the language environment is dominated by the Arabic language. Further, students find it increasingly difficult to cope when English is used as the medium of instruction at the university level. The current pedagogy nonetheless helps to strengthen students' grammar, encourage reading and build their vocabulary. This research explores the readiness of students and teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia. The next section specifically explores the need for information technology in education in Saudi Arabia.

2.3.5 Information technology in Saudi education system

Historically, the introduction of technology in general, and computer usage in particular, in Saudi education occurred when the MoE began operating a database that recorded, processed and stored information about teachers, students and administrators. The MoE later introduced computer studies as a major part of the Saudi educational curricula in the 1990s. Computer literacy programmes were initially piloted in the late 1990s by the MoE and later made a compulsory subject for high school students and optional in the curriculum for primary and intermediate schools (Al-asmari and Khan 2014; Alresheed et al. 2015). The curriculum allowed for students to have computer lessons twice per week, each lasting 45 minutes (Al-asmari and Khan 2014). Computer studies remains an optional subject in the curriculum for primary and intermediate schools.

Internationally, many countries around the world have become oriented towards building a knowledge-based economy, and have paid greater attention to education because of the pivotal role it plays in accomplishing this goal. In Saudi Arabia, the use of technology, especially computers, has increased considerably over the past years. Beyond the introduction of computer studies into the education system, the MoE has proposed to introduced the teaching and learning of many subjects through the use of computer-based information technology as known as E-learning (e.g. EFL through E-learning) (Al-Hamidi 2013). Although E-learning can be and has been used as tutor, tool and/or medium depending on the contexts, for the purposes of this research it is to be seen as a tool to facilitate teaching and learning, particularly of EFL in Saudi Arabia (see Section 1.1 for definition).

The use of E-learning seeks to increase the efficiency and effectiveness of teaching and learning, as well as to provide easy and unlimited access to educational materials and tools, anywhere and at any time (Tatweer 2014). To achieve this, all high schools were to be equipped with computer facilities and to provide training courses for selected teachers (Al-Harbi 2014). Efforts on the part of the Saudi government include the construction of about 6,700 computer laboratories containing 139,338 computers for high schools between 2011-2013. According to KACST and Ministry of Economy and Planning (2014), cummulative, the government efforts have brought the country to the level of the global average of one computer for every ten students as at the end of 2012. Some major milestones in the government efforts at the school level include the following.

1. In 1991 the General Administration for Educational Technology was established in order to develop and administer quality education in schools through the integration of technology as well as providing educational materials and staff training.
2. In 2000 the Learning Resource Centres Project was introduced in order to develop school libraries to be the learning resource centres to support learning processes. Each learning resource centre aimed to be fully equipped with the requisite resources such as: computers, projectors, TVs, DVDs, printers and network connectivity.
3. In 2007 King Abdullah's Education Development Project was introduced in order to re-qualify teachers to teach with technology, and to implement technology in the classroom with the curriculum provided. Moreover, this project aimed to provide classrooms with ICT equipment including: laptops, computers, projectors and interactive whiteboards. Further, the project has trained about 400,000 teachers in various subject areas across the country in the use of technology. Finally, the project sought to ensure that schools are connected to a network that allows them to participate in E-learning courses.

In spite of all the reforms and efforts on the part of the Saudi government through the MoE, the use of E-Learning is still concentrated in higher education to the neglect of schools. Whereas almost all universities have proceeded to teach some of the courses via an E-learning system, the same cannot be said about the school level. This research therefore explores the readiness of students and English teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia.

2.4 Chapter summary

This chapter provides a description of the research context with particular focus on the Saudi educational system. Over the past few decades, there has been an increase in government commitment to education in Saudi Arabia. This is manifested in the gradual increase in the adoption and use of technology, E-learning in particular, across all levels of the educational sector. This provides the background needed to explore the readiness of students and English teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia. The next chapter engages in a much broader review of the literature.

Chapter Three: Review of the literature

3.1 Introduction

Relevant to the success of an E-learning implementation, in specific reference to school, is the exploration and evaluation of the readiness of individuals (that is, students and teachers) for this kind of technology (e.g. Hung 2016; Hung et al. 2010; Smith 2000; Smith et al. 2003). This chapter reviews the relevant literature associated with E-learning in general, and E-learning readiness in particular. The first section of the chapter briefly explores the history of E-learning in language education and its practical implementation. The section also identifies the terminology associated with E-learning and provides some basic definitions of E-learning. Finally, the section explores and discusses the benefits of using E-learning for the study of EFL. The second section of this chapter reflects on the literature of particular models/theories used in explaining E-learning acceptance and adoption. The aim is to put into perspective the theoretical lens that informs the study. The particular theories/models of interest include: the theory of planned behaviour (hereafter, TPB); the theory of reasoned action (hereafter, TRA); the technology acceptance model (hereafter, TAM); and the socio-cultural approach. The third section deliberates on the concept of E-learning readiness including both organisational and individual readiness. The section also provides an overview of the various models supporting both organisational and individual readiness as well as their limitations. Finally, the main highlights of the literature reviewed are presented by way of a chapter summary.

3.2 E-learning: An overview of the literature

As a concept, the evolution of E-learning is traceable to a number of historical standpoints. The concept has since been widely adopted by diverse communities of practice and defined in different ways. The need for precision in what E-learning means in this research cannot be overemphasised. To do this, the historical development in E-learning, including its general usage in education, and particularly in language education, are explored. This provides useful insights to the broader practical implication of E-learning implementation. In addition, the section also focuses on the terminology around, and the broad semantics associated with, E-learning. A definition for E-learning that guides this particular research is then provided. Finally, the section provides a discussion of the use of E-learning for studying EFL.

3.2.1 History of E-learning

The term E-learning was first used in the late 1990s (Corbeil and Corbeil 2015), yet computer innovations have a long history of use in education, stretching over five decades in the specific case of language education (Davies 2012a; Davies 2012b). Davies (2012a) has mentioned that the use of computer-based technologies in language education has been in existence since the 1960s following the inception of commercial mainframe computers in the 1950s. This era marked the beginning when educational researchers began to show interest in using their capabilities in this field. Educational researchers at the University of Illinois, for example, were among the first to pioneer the use of a mainframe computer system in education. This system was referred to as the Programmed Logic for Automated Teaching Operations (hereafter, PLATO) system (Bitzer and Skaperdas 1968; Meer 2003; Peterson 2013). PLATO incorporated course materials into larger interrelated conceptual packages, and was used in language education to provide a variety of language-learning activities by deploying audio-lingualism. Typical activities included: vocabulary drills, translation tests and multiple choice-based grammar (Peterson 2013). PLATO as a system was considered to have great prospects for foreign language education due to the use of technologies that were seen as advanced for the time (Bitzer and Skaperdas 1968; Grundlehner 1974). Although PLATO provided the advantages of self-paced individualised practice, immediate feedback, an early form of email through which individuals communicated with each other in real time through text, audio access, an on-screen help system, and an efficient monitoring and record keeping system for student performance (Peterson 2013), the system had its own limitations. The main limitations included: the requirement for learner training, limitations of the hardware, the negative attitudes of teachers to the system as well as the high costs of development (Marty 1982).

New developments in language-learning software were stimulated by the beginning of microcomputers in the late 1970s. However, the programmes of the time were designed mainly to cover text-based activities because most early microcomputers lacked video and audio facilities (Peterson 2013). In the 1980s, personal computers became more advanced, incorporating sound cards, CD-ROM drives, and video-playing capabilities (Peterson 2013). Such developments, together with the development of digital storage capabilities, led to the creation of multimedia CD-ROMs that were particularly designed for use in language education. The development of multimedia CD-ROMs, in particular, were viewed as useful

tools for supporting individualised learning due to their range of multimedia activities, encouraging the development of learner autonomy, thereby encouraging learners to take responsibility for their own learning (Iwabuchi and Fotos 2004). Multimedia CD-ROMs also provide both comprehensible input, as well as immediate feedback, which are considered significant factors in language learning (Peterson 2013). Despite this, the literature suggests that whilst innovative work had been undertaken, many activities within CD-ROMs were continually focused upon language drills (Davies 2012a; Iwabuchi and Fotos 2004). The failings of CD-ROMs to provide opportunities for interaction using language and negotiation of meaning, which are regarded as highly important factors in the acquisition of a second language is also highlighted in the literature (Iwabuchi and Fotos 2004). Multimedia development for use in language education continues, but the technology of distribution has been largely replaced by the coming into existence of the World Wide Web.

The World Wide Web emerged in 1989, a period that marked a new era in the development of language education. For the first time, learners and teachers were able to access a wider variety of communication tools that were easily accessible, and allowed for distance communication (synchronous and/or asynchronous) at the same time (Kern et al. 2008). The implication for such technological advancement was considered to be huge. Of these new innovations, video-conferencing facilities were particularly promising developments that incorporated video, text chat and interactive whiteboard technologies (Wang 2004; Kern et al. 2008). International projects were facilitated by these technologies which provided opportunities for learners to connect with different groups of peers and native speakers in other countries, which allowed for the development of communicative skills, as well as intercultural knowledge (O'Dowd 2000). The full integration of the four language skills into the process of language learning was also made possible (Peterson 2013).

The most common terms that have been ascribed and used to describe the application of technology for learning, usually emphasising a particular approach include: computer-based training, technology-based training, computer-based learning, computer-assisted learning, computer managed learning, computer managed instruction, computer-mediated communication, computer-supported collaborative learning, computer-assisted language learning, online learning, web-based learning, mobile-based learning, and E-learning (Friesen 2009; Sangrà et al. 2012; Kirschner and Paas 2001; Jarvis and Achilleos 2013). Arguably, this variety of terms reflects the continued evolution of E-learning as a concept as well as the

organisational differences within which educational technologies are employed (Sangrà et al. 2012; Bailey and Janagan 2014). However, these terms are synonymous in meaning and the fundamental commonality across the board is that some sort of instruction takes place at different times and/or places, using varied forms of instructional materials. The term E-learning is adapted and used in this study because it seems to imply a wider domain of usage and conceptualisation. Additionally, the term E-learning is commonly used within the Saudi MoE and a familiar one in the Saudi educational lexicon. The next section explores existing definitions of E-learning in the literature with the aim to provide a fit-for-purpose definition for the present study.

3.2.2 E-learning: Towards a definition

Over the years, the term E-learning (an abbreviation for electronic learning) has been variously defined depending on the individual and/or organisational goals. E-learning is also sometimes defined depending on the target audience, access, and type of content it provides (Sangrà et al. 2012). Broadly, it is defined to mean any form of learning done simply with a computer, a computer and the Internet, CD-ROM or other technology devices designed to build knowledge and skills related to individual or organisational learning goals (Clark 2002). Naidu (2006, p.1) also defines the term E-learning as:

...comprising a lot more than online learning, virtual learning, distributed learning, networked or web-based learning. As the letter “e” in E-learning stands for the word “electronic”, E-learning would incorporate all educational activities that are carried out by individuals or groups working online or offline, and synchronously or asynchronously via networked or stand-alone computers and other electronic devices.

Similarly, Lee et al. (2011, p. 355) view E-learning as:

...an information system that can integrate a wide variety of instructional material (via audio, video, and text mediums) conveyed through e-mail, live chat sessions, online discussions, forums, quizzes and assignments. Additionally, E-learning encompasses Internet, intranet, extranet, satellite broadcasts, interactive TV and CD-ROMs, allowing for synchronous and asynchronous communication and instructional delivery between trainers and learners.

Following from the above definitions it appears that the key facets to E-learning these days involve the use of Internet technology (Sanderson 2002) and audio/video facilities, CD-ROM, television, radio and wireless technology (Wagner et al. 2008; Lehner et al. 2003). Similarly, Cross (2004, p.104) suggests that E-learning is “learning on Internet Time, the convergence of learning and networks”.

Other perspectives go beyond the technological element of E-learning by emphasising more on the learning aspect. McConnell (2005), for instance, describes E-learning as the collaboration of students and other people who use networks to share knowledge, information and experience to create an environment that will benefit everyone. This stresses that people using the network regard themselves as part of a community that participates in cooperation, sharing information and supporting each other in the learning process. Khan (2005) also states that E-learning is primarily a learner-focused system and emphasises cooperation and interaction. Although the focus here (networking and cooperation) applies to only a subset of the technology involved in E-learning, it does extend the use of this technology by emphasising on the collaborative and learning aspects.

In a generic sense, Sangrà et al. (2012) have classified the existing E-learning definitions into four broad categories: technology-driven (emphasising the technological aspects of E-learning); delivery system-oriented (focusing on the accessibility of resources and not the results of any achievements); communication-oriented (emphasising E-learning as a communication, interaction, and collaboration tool); and educational paradigm-oriented (emphasising E-learning as a new way of learning or as an improvement on an existing educational paradigm).

It seems clear from the narratives above that, ultimately, E-learning environments differ depending on particular technologies and educational goals. As stated earlier in Section 1.1, the term E-learning is defined in this research to mean, a web-based learning management system that provides different supplementary educational tools including virtual school, e-tests and self-evaluation tool, e-homework assignments tool, question bank tool and lesson planning tool, for students and teachers (Tatweer 2014). The current policy objective of the Saudi MoE is to provide educational resources through E-learning systems in order that students and English teachers can use them as a supplementary tool for the learning and

teaching of EFL (Ministry of Education 2016). The next section explores the literature on how E-learning is used for studying EFL in different contexts.

2.2.3 Using E-learning to teach EFL

Although the use of E-Learning for teaching and learning in schools has increased over the years, researchers have concerns regarding the effect that technology in education has on the achievement levels of students in their language skills – that is, reading, listening, speaking and writing (Warschauer 1999; Yang and Chen 2007; Farzi 2016). The central argument of studies discussed in this section is that E-learning can be beneficial to learning and teaching EFL. The main benefits include: provision of easy access to useful language resources, an opportunity to communicate directly with native English speakers, appreciating and accepting different cultures, as well as the possibility of students using it to acquire the four main language skills – listening, speaking, reading and writing (Yang and Chen 2007). This section explores and discusses these language skills separately elaborating on the implications and challenges for Saudi students.

The first language skill explored in relation to the use of E-learning for teaching and learning EFL is students' speaking skills. Speaking is considered as one of the major challenges encountered with traditional face-to-face studying of EFL in Saudi Arabia. The main reason is that Saudi students are not provided with the authentic English learning environment to practice speaking, as public life is primarily dominated by use of Arabic language. Furthermore, individual students have limited opportunities to contribute and/or communicate one-to-one with their teachers because of the large class sizes, that is, an average of 35-40 students per class (Al-Jaber 2014). E-learning, therefore, offers a platform on which students can develop their speaking abilities in English by engaging with other students in the virtual world (Tatweer 2014). It is worth noting that these limitations are not peculiar to the Saudi context but affect most other countries where English is used as a foreign language (Yang and Chen 2007).

Further, there are notable major illuminating works carried out to explore the development of students' speaking skills. For instance, Warschauer (1999) and Yang and Chen (2007) have pointed out that the benefits of E-learning for developing students' speaking skills include the opportunity for more equal participation compared to face-to-face interaction. In addition, while face-to-face interaction confines students to the local level,

opportunities through the use of E-learning extend these opportunities to the international setting. This exposure to the international setting opens up opportunities for students to develop their cross-cultural knowledge (Yang and Chen 2007). For example, it is possible for students in Saudi schools to engage in open discussions with other students from other parts of the world using E-learning. This could help broaden and enrich the experiences of the students, without the need to leave the country or physically mix with students from other cultures and/or gender. However, it is important to note here that, the use of discussion platforms of this nature are restricted and considered more acceptable for students at the university level (Madini and de Nooy 2014). Students at the school level might therefore find such platforms inaccessible on their own in Saudi Arabia.

Another dimension to the use of E-learning in developing students' speaking skills is the use of automatic speech recognition technology. This provides opportunities for those students who rarely have an opening to speak with native English speakers, and for others who are shy to practise speaking (Yang and Chen 2007). A classic example of this kind of technology is a web-based conversation environment called Candle Talk which has been developed to enable students to practice speaking with the computer, interactively (Chiu et al. 2007). This software allows students studying EFL to access explicit speech training programmes, thereby enhancing their oral skills. Additionally, the application of this automatic speech recognition software can facilitate the teaching of oral communication and its instructional methods are welcomed by students.

The second language skills explored in relation to the use of E-learning for teaching and learning EFL are students' writing skills. In relation to this, Al-Menei (2008) investigated the effectiveness of the computer-assisted English writing skills of Saudi students at the university level. His study demonstrated a significant improvement in the writing capabilities of these students studying EFL when they had used computer-assisted programmes to correct their grammar and paragraph writing. Farzi (2016) also observed that computers can be programmed to provide corrective instruction to identify any mistakes in writing. This arguably helps students to correct their mistakes and enrich their writing. Further, Lee (2002) conducted a pilot study using synchronous electronic chat together with task-based instructions, to enhance students' writing skills. In brief, the outcome of that study suggested that the cumulative effect of using online interaction together with task-based instruction helps to improve students' writing skills.

The third language skills explored in relation to the use of E-learning for teaching and learning EFL are students' reading skills. E-learning provides students with unprecedented opportunities to develop their reading skills, due to the unrestricted availability of course materials online (Brandl 2002). Online information enables students to overcome the confines of textbook based learning, and promotes access to knowledge acquisition, anytime and from anywhere.

Finally, how E-learning for teaching and learning EFL develops students' listening skills is explored. Indeed, alongside the three other language skills explored above, the importance of listening exercises in the development of students' language skills cannot be overemphasised. It is reported for instance that when more syntactically complex clauses are used, learners alter their approach to learning to help them understand (Romeo 2008). This is easily facilitated through the use of E-learning with audio prompts made available online. E-learning is therefore considered to provide opportunities for students studying EFL to be able to listen to authentic English language materials online.

Essentially, the above demonstrate the development of students' language skills through the use of E-learning. However, the benefits of an E-learning system cannot be maximised if students and teachers do not use it. Richards and Renandya (2002), Abas et al. (2004) and Hung (2016) have all argued that the successful implementation of E-learning requires educational authorities to measure students' and teachers' readiness to adopt it in order to allow them to benefit from its advantages. The next two sections explore the models/theories used to explain E-learning acceptance and adoption and E-learning readiness respectively.

3.3 Models used to explain E-learning acceptance and adoption

The aim of this section is to explore the relevant existing models/theories based on which this study is grounded. The specific ones explored include: TRA, TPB, TAM and the socio-cultural approach. The section provides insights into the ways these models/theories can contribute to understanding the readiness of students and teachers to use E-learning as a supplementary tool for studying EFL in Saudi Arabia. Further, the models/theories will help to interpret the interplay between the personal factors and external factors and the dynamics this provides in understanding the readiness of students and teachers to use E-learning in Saudi Arabia.

3.3.1 Theory of Reasoned Action (TRA)

TRA was developed by Fishbein and Ajzen in 1975 to explain, in general, why individuals exhibit certain behaviours. TRA is popular among researchers, familiar to many students, and accepted by policy makers. While TRA is drawn from the fields of psychology, it is applied in other fields such as education to explain E-learning usage by individuals. TRA focuses on explaining behaviour based on the individual's will to undertake specific behaviours. The basis for TRA is that the construct of an individual's intention determines the actual performance of behaviour. Central to TRA is the individual's intention which represents "the individual's motivation in the sense of her/his conscious plan or decision to engage in the behaviour" (Al-Harbi 2010, p.20). Intention is therefore considered a necessary but not sufficient immediate determinant of behaviour in TRA (Ajzen 1985). This means that there will not be perfect connection between intention and behaviour at all times (Ajzen and Fishbein 1980). Additionally, the individual's intention depends on, or is a function of, the person's attitude and subjective norms towards a specific behaviour. According to Ajzen and Fishbein (1980, p. 6), attitude towards a behaviour is defined as "the individual's positive or negative evaluation of performing the behaviour"; subjective norms are defined as "the person's perception of the social pressures put on him to perform or not to perform the behaviour in question". Further, the theory hypothesises that both attitudes and subjective norms are functions of an individual's beliefs (attitudinal and normative respectively). Figure 3.1 below gives a visual summary of TRA. It is important to note that although attitudes and subjective norms are not independent, perceived social pressure may nonetheless be in conflict with an individual's own attitudes, or it may coincide with them. Equally important is the recognition that, conceptually, beliefs underpin attitudes in any given socio-cultural context. A theory which does not only flag the significance of beliefs and attitudes, but demonstrates how they interplay in particular context is the socio-cultural approach. This is explored in detail in section 3.3.4.

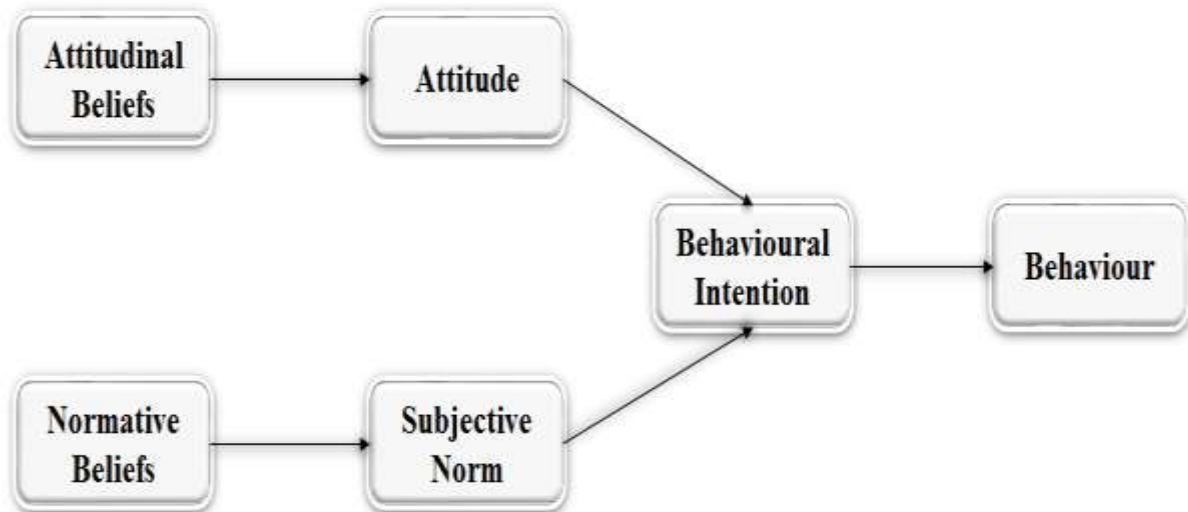


Figure 3-1: The Theory of Reasoned Action (Ajzen and Madden 1986)

In spite of the popularity of TRA in many fields of study, the theory also has its limitations. The main limitations of TRA in the context of E-learning usage by individuals are as follows. It is criticised for being insufficiently elaborate considering that the theory is based mainly on the individual's intention to explain the actual use of the E-learning. It is hence perceived as an account of the determinants of behaviour that over-emphasises intention (Conner and Armitage 1998). This has resulted in questions being raised about its reliability and/or validity, especially in the field of E-learning usage by individuals. Ajzen (2005) also argues that the emphasis on intention provides a parsimonious account of the determinants of behaviour. Another limitation raised about TRA is that, the theory was not originally developed to explain E-learning usage by individuals. Therefore, the application of the theory to explain E-learning usage in the education field is particularly overlooked since the theory is centred on the intention of the user but ignores other equally important factors in E-learning usage by individuals – perceived usefulness and perceived ease of use (Davis 1989). The limitations of TRA have resulted in the development of TAM. TAM seeks to fill the existing gap and to serve as a benchmark to explain technology-related behaviour. TAM is discussed further in more details below.

3.3.2 Technology Acceptance Model (TAM)

TAM is specifically tailored to predict and explain technology-related behaviour in business organisational settings (Davis 1989). Similar to TRA, TAM is based on the assumption that behaviour is determined by a person's intention. It lays the foundation for

identifying the influence of external factors on internal beliefs, attitude and intentions, so that practitioners as well as researchers could trace the acceptability or otherwise of particular systems, and follow the necessary right steps (Davis 1989). The model has two main important factors identified as perceived usefulness and perceived ease of use of a particular system. Davis (1989, p.320) defines perceived usefulness as, “the degree to which a person believes that using a particular system would enhance his or her job performance”. Perceived ease of use on the other hand is seen as, “the degree to which a person believes that using a particular system would be free from effort” (Davis 1989, p.320). The main hypothesis of TAM is that individuals’ behavioural intentions are influenced by attitudes and perceived usefulness. Further, attitudes are influenced by perceived ease of use and perceived usefulness while perceived usefulness is directly influenced by perceived ease of use (Davis 1989), as shown in Figure 3-2.

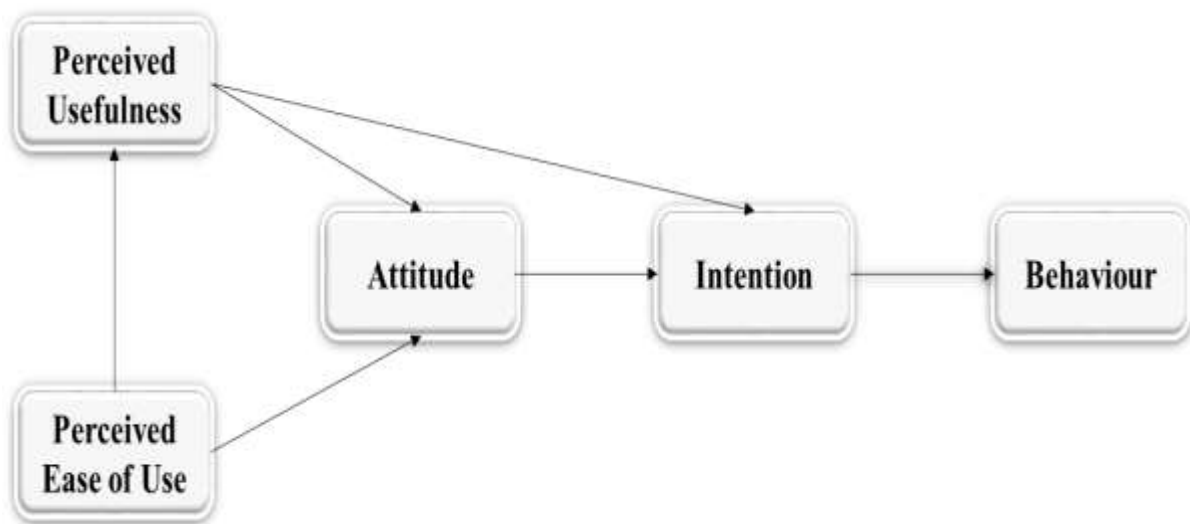


Figure 3-2: Technology Acceptance Model (Davis 1989)

As a model tailored to explain technology-related behaviour, TAM has chalked a lot of successes. However, the model does have limitations. The major criticisms of TAM are more or less the same as the limitations of TRA, for instance, an over-emphasis on intention as the main factor to explain technology-related behaviour (Al-Harbi 2010). This means that the existing accounts of TAM fail to move away from the centrality of intention as the main determinant of technology-related behaviour. For instance, the model could include technology-related skill and ability such as IT literacy alongside intention. In its current state, there is a legitimate question as to whether TAM provides a comprehensive explanation of E-

learning usage. In order to mitigate the over-reliance on intention in both TRA and TAM, TPB has been proposed. TPB seeks to shift the focus onto intention as the only element to predict behaviour by introducing perceived behaviour control. This theory is explored and discussed further in more detail below.

3.3.3 Theory of Planned Behaviours (TPB)

TPB, which was proposed by Ajzen in 1985, also draws on TRA. Similar to TRA, TPB assumes that in the available information, human beings usually behave sensibly considering the implications of their behaviours (Ajzen 2005). TPB hypothesises that the intention of an individual to perform a particular behaviour, although the most important and immediate determinant of that behaviour, it is not the only determining factor (Ajzen 1991). In general terms, TPB suggests that behavioural intentions are affected by attitudes, subjective norms and perceived behavioural control (hereafter, PBC) towards a particular behaviour (Ajzen 1991). The theory defines attitudes and subjective norm in the same way as in TRA demonstrated above. PBC is also defined as “people’s perception of the ease or difficulty of performing the behaviour of interest” (Ajzen 1991, p.183). Overall, TPB as a theory assumes that the relative importance of the determinants (attitudes, subjective norms and perceived behavioural control) depends on how they influence the intention to perform the actual behaviour. The theory also hypothesises the degree of dependence of behaviour directly on PBC rather than indirectly through intention, as shown in Figure 3-3. By introducing the concept of PBC, TPB shifts away from the notion that intention is the only significant immediate determinant of action. Indeed, other factors either personal or external can prevent the performance of a behaviour. Success or failure in carrying out the intended behaviour depends on the ability of the individual to control the different factors that may delay it.

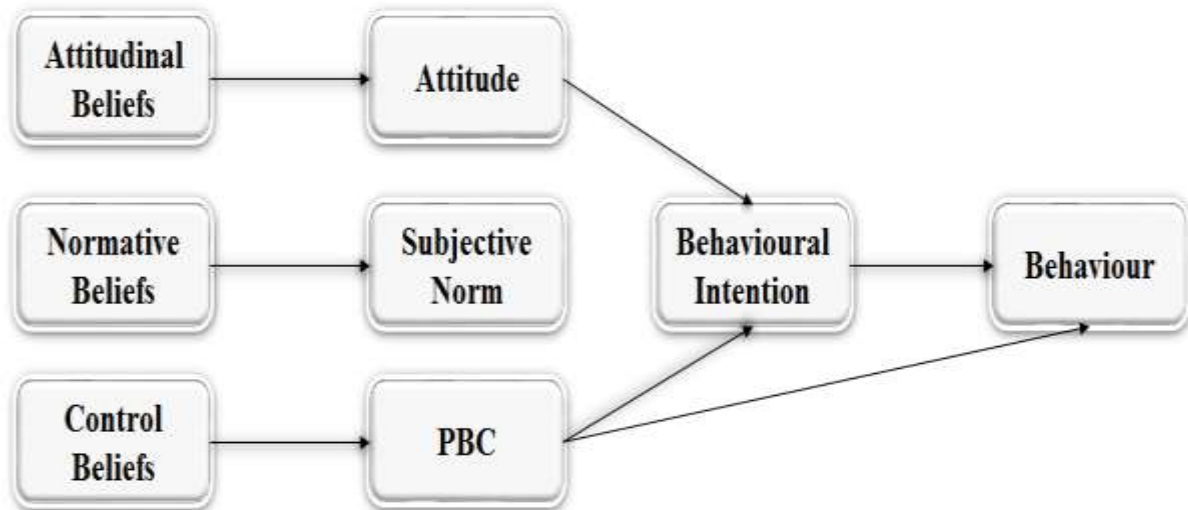


Figure 3-3: The Theory of Planned Behaviour (Ajzen and Madden 1986)

TPB is criticised in a number of ways. For instance, the theory introduces the concept of PBC which has been vigorously criticised as an ambiguous component, and an insignificant predictor of behaviour (Conner and Armitage 1998; Armitage and Conner 1999). Specifically to technology-related behaviour, Mathieson (1991) has argued that PBC is a general and abstract concept which needs to be adjusted according to each behavioural situations. Chu and Chen (2016) have also criticised the PBC component of TPB for being insufficient to explain technology adoption as it does not focus on technology adoption per se. It thus seems that the PBC component of TPB is largely seen as an insignificant and inadequate predictor of E-learning usage in the literature. This calls for the need to concretise and re-examine the PBC of TPB in order to help predict the needs of E-learning usage. This is beyond the focus of this research but a worthwhile project for the future.

In the particular context of Saudi Arabia, the country is well known to be highly religious based on Islamic dictates and has a sense of community. As such, a very high degree of conformity with social norms is expected. TPB, indeed, recognises this factor, but mainly in the context of “subjective norms”, an element conditioned rationally by normative beliefs. This may imply at once too rationalistic and too individualistic a focus. A theory that considers the social and cultural needs of the people, it appears, will be more applicable to the context. The socio-cultural approach is explored next.

3.3.4 Socio-cultural approach

The importance of the social construction of knowledge and learning has been researched by cognitive psychologists such as Piaget, Vygotsky, and Bruner. Across these theorists, the social nature of learning is emphasised. The concept of a socio-cultural approach as espoused by Vygotsky (1978) suggests that human learning and cognition (thinking processes) have their origins in social life. That is, human cognition is shaped by participating in social contexts. This theory will help to provide insights into the relationships between the internal world of the human mind and the external world in which we live. Essentially, the theory enables the exploration of the closely connected dimensions of the social, cultural, historical, physical, mental and institutional worlds of people as they engage in interactions and activities (Daniels 2008; Odessa 2011). This study draws mainly on the socio-cultural approach for a number of reasons. Principally, the approach offers a unique opportunity to contextualise the interpretation of the research outcomes taking into consideration the situational constraints such as socio-cultural barriers. The approach also helps to interpret the interplay between internal beliefs and external factors and the dynamics this provides in understanding the readiness of students and teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia. Finally, the socio-cultural approach allows for an exploration of how the structures in Saudi Arabia influence students' and teachers' readiness to use E-learning for EFL in Saudi Arabia.

At the centre of Vygotsky's (1978) socio-cultural approach is the notion of context. He argued that the development of human cognition stems from, and is shaped by, participation in social activities within situated contexts (Vygotsky 1978). This departs from the earlier theories and models where context is not fundamental to its application. Kalaja and Barcelos (2006) have also noted that context is not a static concept, nor a mere recipient for social interaction; it is dynamic and ever changing. Furthermore, context is understood and conceptualised as a "socially constituted, interactively sustained time-bound phenomenon [where] each additional move within the interaction changes the current context while creating a new area for new interaction" (Duranti and Goodwin 1992, p.5). The above are echoed by Odessa (2011) who argues that a socio-cultural approach should aim to clarify the relationships between human behaviour and the cultural, institutional, and historical situations in which this functioning occurs. Vygotsky stresses the significance of an interplay between internal factors (referred to as personal factors in this research) and the external

factors that include the social and cultural aspects of the people. The metamorphosis both within and between these factors is also mediated by the social and cultural environment. In the present research the identified personal and external factors seek to help explain the readiness of students and teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia. Unlike TRA, TPB and TAM where rationality trumps commitment, for Vygotsky the isolated mind is impossible. Though, as Levykh (2008) points out emotions vary in intensity and context, they powerfully influence what we learn and our commitment to the learning. The next section explores the literature about E-learning readiness in a much broader sense.

3.4 E-learning readiness

The original conception of E-learning readiness by Warner, Christie, and Choy in 1998 was limited to the individual (Warner et al. 1998; Hung 2016). Others have since defined E-learning readiness broadening it to cover the entire organisation. Further, there are some who have combined the two levels, individual and organisation, into a single definition of E-learning readiness. For instance, Andaleeb et al. (2010, p.229) define E-learning readiness as the “degree to which an individual or institution is prepared, willing and has the capacity to participate in the digital world of education”. Arguably, many educational institutions have experienced failure in introducing E-learning because they have done so without exploring the readiness of the individuals and/or entire institution as a whole (Aldhafeeri and Khan 2016). It has further been noted that the importance of accessing both is because organisational readiness without individual readiness (and vice versa) is likely to result in lack of readiness and failure (Aldhafeeri and Khan 2016). The importance of exploring the readiness of institutions and individuals to use E-learning therefore cannot be overemphasised.

Indeed, technology alone does not ensure readiness or a workable and sustainable E-learning system. It is therefore significant to put in place readiness-based strategies that will ensure a successful implementation of such technology, which could be done prior, during and after the implementation process. Readiness should be seen as a continuum, and depending on where individuals, groups and/or an entire institution is, there should be appropriate strategies in place to effectively assess their level of readiness. In line with the above, Farid (2014) and Aldhafeeri and Khan (2016) emphasised that E-learning readiness must be determined before initiating any steps in the design and development process in order for an organisation to be successful with their implantation of an E-learning strategy. So

(2008) and Abas et al. (2004), for example, emphasise that insight into readiness can inform future action and help policymakers develop a framework for E-learning implementation by creating more convenient strategies. This process would help to identify the weakness and strengths of an organisation to implement E-learning and to show where to put their training and development resources and how they will do so. Exploring E-learning readiness, therefore, allows and provides key information to supply solutions to meet the particular needs of each set which can cater for their specific needs, such as the financial, equipment and human resources. Additionally, Aldhafeeri and Khan (2016) concluded that readiness for E-learning encourages schools, for instance, to match teaching and learning strategies using technology with existing methods of face-to-face instruction and it is advisable for institutions to pursue educational strategies that are in line with the present needs of teachers and students. Finally, in designing an E-learning implementation strategy, institutions should be encouraged to take into account the socio-cultural requirements of different students to avoid resistance to such programmes.

A number of studies, therefore, have been conducted in the area of E-learning readiness either for the entire organisation (e.g. Abas et al. 2004; Chapnick 2000) or specifically to the individual levels (e.g. McVay 2000; Hung 2016), using various methodologies and adopting different theoretical frameworks in order to understand the underlying factors of readiness of entire organisation or individual level. The focus in the ensuing two sections is to explore how E-learning readiness is defined of organisational and individual levels and what underlying factors determine their readiness.

3.4.1 Organisation level

As the name suggests, this category defines E-learning readiness at the organisation level. For instance, Borotis and Poulymenakou (2004, p.1) have defined E-learning readiness as “the mental or physical preparedness of an organisation for some E-learning experience or action”. Borotis and Poulymenakou (2004) have further identified seven aspects of E-learning readiness in relation to organisations, namely: business, technology, context, training, culture, human and financial readiness. Equal weight is given to all seven aspects and an organisation needs to meet all of these in order to be considered ready for E-learning. Schreurs et al. (2008, p.3) have also defined E-learning readiness simply as, “how ready the organisation is on several aspects to implement E-learning”. In essence, the degree to which the organisation is ready for E-learning can be described as the e-maturity of the organisation for learning.

Bowles (2004), uses this term e-maturity to check the organisation in terms of availability of infrastructure, suitable aims of the training, teacher and learner support and guidance, and competent leadership of an E-learning initiative. Bowles' readiness standards stress the importance of the readiness, not only of the learner, but also of the trainer [teacher] and the organisation itself. The significance of exploring the readiness of organisations to use E-learning is that the outcome can assist policymakers to create more convenient strategies for the adoption and implementation of such technology through the identification of the strengths and weaknesses of the proposed strategy (Abas et al. 2004).

A number of models have been proposed at the organisational level in order to facilitate their E-learning readiness. These models depend on the context, but there are also overlaps. The first is *an eight dimensional model* designed by Samantha Chapnick in 2000 (Chapnick 2000). This model was developed to measure and assess the readiness of an entire organisation for E-learning using questionnaires. Overall, the research outcome was grouped into eight categories, hence the name *eight dimensional model*. The categories are considered equally important and are: content (i.e. the subject matter and goals of the instruction); environmental (i.e. the large-scale forces operating on the stakeholders both inside and outside the organisation); equipment (i.e. proper equipment possession); financial (i.e. the budget size and allocation process); human resources (i.e. the availability and design of the human-support system); psychological (i.e. the individual's state of mind as it impacts the outcome of the E-learning initiative); sociological (i.e. the interpersonal aspects of the environment in which the E-learning programme will be implemented) and technological skill (aptitude) readiness (i.e. observable and measurable individual technical competencies). Haney (2002) and Rosenberg (2000) have also developed similar models for determining the readiness of organisation to adopt E-learning.

Aydin and Tasci (2005) have also developed a model that helps to determine the overall readiness of organisations to adopt E-learning. Their model has four dimensions with sub-categories. This is referred to in the present study as *the four dimensional model*. The dimensions are: innovation (i.e. an examination of past experience of employees and managers to use E-learning); people (i.e. level of education of all human resource personnel in the organisation); self-development (i.e. actively seeking information to improve ones' self) and technology (i.e. having at least the minimum hardware requirements and the software required to use that hardware). The sub-categories under the model are: attitudes of

users, educational level of employees, budget of the organisation, self-belief among employees, resources, and skills. Table 3.1 below presents how these dimensions and sub-categories effectively combine to determine the readiness of organisations to embrace E-learning. In essence, the dimensions and sub-categories determine the fundamental requirements for E-learning adoption and the factors associated with it (Aydin and Tasci 2005). They also facilitate the effective use of an E-learning environment in an organisation. The merit of this model is that it is designed to take care of the human resource development needs in emerging economies.

Table 3.1: The factors and constructs identified to assess E-learning readiness of companies (Aydin and Tasci 2005)

	Resources	Skills	Attitudes
Technology	Access to computers and Internet	Ability to use computers and Internet	Positive attitude towards use of technology
Innovation	Barriers	Ability to adopt Innovations	Openness to innovations
People	Educated employees (Average education level of employees) Experienced HR specialists An E-learning champion Vendors and external parties	Ability to learn via/with technology	
Self-Development	Budget	Ability to manage time	Belief in self-development

The above are considered the two most instrumental models and are most cited in the literature to assess and measure the readiness of organisations to use E-learning. Thus, it may seem that either of these instrumental models can be used by any organisation to assess their readiness to use E-learning. The outcomes can be used as basis for organisations to implement E-learning or avoid it altogether. Organisations can also identify areas where they may need to improve to be able to implement the E-learning with successful outcomes (Aydin and Tasci 2005). The main limitation of the two well-known models is that they were developed to measure readiness for E-learning in business organisation environments.

Others have seen the need to design models for measuring readiness in sectors other than business, arguing that these settings do not exactly correspond with those of the business

sector (Abas et al. 2004; So and Swatman 2006; So 2008; Lopes 2007; Darab and Montazer 2011). For example, Abas et al. (2004) have proposed another *eight dimensional model* to evaluate the readiness of tertiary education in Malaysia for E-learning. The dimensions are: content (i.e. the variety and availability of appropriate E-learning materials); cultural (i.e. the enculturation of E-learning in terms of Internet use and networked technologies to disseminate information, communication, interaction and teaching); environmental (i.e. the readiness of the country as a whole in terms of the presence of government policy, the role of mass media, intellectual property regulations and proficiency in the English language); financial (i.e. learner/trainee and institutional/organisational readiness to spend or allocate funds to develop and/or acquire E-learning); the learner (i.e. the readiness of the learner or trainee in terms of time commitment to E-learning, discipline and interest in E-learning as well as perception of the status of qualifications obtained via E-learning); the management (i.e. the institution/organisation having a vision/mission or formulated policies related to the provision of E-learning and the institutional/organisational recognition of qualifications obtained via E-learning); personnel (the readiness of the institution/organisation in terms of having a central unit dedicated to E-learning initiatives with a team of dedicated instructional designers as well as staff development plan for E-learning.); and technical readiness (i.e. the institution/organisation providing the necessary infrastructure for E-learning in terms of technical help, E-learning content delivery, broadband facilities as well as a Learning Management System (LMS)).

Another is that suggested by Lopes (2007) to evaluate and explore the E-learning readiness of health sciences in higher education institutions (HEI). This is referred to as a *six dimensional model* in the present study. The dimensions are: business dimension (i.e. the alignment of the E-learning strategy with the HEI global strategy and goals and with the external environment); content (i.e. the availability of existent content, its format, levels of interactivity, reusability and interoperability); culture (i.e. the habits and perceptions of HEIs towards E-learning adoption and use); financial resources (i.e. analysing the budget allocation of HEIs to the E-learning strategy); human resources (i.e. the availability and skills of everyone involved in the E-learning experience); and technology (i.e. focuses on the HEI technologic infrastructure and degree of access to the infrastructure and to the Internet).

Similarly, Darab and Montazer (2011) proposed an *eleven dimensional assessment model* to explore E-learning readiness at higher education institutions in Iran. Although the

context is different, the dimensions in their model are: content, culture, equipment, financial, human resources, management, network, policy, regulations, security and standards. Policy and standards relate to the efficacy and consistency of applying a certain procedure, whereas management combines the creation of a successful management methodology with the necessary regulations. Furthermore, the network element is fundamental to the success of E-learning in their model. According to Mosa et al. (2016), it enables the educator to inspire a positive attitude to life-long learning as an essential behavioural attribute in students. Equipment is also necessary to enable the E-learning system to work because such systems are based on technology and technological equipment. The significant benefits of E-learning, and its application, also arise from a positive cultural attitude towards this method required by employees, students and teachers alike. Keramati et al. (2011) have grouped these dimensions into three different dimensions: organisational, social, and technical. The organisational dimension consists of the management of permanence, organisational culture, organisational rules and support of experts. Social dimension constitutes the administration of instructions, governmental rules, and society's conception of E-learning. Finally, the technical dimension includes the availability of hardware, bandwidth, content, Internet access, school space and software.

This section is by no means an exhaustive review of the literature on organisational readiness to adopt E-learning, but it does provide a diverse background to organisational readiness literature. The reviewed literature was considered broad and fundamental, and subsumes those excluded (e.g. Rosenberg 2000; So 2008). Thus, the reviewed literature provides sufficient understanding of E-learning readiness at the organisational level and provide a solid ground for the advancement of the objective of the present research. Another level of E-learning readiness that nonetheless needs exploring is the readiness of individuals (students and teachers) in this regard. The next section explores the literature on individual readiness for E-learning.

3.4.2 Individual level

For a long time now, researchers have demonstrated interests in constructing and validating surveys in order to investigate and evaluate the E-learning readiness of teachers and students at the individual level in various contexts, using various methodologies and adopting different theoretical frameworks. This has led to the development of a number of

surveys based on different factors. These factors appear to vary widely between studies, but there are also overlaps. Under the individual level, Parasuraman (2000) provides the most acknowledged definition. According to him, E-learning readiness can be defined as, “people’s propensity to embrace and use new technologies for accomplishing [learning] goals in home life and at work” (Parasuraman 2000, p.308). Warner et al. (1998) also define E-learning readiness as students’ preferences, confidence, and ability to engage in such technology. Across these definitions, it appears that E-learning readiness at the individual level in education is measured by the ability of teachers and students to adopt and implement new technology for teaching and learning. The ensuing literature explores and evaluates various studies that assess the readiness of students and teachers for E-learning.

Warner et al. (1998) carried out one of the earliest studies to assess and explore students’ readiness towards E-learning (online learning) based on a mixed method research. They hypothesised that the three factors determining E-learning readiness are: students’ preferences [attitudes] for online learning over traditional ways of teaching and learning; the confidence of students to use electronic communication for learning most especially, the competence and confidence in the use of Internet and computer-mediated communication; and ability to engage in independent learning (Warner et al. 1998). The study remains valuable today, although it has been criticised by some as less elaborate compared to later models of E-learning readiness. The factors identified by Warner et al. (1998) in their study also appear to overlap and are interdependent.

Another study designed by McVay (2000) in an effort to concretise the concept of E-learning readiness relied on a survey consisting of 13 items, rated by respondents on a 4-point Likert scale. The study resulted in two fundamental factors – self-managed learning and comfort with E-learning. Self-managed learning, also known as self-directed learning, means the ability of learners to control/manage the learning process regarding content and pace. Comfort with E-learning on the other hand implies that learners feel comfortable whilst learning using the Internet (Smith 2005). McVay’s (2000) study offers promise since it has shown some validity in his own research, as well as other similar research. For instance, Smith et al. (2003) carried out an investigative study to test and verify the possible worth of McVay’s (2000) study. Overall, 107 undergraduate university students in Australia and the United States completed the survey from a variety of educational contexts, which was then

scrutinised under a reliability and factor analysis. The study generated two factors, comfort with E-learning and self-managed learning, as suggested by McVay (2000).

Similarly, Smith (2005) used 314 Australian undergraduate university students to explore the potential value of McVay's (2000) study. The study confirmed that McVay's (2000) study may be useful in terms of its applicability to research and practice in the area of student dispositions and preferences associated with online learning. However, both studies by Smith et al. (2003) and Smith (2005) call for adjustments to McVay's (2000) study in order to enhance its reliability. These same two factors (comfort with E-learning and self-managed learning) were again included in comparable findings from the study done by Blankenship and Atkinson (2010). A possible weakness of these studies is that they are unable to establish an association between comfort with E-learning and self-managed learning in their explanation of E-learning readiness. Such an association could help with a deeper understanding about why people who are comfortable with E-learning are also able to self-manage their learning or vice versa. The establishment of this association could have been tried alongside measuring the survey validity and reliability. It is therefore important to note that comfort with E-learning and self-managed learning may not be independent of each other – the former may even occasionally conflict with the latter.

Despite the fact that McVay's (2000) study has potential value and is still the most prevalent benchmark for assessing and exploring students' readiness for E-learning at the individual level, Hung et al. (2010) argue that the study appeared inadequate in its coverage of additional factors that are critical to E-learning readiness including technical skills and learner control. Their research was, however, built on McVay's (2000) study and the relevant existing literature (e.g. Garrison 1997; Ryan and Deci 2000). In this pursuit, Hung et al. (2010) developed the Online Learning Readiness Scale (hereafter, OLRs) to measure the readiness of students at the university level to use E-learning. OLRs contains five factors: computer/Internet self-efficacy (i.e. online learners' [perception of] ability to demonstrate proper computer and Internet skills); learner control (i.e. online learners' [perception of] control over their learning and efforts to direct their own learning with maximum freedom); motivation for learning (i.e. online learners' learning attitudes); online communication self-efficacy (i.e. [perception of] learners' adaptability to the online setting through questioning, responding, commenting, and discussing); and self-directed learning (i.e. learners'

[perception of] taking responsibility for the learning context to reach their learning objectives).

OLRS was conducted and validated with a sample of 1,051 college students using confirmatory factor analysis. However, in spite of its comprehensive nature, it fails to consider the underlying external factors that influence the five factors that indicate individual readiness, that is, the wider socio-cultural context and how it influences the process of students' readiness for E-learning. The language of the study also appears vague and imprecise. For instance, one is not clear whether "self-efficacy" in the study refers to actual capabilities or rather (as one would expect) the individual's perception of these. Although this ambiguity is not uncommon in the literature related to student readiness, "self-efficacy" is specifically interpreted in the present study to mean a perception as originally proposed by Albert Bandura in 1977 (a detailed review of self-efficacy is provided in Section 3.4.2.2). The failure of OLRs to consider contextual/external factors provides justification for our development of a study that provides insights into the relationships between the internal world of the human mind and the contextual/external world in which we live. It can be argued that these two are inseparable and inter-determining (Vygotsky 1978): the social context of learning is a crucial consideration in attempting to characterise the students.

Besides the above mentioned individual surveys for E-learning readiness for students, Hung (2016) has argued for a study that explores and validates the E-learning readiness of teachers-as-learners. His work is based on that of McVay (2000) and Hung et al. (2010) and is aimed at understanding the readiness of teachers-as-learners to engage in E-learning. Referred to as Teacher Readiness for Online Learning Measure (hereafter, TROLM). TROLM sought to assess and explore elementary and middle school teachers' readiness to use E-learning to learn (Hung 2016). The study relied on two sets of samples (128 and 248 teachers) and the results based on exploratory and confirmatory factor analysis supported an 18-items survey. TROLM identified four factors: communication self-efficacy (i.e. learners' [perception of] the adaptability to the online setting through questioning, responding, commenting, and discussing); institutional-support (i.e. [perception of] factors that help or hinder people's behaviour in certain environment); learning-transfer self-efficacy (i.e. [perception of] the degree to which individuals effectively apply the skills and knowledge gained from a training programme to a job situation) and self-directed learning (i.e. learners' [perception of] taking the initiative and responsibility for establishing personal learning

goals). Other less explored surveys include studies by Parnell (2003), Bernard et al. (2004) and Watkins et al. (2008). These studies share similar characteristics with those explored above and will not be discussed any further in this literature review.

Finally, TROLM and the other surveys explored above have limitations. For instance, they would have been considered more useful if access to tools in the school and at home was clearly identified as a factor under the surveys, since access to technology is a qualified condition of effective E-learning. Another limitation that was noted with the majority of the existing surveys is that they generally fail to take into account the underlying contextual/external factors driving readiness for E-learning, and admit no place for qualitative attention to the individual experiences and stories of students and teachers. This approach may be an oversimplification and may have limited value from the perspective of teachers and students. For instance, by relying on concepts from the literature, such as technology acceptance and dropout risk in online learning to select the underlying factors of students' and teachers' readiness, the research outcomes are considered problematic because they tend to treat learners as if they were isolated individuals and fail to respect the environmental and social settings in which they are embedded. These may be very different in some contexts, e.g. the culture of Saudi Arabia, has significant impact on the readiness of students and teachers for E-learning. Further, a qualitative engagement with individual research participants, instead of the use of only surveys, would have been more pertinent to students' and teachers' E-learning needs since that would have offered students and teachers the opportunity to identify what they considered to be the underlying factors of their readiness.

This section has explored the literature on the E-learning readiness of students and teachers based on factors at the individual level. Overall eight individual factors were identified and discussed: preferences/attitudes, motivation, confidence self-managed, computer/Internet self-efficacy, learning control, online communication self-efficacy, learning-transfer self-efficacy, and comfort with E-learning. The next section further explores these individual factors under two broad categories: personal drivers (i.e. preferences/attitudes and motivation), and self-efficacy (i.e. confidence self-managed, computer/Internet self-efficacy, learning control, online communication self-efficacy and learning-transfer self-efficacy). These are explored further below demonstrating their significance to students' and teachers' readiness to use E-learning.

3.4.2.1 Personal drivers

The importance of personal drivers on users' learning actions, including their use of E-learning, cannot be neglected. The readiness of users for E-learning has been consistently linked to individuals' personal drivers (i.e. preferences/attitudes and motivation) although relatively fewer formal studies currently exist in the literature (e.g. Warner et al. 1998; Hung et al. 2010). This section explores and interrogates the literature on how personal drivers are linked to users' readiness for E-learning.

The first personal driver explored is the attitude of users as reflected in example users' preferences. Attitude is considered one of the most important concepts in social psychology (Manstead and Hewstone 1995) and has been defined differently over a long period of time. According to Ajzen and Fishbein (1980, p. 6), attitude towards a behaviour is defined as, "the individual's positive or negative evaluation of performing the behaviour (e.g. E-learning)". This definition will be relied on throughout the discussions in this thesis. Lin and Lu (2000), conducted a study into students' acceptance of an Internet website using TAM. Their results showed that attitude toward a preferred web site influenced their intentions to use it – an indication of their readiness to use such an Internet website (Lin and Lu 2000). Liaw (2002, p.18), has also claimed that, "no matter how good and sophisticated the technology is, its effective implementation is dependent on the user's attitude being favourable and positive toward using it". Although, this claim was captured in a study into a development and testing programme for students' perceptions regarding the use of Internet technology as a training tool, its plausibility lies in the free choice of individuals. Numerous other studies have been done in various countries and virtually all agree with the outcome that a positive attitude is required and will influence the readiness of an individual to use the new technology (e.g. Warner et al. 1998; Pillay et al. 2007). This means that a positive attitude is not just indicative, but is to some extent constitutive of individual readiness.

Specific to the Saudi context, although the government has proposed the introduction of E-learning as a supplementary tool across Saudi schools, it has been demonstrated that many teachers do not approve of the use of technology in teaching and learning (Alshumaim and Alhassan 2010). Reasons for their disapproval are traceable to the conservative nature of Saudi society (for example, teachers preference to use the traditional methods of teaching and learning) coupled with the lack of governmental support at practical level (Alshumaim and

Alhassan 2010). This lack of approval highlights a fundamental gap between policy and practice and might impact negatively on their readiness to use E-learning as a supplementary tool for studying EFL. Attitude as a social construct will play a huge role in the readiness of students and teachers to use E-learning for studying EFL in Saudi Arabia. By this, it means that the attitude of students and teachers is something that does not only come from the individual but is influenced by the family, peers and society at large. This makes these factors much more important and are worth emphasising here because their value and influence might not be the same in other contexts. Yet, the current literature in exploring students' and teachers' readiness have either ignored these factors completely or minimised their importance.

Besides users' attitudes, the second personal driver explored is the motivation of users for using E-learning. Motivation as defined by Garrison (1997) includes the need to do something out of curiosity and for enjoyment which might come as a result of either the perceived value of learning or anticipated success in learning, or even sometimes both. In several classroom contexts, researchers have highlighted the significance of motivation in determining learning actions (Hung et al. 2010). Insights into the motivations of students to engage in E-learning may help teachers determine which students are likely to participate in and benefit from such technology (Hung et al. 2010). Similarly, Tallent-Runnels et al. (2006) state that knowledge of learner motivations regarding the use of E-learning is fundamental to the design of effective and ultimately successful E-learning programmes. Hung et al. (2010) also found there is a direct relationship between the motivation of students to use E-learning and their level of readiness. This suggests that those who are more motivated to use such technology for learning are more ready compared to those who are less motivated. Therefore, in order to reach the optimal level of readiness, it is suggested that educators should be able to motivate students enough to engage in E-learning activities (Chu and Tsai 2009; Hung et al. 2010). It has also been suggested that students' active learning develops in them a strong sustained desire for learning or keeps them motivated to learn (Hung et al. 2010). Motivation is therefore a significant factor because as demonstrated above it has a direct relationship with students' and teachers' readiness to use E-learning and its ultimate success.

3.4.2.2 Self-efficacy

As a concept, self-efficacy was first identified by psychologist Albert Bandura as an element of his social cognitive theory in 1977. Since then, it has received increasing sustenance from a growing volume of research from varied disciplines. According to Bandura (1997, p.3), self-efficacy can be defined as, “beliefs in one’s capabilities to organise and execute the courses of action required to produce given attainments”. Bandura’s conceptualisation of self-efficacy suggests that the concept does not evaluate an individual’s actual ability, or the objective efficacy that one possesses; instead, it refers to the belief by an individual about their ability to function within various circumstances regardless of their actual abilities. Bandura (2006, p.70) further stresses that, “whatever other factors serve as guides and motivators, they are rooted in the core belief that one has the power to effect changes by one’s actions”. The subjective nature of self-efficacy makes its measurement in practice problematic using a single standard since it depends on the individual, context and/or circumstances.

In practice, the concept of self-efficacy has been shown to shape the intention of the individual (Ajzen and Madden 1986), goal choice and task performance (Locke et al. 1984), motivation (Zimmerman et al. 1992), technological usage (Al-Harbi 2010; Cassidy and Eachus 2000) and individual readiness for E-learning (Hung et al. 2010; Hung 2016). Other sub-concepts under self-efficacy include: communication self-efficacy, learning-transfer self-efficacy, and self-directed/self-management learning (Hung et al. 2010; Hung 2016; McVay 2000) as well as computer/Internet self-efficacy and learner control (Hung et al. 2010). These variants of self-efficacy are all largely dependent on the context and are defined in Section 3.4.2.

A large and growing body of literature has also investigated the role of self-efficacy on adopting technology, with specific reference to user readiness for E-learning. It is also considered one of the key factors used to explore an individual’s readiness for E-learning usage particularly in the field of education. For instance, Hung et al. (2010), Hung (2016), McVay (2000) and Smith et al. (2003) argued that it is crucial to measure students’ computer and Internet self-efficacy prior to embarking on E-learning. This process is particularly important because it has the potential of ensuring that students obtain the greatest advantage; the technology is applied directly to students who are considered ready and those students

identified to have weaker ability could be provided with the needed support to enhance their readiness. In addition, individuals with greater perception of self-efficacy employed E-learning more often, received greater benefits from such technology, and encounter lower degrees of anxiety or technological apprehension (Eachus and Cassidy 2006). On the other hand, individuals will be reluctant to persevere in their readiness to use E-learning if they are faced with challenges and/or do not think that they can achieve the desired results using such technology (Bandura 2006). In the E-learning context, individuals who are not confident in their abilities within a specific aspect of E-learning usage may attempt to avoid the challenge (Hung et al. 2010; Hung 2016). The next section explores how individual readiness for E-learning differ based on gender and age differences considering their significance to this present research.

3.4.2.3 Individual differences

There is a rich resource of investigative literature that is dedicated to exploring the relationship between individual differences and the adoption of information technology (Science 1979; Agarwal and Prasad 1999; Sun and Zhang 2006). Generally, the following individual differences are usually considered in adopting information technology: differences in the personality and demographics of individuals (age and gender) (Hung et al. 2010; Hung 2016; Park and Choi 2009), as well as the experiences and the level of training of individuals (Agarwal and Prasad 1999; Hung 2016; Hung et al. 2010). All the above may also be influenced by other situational variables including school and social support. The focus of this section is to explore the literature on how gender and age as individual variables differ in their E-learning usage in general and E-learning readiness in particular. The selected demographic factors are of particular interest to this research because they are understood and tend to play a different role within the research context compared to other contexts.

3.4.2.3.1 Gender

Regardless of context, the significance of gender in technology adoption over the years cannot be overemphasised. However, there are variations in the way and degree to which context has an effect on gender differences in relation to technology adoption. Across the board, the outcomes of studies provide evidence to suggest that there are gender disparities in attitudes towards E-learning usage and access to a computer at home (Colley and Comber 2003), as well as skills relevant to E-learning usage (Hung 2016). The distinct

variations between men and women in their attitudes towards technology, as well as the actual adoption and implementation of such technology, particularly in education have also been identified (Zhou and Xu 2007). While some research outcomes show that males are more accepting of technology; others suggest the opposite indicating that females are more accepting of technology. Yet, others do not see any gender differences in the acceptance of technology. It might be argued that the differences in the outcomes of these studies are influenced by the wider socio-cultural context. Gender has therefore been a topic of much investigation regarding technology adoption and usage including E-learning readiness. The main differences in the literature are further explored below.

Although, a number of studies suggest that there has been a continuous rise in the number of female Internet users over the years resulting in narrowing the gap between males and females in technology usage and attitudes (e.g. Colley and Comber 2003; Rainer Jr. et al. 2003), globally, there is still a lingering traditional perception that majority of technology users are men (Al-Harbi 2010). This might true for the research context because Saudi Arabia has been and remains one of the conservative countries in the world where strict religious and cultural belief, including sex role stereotypes, and socialisation differences are applied in the use of technologies.

Mitra et al. (2000), who studied technology adoption and self-efficacy based on the differences between men and women, found that men had more positive perceptions about technology than women, and that men performed more effectively when using computers than women. Other researchers who have worked extensively in this area of research with similar outcomes include (Ong and Lai 2006; Young 2000). Ong and Lai (2006), for instance, discovered that there are gender differences in terms of computer self-efficacy, perceived use and behavioural interaction towards E-learning. Their study also suggested that females are significantly influenced by their own perceptions towards technology while males are strongly influenced by their perception of the usefulness of the technology. Further, Young (2000) has asserted that overall men are more confident using technology and the Internet, and display higher levels of self-efficacy. In the specific case of E-learning readiness in education, Hung (2016) identified that male teachers exhibited statistically significantly greater learning-transfer self-efficacy than female teachers. In contrast, other researchers have suggested that females are more amenable to the use of technology compared to men. For

example, the research outcome by Keller et al. (2007) suggested that females experienced a higher degree of perceived usefulness of the E-learning environment than male students.

Further it is claimed by others that there are no significant differences in E-learning readiness between males and females depending on the context and culture. A recent review by Hung et al. (2010), for instance, found that male and female college students had similar readiness levels in online-learning environments. Yukselturk and Bulut (2009) have also found evidence to suggest that the motivational beliefs, self-regulated learning variables, and achievements of Turkish female and male students did not vary significantly on the basis of their gender. Furthermore, Gefen and Straub (1997) have indicated marginal differences in the perceptions of men and women on the use of information technology and concluded that its effect is negligible. Similarly, Tsai and Lin (2004) have studied attitudes towards the Internet among Taiwanese students and found no significant difference on the basis of gender regarding their feelings and behaviour towards using the Internet. This outcome is similar to that of Leong et al. (2002) who concluded that there is no significant gender difference in students' satisfaction with web-based courses. Chen and Lin (2002) have also shown similar results in their study of the factors affecting the acceptance and success of the courses that take place over the Internet. Specific to E-learning readiness, Hung (2016) indicated that both male and female teachers demonstrated an equal degree of E-learning readiness in the areas of communication self-efficacy, institutional support, and self-directed learning.

Naturally, the literature on gender in one context may have little to say about quite a different one because gender cannot be separated from its sociocultural context. For example, in the general sociocultural environment that characterises the Saudi society and many of its kind, the conceptualisation of gender is shaped by the culture and wider sociocultural values. Narrowing the discussion of the role of gender on E-learning readiness to the Saudi context therefore requires an acknowledgement and/or recognition that it is fairly different from most of the contexts that have been examined in any detail in the literature, and needs to be treated separately. Overall, there are few studies that have been conducted in Saudi Arabia to explore the differences in the use of technology based on gender although there is a strict gendering of virtually everything. In summary, these few studies conducted are unanimous in the outcome that males are more accepting of technology than females. For example, a study by Al-Harbi (2010) concludes that generally males are more willing and more confident in trying online learning systems. Females on the other hand were considered much less

motivated in their attempt to use E-learning programmes. Additionally, some female participants also expressed a preference for face-to-face interaction that uses more traditional instruction methods. Besides these empirical research outcomes, there is also a long held public perception and belief that learning online may offer female students the rare opportunity to socialise outside the family and with the opposite gender. This might be a specific concern regarding the online/Internet aspect of E-learning and its adoption and use in Saudi schools. Gender differences are therefore of significance to this research and will be explored further in the research findings.

3.4.2.3.2 Age

Across many contexts, researchers have highlighted the importance of age and age differences in relation to the adoption of E-learning (Venkatesh et al. 2003; Wang et al. 2009). Age has therefore been a topic of much investigation in this area of research for some time now. Overall, outcomes of these previous studies demonstrate that there is sufficient evidence to suggest that age disparities in individuals can be used to explain both E-learning adoption and E-learning readiness. For example, in relation to computer and Internet self-efficacy (an aspect of E-learning readiness), Czaja et al. (2006) and Wang et al. (2009) found that younger (18–39) were perceived to have higher computer and Internet self-efficacy than older (40–59). Similarly, So (2008) found in their research that older (31-40) usually consider themselves old to learn a new technology. There is also sufficient evidence grounded in research that demonstrate the unwillingness of older to learn new computer and Internet skills because of higher levels of computer anxiety (So 2008). Younger (25-30) are able to engage in opportunities to learn new computer and Internet skills because they have lower levels of computer anxiety (So 2008).

Further, within the particular context of schools, age differences have been noted to play an important role in relation to E-learning adoption. For instance, Comber et al. (1997) found that younger students (11-12) have had more positive attitudes towards computers than older counterparts (15-16). This research outcome was confirmed by Colley and Comber (2003) when they conducted a similar study to examine any potential changes in the computer attitudes using the same age groupings (i.e. 11–12 year olds and 15–16 year olds). Although there was an indication that some changes were made over the years, these changes were rather insignificant. Further, Lahtinen (2012) who has conducted a research about young

people (ages 12-16) concluded that there is no difference between the age groups in terms of their ICT usage for informal learning at home. Similar to gender, age is socially constructed and its meanings vary from one context to another. In the particular context of Saudi Arabia, students are categorised into what is referred to as “normal” (15-18 years) school age and “older” age (above 18 years). This is unlike the educational system in most western countries where students in a particular class are of the same age. The difference here stems from the fact that in Saudi schools, a student necessarily has to successfully complete an exam at the end of each academic year in order to move to the next grade irrespective of age. However, there is a paucity of research that explores age in relation to individuals’ readiness to use E-learning in Saudi Arabia. This provides justification for the inclusion of age in this particular research.

In summary, the above has explored the role individual factors play in users adopting E-learning. In addition to these individual factors, it is recommended that in implementing E-learning, certain external factors need to be considered. These external factors usually comprise socio-cultural elements such as school, family, and peer support. These factors are explored further in the next section.

3.4.3 External factors

The literature reviews on E-learning usage, generally, demonstrate that organisational support (e.g. school), social support (i.e. family and peer support), E-learning functionality (i.e. flexibility and interactivity) as well as E-learning usability (i.e. perceived useful and ease of use) are the main external factors affecting the use of E-learning regardless of the context. As demonstrated in Section 3.4.2 above, the existing surveys developed in order to investigate and evaluate the E-learning readiness of teachers and students at the individual level appear to have often neglected the important role external factors play in readiness of students and teachers to use E-learning. Considering the significance of these factors for the present study, these external factors are explored below.

3.4.3.1 E-learning functionality

This refers to the perceived ability of an E-learning system to allow for interactivity and provide flexible access to instructional material at the same time (Pituch and Lee 2006). E-learning functionality is achieved through the use of a combination of different types of

media, including text, video and audio, which are directly controlled by the learner, the software program, or perhaps both (Al-Harbi 2010). The functionality of an E-learning system is further divided into two characteristics: interactivity and flexibility.

Interactivity. According to Palloff and Pratt (2007, p.4), for E-learning systems, “the key to the learning process are the interactions among students themselves, the interactions between faculty and students, and the collaboration in learning that results from these interactions”. They further identified a number of interactive tools, such as email, forums and bulletin boards (Palloff and Pratt 2007). Interactivity as a concept has been defined differently and examined it from multiple dimensions (Angeli et al. 2003; Chang and Wang 2008). For instance, it is seen as, “the extent to which the communicator and the audience respond to each other’s communication need” (Ha and James 1998, p.457). Interactivity is also defined as a “three-dimensional construct including control, exchange of roles and mutual discourse (Al-Harbi 2010, p.62). Similarly, Neuman (1991, p.104) defines interactivity as the “quality of electronically mediated communications characterised by increased control over the communications process by both sender and receiver”.

The significance of the interactive aspect of an E-learning system, besides helping in the acquisition of knowledge, is crucial in motivating discussion and providing a desirable motivation for students who sometimes feel isolated (McIsaac et al. 1999), and helps in the development of cognitive skills (Angeli et al. 2003). These significances are true whether the environment is classroom-based, Internet-based or blended (Woo and Reeves 2007). The impact of interactivity includes: it improves on learning outcome and learner satisfaction in E-learning environments (Zhang et al. 2006); it influences beliefs and acceptance of E-learning systems (Chang and Wang 2008); and it influences attitudes towards the use of E-learning (Al-Harbi 2010). Interactivity is therefore a central feature of most E-learning systems nowadays and perhaps the main rationale for the wide adoption of the E-learning for teaching and learning (Wong 2002).

Flexibility. Regarding the provision of flexible access, E-learning systems offer convenient access and online tools, enabling students to access course content, submit assignments and undertake online tests or quizzes. Further, the provision of flexible access by E-learning systems will be enhanced if they were designed to allow access to them even at remote locations and provide access to course content, anytime and anywhere (Selim 2007).

The concept of E-learning flexibility can be applied with regard to “time, content, entry requirements, instructional approach and resources, and delivery and logistics” (Collis and Moonen 2001, p.10). It does offer students and teachers learning and teaching experiences similar to face-to-face settings, as well as provide some merits over the traditional classroom setting (Lee 2001). For instance, it offers students in particular greater control and choice over what, when, where, how and at what pace to learn. Flexibility also helps students to take responsibility for their learning, and provides the appropriate support in order to meet their individual needs (Wong 2002). In addition, both students and teachers are not tied by time and geographic constraints to facilitate teaching and learning (Meredith and Burkle 2006). As a result, the flexibility component of E-learning systems has the potential to improve learning experiences and encourages full-time workers or busy people to enrol for programmes (Wong 2002). The flexibility component of E-learning is also strongly related to user satisfaction with online courses (Sun et al. 2008). Further, E-learning flexibility can and does encourage groups such as rural students and those who are young married women to pursue their studies with greater convenience compared to studying in the traditional classroom setting (Al-Harbi 2010). This could therefore inspire the adoption of E-learning through building positive attitudes towards its adoption.

3.4.3.2 E-learning usability

Another characteristic of E-learning systems as suggested in the literature is E-learning usability (i.e. perceived usefulness and ease of use). The perceived usefulness and ease of use of an E-learning system were first identified as key characteristics by Davis (1989) in his TAM model (TAM is explored in detail in Section 3.3.2). These characteristics are explored below.

Perceived usefulness. This is described by Davis (1989, p.320) as, “the degree to which a person believes that using a particular system would enhance his or her job performance”. For instance, a system that is perceived to be useful in performing the tasks required will allow the user to achieve better performance, as well as benefit from its use (Davis 1989). This is explained to mean that such a system has the potential to make the educational process better as well as increase access to learning (Al-Harbi 2010). It also means that users of such systems with higher levels of perceived usefulness will lead to more

positive attitudes towards the adoption and use of E-learning (Ndubisi 2004; Mahmud et al. 2005).

Lin and Lu (2000) investigated the acceptance of a website, and found perceived usefulness to be an influential factor of attitude towards the website. It was also found that perceived usefulness was an important precursor of attitudes towards acceptance of the web (Moon and Kim 2001). Lee et al. (2003) also found a strong direct influence of perceived usefulness of new collaboration technology on attitudes towards distance learning. The attitudes of learners towards the course material were largely based on its usefulness to them in efficiently completing tasks. Goal-oriented performance expectations led to the formation of positive attitudes through students' perceptions of the usefulness of the technology. Similar findings were reported by Ndubisi (2004) in his investigation of factors influencing the adoption of Blackboard by 300 university students in Malaysia. Mahmud et al. (2005) also found through research to explore the intentions of students to adopt an electronic Masters in Business Administration in Malaysia, that perceived usefulness was a significant determinant of attitude in order to pursue the course. Learners' acceptance of E-learning as a training tool for unemployment was investigated by Huang et al. (2006). Perceived usefulness was revealed in their study as being the significant critical success factor for E-learning. The adoption of Web-CT by 836 university students in Hong Kong, using a structural model based on TAM, was investigated by Ngai et al. (2007). Their results indicated that perceived usefulness was the main factor that affects the attitudes of students. These findings were supported by a study in Korea (Park 2009).

Perceived ease of use. Davis (1989, p.320) defines it as, "the degree to which a person believes that using a particular system would be free from effort". Perceptions of a system's ease of use have been shown to exert influence on attitudes towards acceptance or rejection of the system (Davis 1989; Rogers 2003; Ngai et al. 2007). The impact of the lack of consistency of ease of use in technology acceptance research may be explained by users' familiarity with these technologies. Although perceived ease of use might influence pre-usage readiness initially, this is likely to reduce over time as users become familiar and skilled with using the technology. The type of technology being investigated may determine the impact of ease of use.

Perceived ease of use is often found to be stronger than perceived usefulness when influencing users' acceptance. For example, in investigating intentions to accept a website, Lin and Lu (2000) discovered perceived ease of use to be a stronger determinant of preference for a website than perceived usefulness. Similarly, Moon and Kim (2001) found perceived ease of use of the web to be of greater importance in determining attitude than perceived usefulness. These authors considered that the perceived ease of use of a technology might have a greater effect than external factors in creating a positive attitude towards it.

Studies focused on the adoption of E-learning discovered the significant impact of perceived ease of use. Ndubisi (2004) studied the adoption of Blackboard by students in a Malaysian university, and found perceived ease of use to be a major determinant of attitude. Similarly, Huang et al. (2006) explored the acceptance of E-learning for public unemployment vocational training and commented that positive attitudes towards using E-learning were affected by perceived ease of use. In studying web course tools adoption, Ngai et al. (2007) discovered perceived ease of use as a key factor in influencing system usage and attitude.

TAM was applied in the investigation of students' use of an E-learning system by Park (2009), further evidence of the strong influence of perceived ease of use on attitude towards using E-learning was provided by these studies. Davis (1989) commented that if the technology is perceived as easy to use, the potential user would form positive attitudes towards it. Davis (1989) and Rogers (2003) both concluded that technologies that are easy to use would be accepted and used more than those that are complex. Although E-learning may have great educational potential, the system will quickly lose its appeal if users cannot control it effectively within the learning environment (Bates 2005). However, in most cases there is usually a trade-off between ease of use and usefulness; if a system is useful enough, individuals will use it, no matter how difficult.

3.4.3.3 Social support

The term social support is defined variedly by different writers. For instance, it is seen as, "the degree to which a person believes people who are important to him/her want him/her to perform a particular behaviour" (Hernandez et al. 2011, p.2226). Hsu and Lin (2008, p.67) also define social support as "the degree to which a user perceives that others approved and encouraged their participation in E-learning". Social support is referred to as a subjective

norm in TPB and provides the theoretical background for its relationship with individual behaviour. Social support has also been applied in several models of user acceptance of technology in general (Wu and Zhang 2014). The motivation of users to engage in and use E-learning can be influenced by the social support available to them such as family and peer support. This support can either increase the consistency with which E-learning is utilised or decrease it (Hernandez et al. 2011).

From a general perspective, researching the factors influencing E-learning usage leads to a vast quantity of literature relating to the social support given to E-learning usage. Pan et al. (2003), for instance, have argued that the frequency of usage of WebCT is affected by the factors of social support. Additionally, it is observed that social support has significantly affected those who engage in the use of E-learning (Rosli et al. 2016) and can affect how consistently E-learning systems are applied (Taylor and Todd 1995). This suggests that the usage of such resources depends on societal determinants such as friends and family. Ndubisi (2006) researched students' acceptance and use of technology. The research outcome suggested that peer support was important for the students to accept and use the technology. Similarly, in research that investigated perceptions and usage of students in an online course, Saadé et al. (2008) concluded that social support is significantly and positively associated with intention to use the online course. The intention to engage in E-learning is hence considered to be strongly affected by social support (Park 2009; Ma and Clark 2003).

Yet, some previous studies have shown that social support has no impact on users to engage in E-learning. For instance, Wu and Zhang (2014) concluded in their research on continuance towards E-Learning systems that there is no significant relationship between social support and attitude towards E-learning usage. This outcome is consistent with that of Lin and Yang (2012) who performed a questionnaire-based research in order to measure the extent to which E-learning is affected by social support.

Specific to the literature regarding the impact of social support on users' intention, these are considered largely contradictory. For example, Yuen and Ma (2008) failed to identify any discernible impact of social support on teachers' intentions to accept E-learning when they carried out a research to understand teacher acceptance of E-learning. This outcome is congruent with an earlier study by Miller et al. (2003) who also found similar

outcomes when examining the determinants of computer usage in the delivery of online learning.

In summary therefore, although social support plays a significant role in the usage of E-learning, this depends on the context. This according to the socio-cultural theory offers a unique opportunity to contextualise the interpretation of the research outcomes taking into account the situational constraints. The differences in both demographic and geographical settings between studies, as well as the difference in culture and environment, might explain the differences placed on the significance of social support. Overall, it is worth noting that context matters and has a huge influence on the outcome of the research.

3.4.3.4 School support

Several studies have identified institutional support as a major factor that influences the acceptance and use of technology in such institutions (Ngai et al. 2007; Selim 2007). School support can take the form of administrative support, technical support and the provision of equipment (Cheung and Huang 2005). For instance, research by Passmore (2000) indicated that, to make progress in E-learning, it is necessary to provide for the technological requirements of institutions in order to meet the students' and teachers' expectations. Mahmood et al. (2001) have also identified that institutions which were highly effective in their use of E-learning have institutional support. They cited the influence of people in the institution towards accepting and using E-learning as a typical case in point. Institutional support is therefore considered a crucial factor for technology acceptance and usage because not only does it seek to meet the expectation of current and prospective users (Igbaria 1990), but also it guarantees that the necessary resources are provided for E-learning (Cheung and Huang 2005). Having the support of an institution would also possibly lead to an increased use of E-learning and more effective learning (Cheung and Huang 2005). Conversely, lack of support would have an adverse effect on users' E-learning readiness and possibly a rejection of such technology altogether (Hung 2016).

Park and Choi (2009) concluded that the particular importance of institutional support was as a statistically significant predictor of users' decision to use E-learning. Specifically regarding E-learning readiness, Hung (2016) suggested that institutional support appears to be an important factor that influences teachers' motivation to participate in online learning. In the context of the present study, the dimension of institutional support is stretched to include:

administrative support, provision of equipment and technical support. It is argued that schools that provide the above institutional support for students and teachers will ultimately encourage a culture of friendliness and continuous improvement in their teaching and learning of EFL using E-learning as a supplementary tool.

3.5 Chapter summary

The chapter has explored the literature related to the needs and purposes of the present study. Principally, this chapter has presented the evolution of E-learning by way of a short historical overview of the concept. The presentation tracks the changes in the key technologies and theories of E-learning over the years including various terms which may be subsumed into the E-learning concept. Overall, defining E-learning is currently so fraught with debates, although it is largely seen as a concept that emerged to describe a broader, more inclusive set of technologies in the contexts of education. It was highlighted that the four main English language skills – listening, speaking, reading and writing – are key considerations when using E-learning in EFL.

Literature on the various theories and models used to explain E-learning acceptance and adoption was also reviewed identifying their strengths and weaknesses. This provided clarity on their similarities and differences as well as areas of complementarity. Based on the review, it was decided that no single individual existing theory or model adequately meets the needs of this study. The theoretical lens of this study is therefore a combination of the different existing theories and models including TRA, TPB, TAM and the socio-cultural approach. This theoretical lens will guide the interpretation and analysis of the data in later chapters.

Finally, the chapter has reviewed the literature about E-learning readiness focusing on specific surveys proposed by other researchers. It was clear that, across the board, all the surveys that explore and evaluate students' and teachers' readiness for E-learning are limited in nature depending on the context (i.e. related directly to context settings and pertinent to a specific group of users of particular E-learning systems). There are however overlaps among the factors identified in these surveys. The main limitations identified throughout the literature include the following. Firstly, the existing ones mainly focus on personal drivers and self-efficacy factors but often ignore the role played by external factors. However, such external factors are considered important in this research based on the theoretical lens. This

provides insights into the relationship between the internal world of the human mind and the external world in which we live. Secondly, the surveys appear not to address the interrelationships between various factors and the significant role these play in students' and teachers' E-learning readiness. For example, no clear significant relationships were found between self-efficacy and personal drivers. Thirdly, it has also been identified that although students' and teachers' readiness for E-learning, generally, may be widely explored and evaluated in different contexts, this is still under-researched in reference to the Saudi Arabian context. Finally, the majority of the existing surveys are mainly based on a literature review that is not directly linked to the identification of the underlying factors indicating students' and teachers' readiness for E-learning.

Collectively, these limitations provide justification for this research which seeks to address them and to ensure that the outcome of this study is applicable to the Saudi context. The study therefore provides an in-depth insight into this complex phenomenon by recognising both individual and external factors. It also aims to paint a holistic picture about the current level of readiness of students and English teachers to use E-learning as a supplementary tool for teaching and learning EFL in Saudi Arabia. The next chapter discusses the research methods used in the present study.

Chapter Four: Research methodology

4.1 Introduction

The aim of this chapter is to demonstrate the methods and procedure used in doing the present research. The chapter also deliberates on the exploratory steps that were taken in order to explore the readiness of students and English teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia. The specific sections of the chapter address the following:

- Restating the aims of the study.
- Exploring the epistemological issues involved in doing mixed method research, in particular issues concerning the distinction between qualitative and quantitative research.
- Discussing the use of a mixed method in the research design. This means attention is paid to the multi-strategies used in the research data collection in three stages. The first stage involved qualitative research using group interviews with students and teachers. The outcome of the first stage was then fed into building a questionnaire for the second stage of the research which involved administering the questionnaire to a larger constituent of students and teachers. The third and final stage involved follow up in-depth interviews with families and educational officials at the national and regional levels. This was deemed necessary in order to provide a deeper understanding to the research questions.
- Finally, the ethical dilemmas and practical challenges that were faced in conducting this research are also presented.

4.2 Research aims

The main aim of the present research is to explore the readiness of students and English teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia. The specific objectives include the following:

1. To explore the underlying factors affecting students' and English teachers' readiness to use E-learning for EFL in Saudi Arabia;
2. To explore the current level of readiness of students and English teachers to use E-learning for EFL in Saudi Arabia;
3. To explore any age and/or gender differences in students' and English teachers' readiness to use E-learning for EFL in Saudi Arabia.

4.3 Research paradigm and philosophy

The term epistemology, fundamentally, refers to “inquiry into the conditions, paradigms, and limits of knowledge including the nature of truth claims and the historical contexts that have shaped human inquiry” (Lobe et al. 2007, p.6). Over the years, there have been challenges as researchers consider an appropriate methodology through which to explore human behaviour and perceptions within the social sciences. Traditionally, there are two main schools of thought when one thinks about research epistemology: positivists and interpretivists. Positivism is an epistemological position whereby the researcher takes an objective view of reality or the research process (Bryman 2004; Creswell 2009). This means that the researcher is usually independent of the research process and approaches it as a matter of objective reality. The success of the research is evaluated through measuring how closely the outcomes of different researchers doing the same or similar research match. This view emphasises relationships between variables using scientific procedures rather than on processes that impact on how meaning is made (Bryman 2004). Interpretivism on the other hand is an approach of social reality with the aim to understand the meanings and interpretations particular social actors ascribe to certain cultural practice (Bryman 2004). There is an understanding that there is no objective social reality waiting to be discovered, and that knowledge is socially constructed by both the researched and researchers (Schoenberg and McAuley 2007). The interpretivist approach therefore seeks to provide an illuminating process within particular contexts that are usually not generalisable to other jurisdictions.

There is a third epistemological approach which is a hybrid of the two traditional approaches with the hope to overcome the demerits of either and/or both (Woolley 2009). This epistemological approach is referred to as pragmatism. Pragmatism recognises the

importance of both the physical and social worlds, and offers a productive, immediate and useful middle position, philosophically and methodologically, that is practical and result-oriented. It is generally viewed as the most popular epistemological approach among researchers who use mixed methods for social research (Greene 2007; Johnson and Onwuegbuzie 2004). In the case of the research reported in this thesis, it was decided to use this third approach because it seemed “fit for purpose”. This approach was also chosen because it was felt that the outcome of both the quantitative and qualitative research would help in interpreting and enhancing understanding of the perceptions of participants better. The use of the approach also helped in interpreting the interplay between internal beliefs and external factors as well as the dynamics this provides in understanding the readiness of students and teachers to use E-learning in Saudi Arabia. Considering the aims of this research, and to help answer the research questions, the use of the two approaches could help to answer particular research questions, individually, and help to mitigate the weaknesses in each other, as well as benefit from their strengths.

4.4 Using a mixed method approach

Mixed methods research can be defined as, “the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study” (Johnson and Onwuegbuzie 2004, p. 17). This research used a mixed method approach in order to achieve the different research objectives. The first stage involved the use of a qualitative method in order to explore the underlying factors affecting students’ and English teachers’ readiness to use E-learning as a supplementary tool for EFL in Saudi Arabia. Specifically, a qualitative method, by definition, involves exploring and understanding the meaning(s) that an individual and/or group(s) assign to a human or social problem (Creswell 2009). It sees social reality as a constantly changing emergent property of individuals’ creation. Further, it is defined as a research strategy that usually emphasises words rather than quantification in the collection and analysis of the data. Simply put, it seeks to achieve depth rather than breadth (Blaxter et al. 2010; King and Horrocks 2010; Howe and Eisenhart 1990). Qualitative methods aim to develop an in-depth exploration of a phenomenon, but not to generalise to a population (Creswell 2009). It normally has a direct source of data with the researcher being the main instrument (Bogdan and Biklen 1982). Additionally, qualitative researchers do not usually search for evidence to support or refute hypotheses, because abstractions are built as the data

gathered are grouped together (Bogdan and Biklen 1982). “Meaning”, is the main concern to qualitative researchers who are interested in ways that different individuals make sense of their lives (Bogdan and Biklen 1982; Creswell 2009).

The second stage involved the use of a quantitative method to cover the voices of a larger sample of research participants using a questionnaire. Although this was always likely to provide superficial information, it complemented data collected through the first stage of the research – that is data collected using group interviews (qualitative data set). Ultimately, the quantitative method aimed to explore the current level of readiness of students and English teachers. It also aimed to explore any age and/or gender differences in the students’ and English teachers’ readiness to use E-learning in Saudi Arabia. The quantitative research can be understood to mean a research strategy that highlights quantification in the collection and analysis of the data. It embodies a view of social reality as an external, objective reality (Bryman 2007). In using this approach, variables are measured with instruments and numerical data are analysed by applying statistical tests. Quantitative methods use a deductive approach to the relationship between research and theory (Bryman 2007). Researchers using this method have assumptions, guard against bias, provide control for other explanations and are able to generalise and replicate the outcomes of the research (Creswell 2009).

The third stage of data gathering involved the use of qualitative method (individual interviews) seeking to: (a) develop a deeper understanding of the readiness of students and English teachers to use E-learning in Saudi Arabia and (b) to explore the perspective of national and regional officials and heads of families regarding the E-learning implementation. This was aimed at providing further and deeper understanding to the findings gathered in the second stage of this research.

In summary, the objective of using a mixed method approach was not to substitute either of the two approaches, but to produce distinctive findings by drawing from the strengths of both approaches, while reducing their weaknesses (Johnson and Onwuegbuzie 2004). The combination of both the qualitative and quantitative methods resulted in greater detail, by creating awareness of generalisations and trends, as well as in-depth knowledge of the perspectives of participants (Creswell and Clark 2011). According to Bryman (2007, p.9) “bringing quantitative and qualitative findings together has the potential to offer insights that

could not otherwise be gleaned”. Although the present research was meticulously planned at the design stage, there were some challenges at the implementation stages. For instance, a greater level of skill, as well as additional time, effort and resources were required on the part of the researcher (Bryman 2007; Creswell and Clark 2011). A further difficulty encountered as a result of the use of a mixed method was that the research design was relatively expensive (Polit-O’Hara and Hungler 1999). Finally, the use of dissimilar research philosophies had the potential of creating complications and difficulties in research findings, as well as their interpretation (Bryman 2007).

4.5 The use of a proxy researcher

Given the research context and the constituents of the research sample, to successfully carry out the practical research aspects such as interviewing and administering the questionnaire required navigating around particular cultural issues. For instance, the Saudi culture prevents or prohibits non-family males from direct contact with non-family females in Saudi Arabia, that is gender mixing regardless of intent. As a result, the main researcher needed to employ the services of a competent female relative who could help in carrying out the research with female participants – such a female relative is referred to as a proxy researcher in this research. In this research the proxy researcher is the researcher’s sister, who is an English teacher in Saudi Arabia. She was therefore chosen with the conviction that she has the needed linguistic competence to facilitate interviews and administer the questionnaires subsequently. The added advantage of using her services as a female proxy researcher is that she was available when needed and the researcher only paid for her transportation. The use of the female proxy researcher, though not familiar in other contexts and might be considered unconventional, is a growing method used to access research participants of the opposite gender in contexts such as Saudi Arabia (e.g. Alkhatnai 2013; Al-Harbi 2010). The use of the proxy researcher was therefore compelling in this research because without her involvement the voices of female participants would have been missing. Given the context of the present research, the researcher would not have been able to reach female participants on their own. The convention is that the researcher works closely with those of the opposite gender that he/she is permitted to communicate or interact with freely (e.g. mother, wife or sister). A number of steps were taken to prepare the proxy researcher for the task. The researcher ensured that she was briefed and trained through the use of pilot interviews in order to enhance her skills (see Section 4.6.2). This was in order to ensure

consistency in the quality of data gathered. The next section presents and discusses the three stages of data collection. It also provides reasons for each particular stage and highlights the role of the proxy researcher.

4.6 The First Stage: Qualitative data gathering using group interviews

Blaikie (2009) conceptualises data collection as the systematic gathering of information relevant to the research purpose. Given the aims of the present research, various different qualitative research instruments, such as individual interviews, focus group discussions or participant observation, could have been used for data collection. The researcher however chose to use group interviews as the research instrument for a number of reasons. Firstly, group interviews enabled the researcher to gather information rapidly. For example, the researcher was able to interview 4 to 8 participants at the same time. Secondly, group interviews are cost effective compared with individual interviews (Kumar 1987). Thirdly, it was felt that the use of group interviews would help stimulate the group members to come out with new ideas, raise issues and concerns that the researcher might not have considered in individual interviews or in using any other research instrument. Although the use of group interviews did not allow for the gathering of as much in-depth information about individual research respondents as might have been gained in individual interviews (Ritchie and Lewis 2003), it still allowed for the gathering of a considerable amount of information that helped in answering the research questions. This first stage specifically aimed to develop a deeper understanding of the issues involved by examining the underlying factors of readiness of students and English teachers to use E-learning as a supplementary tool for EFL. This involved several sessions of in-depth group interviews and the outcome included in designing the questionnaire for the second stage of the research. This section reviews the processes involved in this stage of the research.

4.6.1 Developing the interview questions

Krueger (1998) identifies two different questioning strategies: firstly, that, the topic guides which list of topics or issues to be pursued in the group interview; and secondly, that, the questioning route should be a sequence of questions in complete and conversational sentences. The second, the questioning route strategy, was used in the present research. The main reason for using this strategy was to enhance consistency in terms of questioning

between the main researcher and the proxy female researcher. Using the questioning route strategy therefore provided clear guidance and ensured that all the relevant issues under investigation were covered systematically and with some uniformity between the two researchers. Further, this strategy helped to mitigate any potential bias between the main researcher and the proxy female researcher. Procedurally, the main researcher was always available on phone in case help was needed. Finally the strategy allowed flexibility to pursue the detail that each individual participant considered important (Ritchie and Lewis 2003). The stages involved in using the questioning route strategy include following four steps: collecting the personal information of respondents; asking introductory or transitional questions; asking the key/main questions; and asking closing questions. Below is a detailed discussion of the four steps used.

Personal data questions: These were designed to gather the background information about the participants. This included their names, experience with E-learning, where they live, their academic discipline (only student participants), proficiency in English (only student participants), experience in teaching EFL (only teacher participants), and the name of the school (only teacher participants). This step was useful because such information aided the main and the proxy female researchers to become familiar with the background information of research respondents as well as research respondents themselves. It also helped in the researcher's style of questioning bearing in mind, for instance, the difference between respondents with E-learning experience and those without E-learning experience.

Introductory and transition questions: These aimed to ease participants gently into the main discussion, and to get them engaging actively. This step was to facilitate respondents' understanding based on a discursive, conversational style of data collection. The questions asked were designed to be relatively straightforward to answer and non-threatening. They were also aimed to be used as a stepping stone to collecting data that provide insights about the context of the research. This was important for the later stages of the interview. They included definitions of and initial reflections on the topic, as well as questions on the advantages and disadvantages of E-learning.

Key/main questions: At this stage, the groups were asked to work interactively in open discussions on the main research questions. This step ultimately proved to be the most productive stage of the group discussion process because it allowed participants the

opportunity to agree and/or disagree with each other. Also, working together provided a synergy that helped to achieve greater depth of insights regarding the research questions about the underlying factors of their readiness towards E-learning.

Closing questions: Both Ritchie and Lewis (2003) and Krueger (1998) have cautioned against the abrupt end of interviews in academic research. This stage involved group discussions aimed towards ending the interview. Participants took the opportunity to repeat the things they had said earlier or to give their final thoughts. The main and the proxy female researchers also thanked them for what had been achieved.

Overall, the style of questioning was tailored to suit the age and status of respondents. All group interviews were conducted in Arabic and later translated into English. Arabic was considered the most appropriate language because it is the first language of the researcher, the proxy female researcher and the research participants (see Appendix A for an overview of interview questions – Arabic and English versions).

4.6.2 Piloting the questions

Ritchie and Lewis (2003) have suggested that a research instrument needs some revision if it is not producing the needed clarity, scope or depth of data the researcher is seeking. To this end, the decision was made to have an initial group interview discussion as a pilot for this study. Piloting the questions helped the researcher and the proxy female researcher to become really familiar with its structure and detailed contents. It also helped the researcher to think about how different issues might be addressed, and the type of responses they might yield and how they would need to be followed up. This kind of preparation was not intended to pre-empt what would come up during the main interview sessions but it was to provide the researcher and the proxy female researcher glimpses of what to expect during the main interview sessions. The outcome of the pilot interviews also provided justification for any future revisions made to the interview questions.

In summary, two pilot studies were conducted, one by the main researcher and the other by the proxy female researcher. The pilot consisted of two male teachers and three female students who were interviewed separately using the same questions. They revealed two main problems, namely ordering of questions and the inclusion of questions that were considered minor. These problems were resolved through the re-ordering of the questions and

those considered not to have any added value were removed. Additionally, the pilot helped to develop the interviewing skills of both the main researcher and the proxy researcher including addressing possible language problems and checking the duration of the group discussions. Finally, it helped in resolving any other difficulties that were encountered during the procedure of the group interviews and ensured that the recorder was working properly ahead of the main interview sessions.

4.6.3 Sampling process and study sample

This section provides an overview of the sampling process and study sample used in this research. It is a common feature in social research to plan and select samples for study, whether it is quantitative or qualitative research (Ritchie and Lewis 2003; Blaikie 2009 and Krueger 1998). A purposive sampling technique was ultimately adopted for this study although a range of different types of sampling technique and strategy were considered. A purposive sampling technique is defined as “a form of non-probability sampling in which decisions concerning the individuals to be included in the sample are taken by the researcher, based upon a variety of criteria which may include specialist knowledge of the research issue, or capacity and willingness to participate in the research” (Jupp 2006, p.244). The participants were selected to meet and represent a location or category in relation to a main criterion. The two main aims of the selection process included to ensure that all the main constituencies of relevance to the subject matter are covered, and to ensure that, within each of the main criteria, some range of diversity was included so that the influence of the characteristic concerned can be discovered (Ritchie and Lewis 2003). The selection of participants also depended on the purpose of the interview (Mann and Stewart 2000). The sub-sections below discuss the sample procedure and size for students and teachers respectively.

4.6.3.1 Student sample

Considering the specificity of the research questions, the student sample covered students from the preparatory year group at Jazan University who are studying EFL. The rationale for choosing the preparatory year students at the university instead of high school students was due to the ease of access to students coming from different regions – inner city, urban and rural areas. The preparatory year students at the university were also preferred

because they presented the researcher with different experiences as opposed to high school students who shared the same regional origin and experiences. To guarantee some diversity in relation to the characteristics concerned, the selection process included differences in terms of regional location and type of area of participants. An additional reason for selecting the preparatory year students was that these are people who can look back, and provide articulate opinion about their past experiences, and are in a position of just starting university to see the importance of EFL in their studies.

In recruiting student participants, the researcher used inclusion/exclusion criteria such as the willingness of students to participate in group interviews, their availability after school hours and students' proximity or access to the interview venues. The researcher and the proxy female researcher attended different classes separately and asked for volunteers amongst the student body after briefing them about the research topic, its aims and objectives and what was involved in taking part in the research – i.e. conducting interviews in a group. Students were also briefed that the group interviews would take place after school (i.e. between 3-4pm). In addition, students who lived nearer to the university or had access to the interview venue after school hours were encouraged to volunteer for practical reasons.

Furthermore, the researcher and the proxy female researcher explained the need to have diversity regarding the use of E-learning (those with E-learning experience and those without E-learning experience) and/or English proficiency (those who consider themselves good at English and those do not). According to Ritchie and Lewis (2003, p.197) “diversity in group composition enriches the discussion, but there also needs to be some common ground between participants-based on how they relate to the research topic or their socio-demographic characteristics”. The decision to include these features as criteria was therefore to ensure that the selected sample was as diverse as possible and to guarantee that responses from the research covered all aspects of the research questions.

Overall, 13 male and 8 female students volunteered to participate. The decision was then made to select 8 male students out of the 13 males using an online randomising technique (Research Randomizer 2015). The essence was to ensure that each group had an equal number of representatives – i.e. 8 male participants and 8 female participants constituting the two groups (Ritchie and Lewis 2003). The selection of males and females was a primary criterion to ensure gender balance and because the underlying factors of

readiness of each gender to use E-learning may be different. Male and female students were interviewed separately because of the strict rules against gender mixing in Saudi Arabia. The distributions of the number of students who volunteered as well as those selected based on the online randomised technique are presented in Table 4.1 below.

Table 4.1: Students (male and female) participant category

Participant Category	Male		Female	
	Number who volunteered	Number selected	Number who volunteered	Number selected
With E-learning experience and High proficiently in English	2	1	2	2
With E-learning experience and Low proficiently in English	5	3	2	2
Without E-learning experience and High proficiently in English	4	3	1	1
Without E-learning experience and Low proficiently in English	2	1	3	3
Total	13	8	8	8

4.6.3.2 Teacher sample

The teacher sample involved the selection of English teachers from a number of high schools in Jazan province, Saudi Arabia. Similar to the student recruitment process explained above, the inclusion and exclusion criteria for teacher participants included: their willingness to participate in group interviews, their availability after school hours as well as teachers' proximity to and access to the interview venue – that is, the Department of Education in Jazan province. The Department of Education in Jazan province was selected as the venue for both male and female English teachers because it is a central point in Jazan province and has facilities to facilitate group interviews in a comfortable manner.

Practically, 5 male schools and 3 female schools were considered to be of reasonable proximity and accessibility to the interview venue where all the participants could meet. In the case of male participants, the researcher visited all the 5 schools and asked for volunteers after briefing the teachers about the research project including its aims and objectives. There were 3 English teachers in each of the 5 male schools – that is, 15 male teachers as the sample population. All 15 English teachers were invited to volunteer to participate in the

research. However, only 4 male teachers accepted the invitation – 2 with E-learning experience and 2 without E-learning experience. Although reasons were not given for the low number of English teachers volunteering to participate in the research, it was thought that the lack of willingness might have been as a result of the lack of public transportation in Saudi Arabia (discussed later as a practical challenge in Section 4.10), and the fact that the research could only take place outside school hours and at venue outside their schools. A meeting was then arranged by the researcher involving all teachers who volunteered in order to agree on the data and time for the group interview.

In the case of female English teachers, the female proxy researcher followed similar procedure as did the main researcher. Only 3 female schools were considered to be of reasonable proximity and accessibility to the interview venue. However, the female proxy researcher found it relatively difficult to recruit participants primarily because of transportation related issues – lack of public transport and the fact that women were not allowed to drive in Saudi Arabia (discussed later as a practical challenge under Section 4.10). This means that the female proxy researcher visited the schools a number of times explaining the research and its aims and objectives before she was able to recruit volunteers. There were 7 female English teachers in all – 2 in 2 schools and 3 in the third school. All 7 teachers were invited to participate in the research but only 4 accepted the invitation – 2 with E-learning experience and 2 without E-learning experience.

Overall, a total of 8 teachers from both male and female genders with some diversity in their E-learning experience participated in two independent group interview sessions. The selection of males and females as a primary criterion was for the same reason as explained with the selection of students above. The distribution of the participants are presented below (see Table 4.2).

Table 4.2: Teachers (male and female) participant category

Participant category	Number of participants (male – female)
With E-learning experience	2 – 2
Without E-learning experience	2 – 2
Total	4 – 4

As described above the selection of students from the preparatory year in Jazan University helped in identifying students from different regions – inner city, urban and rural areas. Similar criteria were used in the selection of teachers except that in this case they shared similar experiences since they were all English teachers in the selected high schools.

Overall, care was taken to guarantee that all the main constituencies of relevance to the aims of the present study were covered in the selection of the study samples. The main recruitment process of the study sample sought voluntary participation, and no remuneration was paid to participants for their participation. Jazan province was chosen over other provinces in Saudi Arabia for the research study because it is more representative and easily accessible to the researcher. Moreover, the Saudis have a shared religion and almost similar cultures (Alosaimi 2013; Al-Alhareth 2014), although there is also a large immigrant population. The focus of this research, nonetheless, was about public schools where there is a unified education system and attended mostly by Saudis. Non-Saudis were therefore not accounted for since they attend international private schools as explained in the research context chapter. These collectively reduced the potential of any bias in terms of where the research was carried out. The next section presents the conduct of the group interviews.

4.6.4 Doing the group interviews

Procedure prior to main interviews. Before the main interview sessions the researcher used different means to gain access to the research participants. This involved contacting gatekeepers such as the Education Department Administration in Jazan province in the case of teachers, and the lecturers in charge of students in the preparatory year in Jazan University

in the case of student participants. The Education Department Administration and lecturers in charge of male students in the preparatory year were contacted by the main researcher. Lecturers in charge of female students were contacted by the female proxy researcher. A purposive sampling procedure was used to select both students and teachers who met the set criteria (see Section 4.6.3 above). Those selected were asked to provide their phone numbers for follow up and in order to set an agreed time for the interview sessions. The WhatsApp application was also used by the main researcher and female proxy researcher to agree on the most appropriate times to conduct the interviews for male and female participants respectively. There were however challenges over the provision of transportation to convey participants to the agreed venue.

Main interview. During the interview sessions the main researcher or female proxy researcher gave personal introductions, background information on the research purpose, outline of the research topic and the source of funding to the different groups of participants they were working with. In addition, confidentiality was stressed, and a clarification was made to explain what will happen to the data and of proposals for reporting. Additionally, groups agreed to treat what other participants said during the interview sessions as confidential and were asked not to repeat what was discussed outside the sessions. Participants were reminded also that they have the right to refuse to answer any question(s) that they did not feel comfortable discussing or even decide to stop participating in the group interview sessions at any time. As the interview was in a discussion form, a clarification was also given to the participants not to wait to be asked before they can step into the conversation. The interviewers stressed that there are no right or wrong answers and that everyone's perspectives were valued since the research aimed at hearing as many different thoughts and voices as possible on the subject matter. Participants who were observed to be inactive were also encouraged to contribute to the discussion. All these helped to mitigate any potential bias in the data.

Moreover, participants were reminded that the interviews needed to be recorded so that they could later be transcribed and analysed. In terms of procedure, both interviewers used audio recorders to record all interviews. Room was made for stoppages and pauses either as a result of interruptions and/or if participants needed to share information that they did not wish to be captured on the audio recorder. These were reasons audio recording of interview sessions was considered the most appropriate technique in this research. Audio

recording interviews provide an accurate, verbatim record of the interview session, capturing the language used by the participant including their hesitations and tone in as much detail as expressed (Ritchie and Lewis 2003). The technique further allows interview data to be captured in its natural form and allows the researcher to concentrate and pay full attention to listening to the interviewee(s) and probing in-depth (Ritchie and Lewis 2003). Finally, the use of audio recording was also seen to be more neutral and less intrusive. In the practical sense, the audio recorders were switched on after participants introduced themselves to the group. This was part of the confidentiality procedure and the researcher's quest to gathering anonymised data. The discussions were then facilitated using open-ended questions to engage as many of the participants as possible. The discussion usually ended with an opportunity for research participants to make further suggestions relevant to the research study that were not captured in the interview questions.

Field notes were also taken to help clarify specific issues or to confirm that all main points in the interview were appropriately transcribed. Only the researcher had access to the audio recorders which were always locked away after the interviews. The proxy female researcher was given access to the audio recorders in order to help check the correctness and consistency of the transcripts. Male research participants were informed from the start that the main researcher is working with a female proxy researcher who will listen to the audio recording device to ensure that the right thing is written. Similar information was provided to the female participants as well. Student participants were interviewed in the preparatory year building in Jazan University, while teachers were interviewed at the Education Department in Jazan province. All the interviews lasted between 45 min and 1 hour. The section below discusses how the data were analysed.

4.6.5 Data analysis

According to Ritchie and Lewis (2003, p.200) "approaches to analysis vary in terms of basic epistemological assumptions about the nature of qualitative enquiry and the status of the researchers' account". They also vary between different traditions in terms of the key focus and the aims of the analytical procedure (Ritchie and Lewis 2003). This section showcases the processes involved at the analysis stage of the qualitative data of this study.

A thematic approach was used in analysing the data collected from the group interviews. Braun and Clarke (2006, p.97), define thematic analysis as "a method for

identifying, analysing and reporting patterns (themes) within data". This involves the identification, examination and interpretation of themes in textual data and asking how these themes helped answer the research questions. Thematic analysis is also seen as an ongoing, fluid, and cyclical process that happens throughout the data collection stage and carries over to the data entry and analysis stages (Bryman 2004). Thematic analysis was chosen, as an analytical tool, because the qualitative phase of the research sought to develop a deeper understanding of the issues involved by examining the underlying factors of readiness of students and English teachers to use E-learning. To ensure that the process was rigorous, data were also triangulated to highlight the points of convergence, divergence and complementarity. Triangulation refers to the use of different sources or means to either investigate and/or analyse a piece of research in order to enhance confidence in its findings (Bryman 2004). According to Denzin (1970), a triangulation process could involve: data triangulation, investigator triangulation, theoretical triangulation and methodological triangulation. The specific type used in the present research was data triangulation. This involved a thorough comparison of the views of different responses – i.e. males versus females, students versus teachers – in order to establish areas of convergence, divergence and/or complementarity. Convergence of views indicated a common understanding both within and between groups of participants, divergence showcased differences in understanding, and complementarity data helped in giving a fuller understanding of the research. The following analytical approach was used in this research.

1. *Data transcription and familiarising with the data.* This was an important phase of the research process because it involved the transformation of the interviews from an oral mode to a written form for analysis (Kvale 1996; Cohen et al. 2007). There are different styles of transcribing data depending on the intended use of the transcript. These include verbatim or condensed and summarised forms of transcribing (Al-Harbi 2010). For the present research, this stage started with a verbatim transcription of each group interview separately as soon as the data had been collected. This was done in order to gain insights into the participants' opinions, which calls for a detailed transcription. This means that each interview session was considered as a comprehensive and meaningful chunk of data in itself. The transcription was done together with the detailed notes that were taken during and shortly after the interviews. In order to ensure consistency and correctness of the transcripts each tape was played and listened to several times allowing the researcher to compare the interview tapes with his typed scripts. The proxy female researcher also

reviewed all the transcripts vis-à-vis the tapes. The entire transcription process appeared time-consuming, frustrating, and at times boring (Riessman 1939), yet, it was an excellent start to familiarize the researcher with the data. All these processes facilitated the researcher's familiarity with the content of the interviews, and helped in making an overall sense of the data. This therefore marked the start of the data analysis.

2. ***Translation of transcripts.*** All the group interviews were conducted and transcribed in Arabic as explained above, and were later translated into English. Translation was deemed appropriate ahead of data analysis for both practical and epistemological reasons. Epistemologically, the recognition that this is not a neutral exercise (Bradby 2002; Duranti 2003) and that people using different languages may construct social reality differently (Barrett 1992) was a significant consideration. Practically, translation was necessary in order to facilitate communication between the researcher and his supervisory team as well as enhance their understanding of subsequent data analysis since they are not able to read in Arabic. In this research although other translation technique such as back-translation and parallel translation were weighted, the researcher adopted a direct translation technique. This meant translation was conducted from the source language (Arabic) directly into the target language (English). The advantage of this technique is that it is relatively cheap and easy to implement and devoid of technicalities (Saunders et al. 2009). However, the technique also has the tendency of resulting in discrepancies between what was said in the source language and its translation into the target language. Aware of the potential drawbacks in the technique, the researcher (who is linguistically and culturally competent in both Arabic and English) decided to take responsibility for the translation (Bracken and Barona 1991). The translated transcripts from Arabic to English were then checked by the female proxy researcher (who is also a fluent bilingual in both Arabic and English) in order to mitigate any inconsistencies and to offer as close as possible meaning as well as ensure consistency and correctness in the translated transcripts. The review exercise by the proxy female researcher also aimed to enhance the quality, trustworthiness and credibility of the data. After the review exercise, the researcher and the proxy female researcher had a set of discussions in order to harmonise and agree on words and/or phrases identified to be problematic or ambiguous. Based on the discussions, some changes to the wordings of some statements were made to enhance

clarity in meaning in the target language. Table 4.3 below provides an example of the statements and the amendments made.

Table 4.3: An example of a statement that needed rewording after translation to English

Original statement	Modification
We hope to see E-learning as a tool that can be used to support what the students are learning in the classroom. But to do this, headteacher in charge of the programme, first of all, need to give us and the students the appropriate assistance to raise our skills to a level that will enable us use this type of technology.	We hope to see E-learning as a tool that can be used to support what the students are learning in the classroom. But to do this, managers in charge of the programme, first of all, need to give us and the students the appropriate assistance to raise our skills to a level that will enable us use this type of technology.

3. **Coding.** Coding was done manually and involved a number of steps that included: initial coding, focused coding, searching for themes as well as reviewing and naming the themes (adapted and modified from the works of Clarke 2006 and Charmaz 2006). The procedure involved working systematically through the entire transcripts, giving full and equal attention to each data item, and identifying interesting aspects in the data items. The steps followed to help make sense of the data are presented below.

Initial coding, a segment-by-segment coding technique using Word electronic comments was used at the start of the initial coding process. This allowed identification of initial codes from the data. According to Charmaz (2006, p.47), “initial coding should stick closely to the data ...”. In light of this, the researcher engaged in looking for similarities and differences within and across the interviews, and then made notes about the patterns that were starting to emerge and began to relate them to the research questions.

Focused coding, the researcher was aware of the need to synthesise the initial codes that emerged in phase one into focused ones. This process began through the selection of codes that were considered significant within and across the data (Charmaz 2006). The process of focused coding helped the researcher to engage more with the initial codes that were considered significant and highlighted under the initial coding phase. The researcher then began sorting through the codes and linking them together in order to establish further patterns within and across the data hence boosting his understanding of the data. These additional insights into the data were kept on record using an electronic comment function. The focused codes provided a summary of the data without distorting the original meaning of what the respondents said, but reducing the data into something more

manageable. Finally, through focused coding the researcher was able to “check his own preconceptions about the research topic” (Charmaz 2006, p.59), and it provided the basis for newer perspectives or interpretations to be made of the data.

Searching for themes, the process of coding operated as a framework to support the categorisation process that allowed for thematising. Polit-O’Hara and Hungler (1997, p.470) define a theme as, “a recurring regularity emerging from analysis of qualitative data”. Themes capture something significant about the data relative to the research question, and represent some level of patterned response or sense within the data. In this phase, all the codes identified as explained in the previous stage were copied to an Excel sheet. This enabled the researcher to combine some codes into relevant potential themes called sub-themes. Additionally, it also became clearer that some sub-themes were related to the same idea that emerged from the data. Such similar sub-themes were then put together into bigger themes and were labelled main themes. Finally, the main themes were grouped into major themes referring back to the research questions.

Reviewing and naming themes, Patton (2002) prescribes dual criteria for reviewing and naming themes in qualitative data analysis: internal homogeneity and external heterogeneity. Internal homogeneity requires that data within themes need to cohere together meaningfully. External heterogeneity on the other hand means that there needs to be a clear and identifiable distinction between these themes. This was particularly significant because the data collected included views from research participants of different gender and ages. It was therefore important to be clear what each group made of the interviews. Overall, the process helped to have a clearer understanding of the data as a whole and how it helps to answer the research questions.

4. ***Producing the analysis***. This final phase involved two major steps: first, the presentation of the themes into a tabular form; and second, interpreting the data. The first step facilitated the identification of dominant patterns across the themes. It also helped arrange, make complex connections and think about the data in new ways that assisted in the interpretation of it. The researcher was faced with two options at the second step – either using participant based group analysis or analysing the data produced by a group as a whole (Ritchie and Lewis 2003). Participant based group analysis involves a type of

data analysis that pays attention to contributions of individual participants separately within the context of a whole group discussion (Ritchie and Lewis 2003). The merit of this type of analysis is that it essentially allows the information of each participant to be retained and for interactions between individual members to be noted as part of the recording of the group dynamic (Ritchie and Lewis 2003). The whole group analysis, on the other hand, involves treating the data produced by a group as a whole without delineating individual contributions (Ritchie and Lewis 2003). This means that the group becomes the unit of analysis and is treated in the same way as a unit of individual data. In the case of the present research the whole group analysis was considered more appropriate because it was recognised that in most cases groups were in agreement on issues. Doing a whole group analysis therefore provided opportunities for comparison between gender and status (teacher and student). It also allowed the identification of patterns and relationships that were observable within and across the groups illustrating what was unique to either gender or status (i.e. students or teachers). However, instances where group members expressed divergent views on an issue or when an experience shared was specific to a member of the whole group, these were duly acknowledged. Additional information (in the form of notes) about group interactions or the balance of individual contributions was added to the data as part of the evidence.

In order to protect the identities of respondents, data were anonymised. The codes F.T. and M.T. represent female and male teachers respectively, while F.S. and M.S. represent female and male students respectively. The findings are discussed and presented using a method of triangulation (Bryman 2004; Ritchie and Lewis 2003). Through this method, findings that look the same or similar are presented together – demonstrating data convergence. Those that contrast or are different are also presented together – emphasising divergence. Finally, findings that appear to support each other are presented – highlighting data complementarity.

As demonstrated throughout the phases of the data analysis, it can be suggested that, although the phases appeared sequential in theory, these did not always occur in isolation of each other in practice. This involved moving between and within the steps of analysis in order to tell the complicated story of the analysis with the aim to convince the reader of the merit, robustness and systematic nature of the analysis. It was significant to do this because

the analysis needed to be a coherent, non-repetitive, concise, logical, and interesting account of the story the data told – within and across themes. In order to draw reasonable conclusions, it was necessary to step back and interpret what all the findings meant, determine how my findings helped in answering the research questions, and draw meaningful implications from the findings (Miles and Huberman 1994). To verify these conclusions, the data were revisited (multiple times) to test and confirm the conclusions drawn. Findings of the qualitative research phase are presented in Chapter 5.

4.7 The Second Stage: Quantitative data gathering using questionnaires

Having identified the underlying factors of readiness of students and English teachers to use E-learning, this second stage of the research involved the development of a questionnaire to help explore the current level of readiness of students and English teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia. The procedure at the second stage also aimed to explore any age and/or gender differences in the students' and teachers' readiness. Defined as a sequence of self-report measures that are administered either through an interview or a printed questionnaire (Stangor 2007), the questionnaire is the most widely used research instrument in quantitative research on technology implementation (Choudrie and Dwivedi 2005). The design of the questionnaire is often used to test and measure a wide field of issues and populations, or to describe any generalised issues (Cohen et al. 2007). Studies that involve a large number of participants using a questionnaire may allow the researcher to make generalisations of the data collected at the sample level to the wider population (Aday and Cornelius 2006; Cohen et al. 2007). The use of the questionnaire in this present research was considered the most suitable method at this stage because it helped to obtain personal and self-reported information in a wider scale which was unavailable at the qualitative stage of this research which involved group interviews. This section reviews the processes at this stage of the research.

4.7.1 Designing the questionnaires

In designing questionnaires researchers generally have the following three principal options to choose from: adopting questions that are used in other questionnaires, adapting questions that are used in other questionnaires, or developing their own questions (Bourque and Clark 1992; Saunders et al. 2009). It is also suggested that in order to develop a

questionnaire that will gain satisfactory responses, the questionnaire must be short, clear, and unambiguous (Wilkinson and Birmingham 2003). The warning by Gillham (2000) that once a questionnaire is distributed, it cannot be corrected, was also heeded in developing the questionnaire for this present study. As a result, the final questionnaire for the present study included some self-developed questions and others adapted from questionnaires from other similar studies. The final questionnaire consisted of two main sections relating to the findings of the first stage, which included: self-efficacy, personal drivers and personal access to tools (personal factors), E-learning characteristics factors, social factors and in-school factors (external factors). In order to construct the questions of in-school factors for the purpose of the present study, for example, the group interviews suggested words and phrases that the interviewees were using to express their ideas which were employed in developing the questions for the questionnaire. This aspect of the questionnaire consisted of six statements measured by a five-point Likert scale ranging from *Strongly Disagree* to *Strongly Agree*. The questions arrived at are as follows.

1. The school where I'm studying/teaching provides the necessary computer equipment for E-learning. (Self-develop based on the qualitative data).
2. The school where I'm studying/teaching provides the necessary Internet connectivity for E-learning. (Self-develop based on the qualitative data).
3. In the school where I'm studying/teaching, the school management would allow me to use the school's facilities for E-learning. (Self-develop based on the qualitative data).
4. In the school where I'm studying/teaching, the school management would support my use of E-learning. (Self-develop based on the qualitative data).
5. In the school where I'm studying/teaching, an IT technician is available to provide assistance when I need help (Ngai et al. 2007).
6. I think that the technical support in the school where I'm studying/teaching is good (Ngai et al. 2007).

The section of the questionnaire that asked questions about personal factors helped to explore the current level of readiness of students and English teachers to use E-learning as a

supplementary tool for EFL in Saudi Arabia. Further, the section of the questionnaire that asked questions about the external factors aimed to explore the extent to which these factors influence the identified personal factors which indicate the current level of readiness of students and English teachers to use E-learning. It is to be acknowledged here that the positive framing of all the questions design had the potential of resulting in a positive/negative bias in the results (Bell 2005). However, the results proved to be different (see Chapter Seven). This means that the respondents were discerning in their responses.

The responses to the questionnaire were gathered using a Likert scale – i.e. a rating scale which allowed the respondents to answer how strongly they agree or disagree with series of statements. A Likert scale was used because it is easily understood and requires a shorter time to answer the questions (Saunders et al. 2009). It usually were either an even number of points (four or six) or an odd number of points (three, five or seven) rating scale (Alosaimi 2013; Saunders et al. 2009). In the case of the present study, a seven-point Likert scale was considered inappropriate because using it could lead to a decrease in response rate and response quality since respondents might become frustrated (Buttle 1996). The decision was therefore made to use a five-point Likert scale for questions under self-efficacy, personal drivers, E-learning characteristics factors, social factors and in-school factors, and a three-point Likert scale for questions under personal access to tools. Finally, the use of an odd number of alternatives allowed for a neutral response.

Moreover, the questionnaire captured the demographic information of the participants, such as responding type (student – teacher), age and gender. The latter helped to explore any gender and/or age differences in students' and teachers' readiness to use E-learning as a supplementary tool for EFL (see Appendix B for the full questionnaire – Arabic and English versions).

4.7.2 Language of questionnaire and translations

Given that the questionnaire was originally designed in English, it was necessary to have it translated into Arabic. This was done in order to boost participants' understanding and to reduce non-responses. The translation process required dexterity and care in order not to change the intended meaning of the original questionnaire (Saunders et al. 2009; Usunier 1998). A decision was therefore made to use parallel translators, which means that more than one independent translator was employed to translate the text (Saunders et al. 2009).

Comparisons were then made and the final version produced by the researcher paying attention to lexical meaning, grammar and syntax of both languages. Specifically, particular attention was paid to the use of gendered language bearing in mind that different words are used in addressing males and females in Arabic (see Table 4.4 below for an example). Finally, two different final versions of the cover letter and questionnaire were prepared to address females and males respectively (Appendix B and C).

Table 4.4: Examples of gendered words

English language	Arabic language	
	Male	Female
Teacher	معلم	معلمة
Student	طالب	طالبة

4.7.3 Piloting the questionnaire

The pilot phase of any research is always a critical step in a study since it greatly increases the chances of a successful outcome (Van Teijlingen et al. 2001). Thus, the decision was made to pilot the questionnaire prior to the main study. The aim of the pilot study was to refine the questionnaire in order to decrease the chances that participants would encounter problems in answering the questions and to prevent or avoid problems in the data recording. Piloting the questionnaire was also important because it helped the researcher to find out if there were any unclear wordings and/or errors, to predict the percentage rate of return for the main study, and to inform the researcher as to how much time was needed to fill out the questionnaire (Bell 2005). Finally, the pilot in many ways enhanced the possibility that the data to be collected would allow the researcher to answer the research questions. The questionnaires were designed in English and later translated into Arabic (see Section 4.7.2 above for the translation process).

The piloting and testing was done online with both male and female participants from the target sample. A total number of five teachers (3 males 2 females) and 16 students (8 males 8 females) took part. All participants consented to the ethical considerations that guided the research. Students were provided with printed consent forms to be given to their

parents. They were signed and returned to the researcher. However, teachers had the opportunity to sign an online consent form (see Appendix C for the consent form – Arabic and English versions). The pilot study was completed in two weeks.

The teachers and students contributed valuable feedback, enabling the researcher to produce an improved final version of the questionnaire. Feedback included requests for clarification of wording and clarity with regard to the instructions intended to help participants understand the purpose of each section of the questionnaire. They also gave estimates of the time needed to fully understand and answer the questionnaire. Finally, the pilot study supplied the researcher with useful indicators for designing the final version of the questionnaire (see Appendix B for the full questionnaire – Arabic and English versions).

4.7.4 Sampling process and study sample

Sampling was necessary in this study because budgetary and time constraints made it impossible to survey the entire population. The decision was therefore made to select a sample which represented the total population of the study. Saunders et al. (2009) and Bell (2005) have argued that using the total population as a sample size would not essentially offer more useful obtainable outcomes than gathering data from a selected sample which represents the entire population. This section provides an explanation and justification for the sampling process in the present study. It also provides details of the present study sample.

According to Saunders et al. (2009), sampling techniques offer a range of approaches that allow researchers to reduce the quantity of data that are required to be gathered by considering only data from a sub-group rather than all potential cases or elements. A probability sampling technique, which involves the use of random sampling to select a sample and in which each unit in the population has a known probability of being selected (Saunders et al. 2009), was used in the present study. The advantages of the probability sampling technique include: cost effectiveness, less time consuming, offering every participant an equal chance to be selected, and producing a sample that is representative of the population and minimising the tendency of bias in the selection process (Bell 2005; Al-Harbi 2010). The sampling technique involved the following three stages: identifying the sampling frame, selecting the sampling technique and selecting the sample size that represent the total population (Saunders et al. 2009).

The sampling frame can be defined as “a complete list of all the cases in the population from which the sample is selected” (Saunders et al. 2009, p.214). For the present research, the frame included high school students and English teachers in high schools for both males and females in Jazan province in Saudi Arabia. A cluster sampling technique was ultimately adopted for the present study although a range of different types of sampling technique and strategy were considered. A cluster sampling technique is defined as a form of probability sampling in which “the population is divided into discrete groups or clusters prior to sampling” (Saunders et al. 2009, p.588). This was initially done and a random sample drawn from these clusters. The process involved first adopting the six educational districts under the administrative department in Jazan province based on the local government classification as a cluster.

The second cluster was to divide schools based on gender in each of the six educational districts. The rationale for the above strategy was to guarantee that the diversity in each of the clusters was represented in the sample. In total there were 212 (124 males and 88 females) schools but only half of this number (i.e.106; 62 male and 44 female schools) were randomly selected using an online random number generator (also known as research randomiser) – in order to give each school an equal chance to be selected (Research Randomizer 2015). In the end there were more male schools than female schools in the selected sample. The imbalance between male and female schools was worth noting, particularly so when the latest statistics suggest that there are more girls than boys in Saudi public schools – that is, 3230532 for males and 3372791 for females (see Table 2.1). A plausible explanation might rest on the fact that although education of males started 36 years ahead of the education of females in schools (see Section 2.3.1), there is currently an unprecedented number of females in Saudi schools. Additionally, female schools are noticeably larger than male schools in Saudi Arabia. This is in spite of the fact that more schools have been built for boys at this present time compared to schools that have been built for females – a situation referred to as a historical structural deficit in this research. Table 4.5 below shows the number of schools for both males and females in each province. Bryman and Bell (2011) emphasise that probability sampling rests on the premise that each case in the population has an equal chance of being selected; hence the study sample size was also reached through a rigorous statistical process. This process is described below.

In the case of English teachers, the researcher did not have access to the comprehensive data stipulating their numbers and distribution in each province, and therefore relied on estimates based on the assumption that the minimum number of English teachers in each school is one and the maximum three (Department of Education in Jazan 2014). This gave an assumed average number of two English teachers in each school. Given that there are 124 male schools and 88 female schools in Jazan province, it meant that the total number of schools was 212. This total number was then multiplied by the average number of English teachers (2) which gave a total number of 424 estimated English teachers in all the six educational districts in Jazan province. Based on power sampling calculation, a technique used in estimating a representative sample of a population with a confidence level of 95%, it was estimated that a total number of 202 English teacher participants was needed (Calculator 2014). This number aimed to guarantee a representative sample size with sufficient diversity across all six provinces. The average was divided equally for male and female schools – that gave 101 per gender. In the case of students, the total population of students was 33522 (Department of Education in Jazan 2014). Using the power sampling calculation technique with a confidence level of 95%, a representative sample size of 380 was selected (Calculator 2014).

Table 4.5: Schools the six educational districts in Jazan province

Educational districts	Numbers of schools (Male-Female)
Office of Education in Jizan	16-14
Office of Education in Abu-Arish	20-19
Office of Education in Al-Arethah	20-9
Office of Education in Ahad-Almsarh	24-16
Office of Education in Samtah	28-26
Office of Education in Farsan	16-4
Total numbers of schools (male-female)	124-88

4.7.5 Data gathering process

The choice of questionnaire technique usually depends on the research question(s) and aim(s) as well as the population or sample from which the data will be collected (Bell 2005; Saunders et al. 2009; Bryman and Bell 2011). The first choice was an online self-administered questionnaire as the main data gathering tool considering the aim of the research. This questionnaire was designed using Google Forms and provided a link (hyperlink) to the questionnaire for participants. The consent forms and approval letter from the education department in Jazan province were also sent to participants via the school email. Follow-up emails were then sent once every week starting from the week after the questionnaires were placed online. This was to thank early respondents and to remind those who had not responded. The merit of this technique were that it allowed participants the time and space to answer the questionnaire at their convenience and the data was imported to the analytics software automatically and with minimum effort. Despite reminders, of the 106 schools (62 male and 44 female) contacted online, there were responses from only 19 and 7 of these schools respectively. This meant that 43 male and 37 female schools did not respond. The gender distribution of those who participated in the online questionnaires were male schools (54 students and 23 teachers), and female schools (53 students and 15 teachers).

Having decided the response rate was too low (less than 25% of a small size sample), the decision was then made to distribute the same questionnaire using hardcopies in order to improve the response rate (the main researcher distributed to the male schools and the female proxy researcher to female schools). In this case, the questionnaires were distributed to the remaining 80 schools (43 male and 37 female), giving each school ten copies. Out of the 80 schools, 33 schools did not respond (15 male and 18 female). Deductively, 47 schools responded to the hardcopies (28 male and 19 female). This resulted in an overall total distribution of 800 hardcopies with a general response rate of 55.5%. Generally, a response rate of more than 50% is considered reasonably satisfactory, whereas less than 30% indicates serious doubts about the usefulness of the research and the validity of its results (Bryman 2004). The gender distribution of the returned questionnaires were males (126 students and 113 teachers), and females (144 students and 61 teachers). The data from the hardcopies were entered manually which complemented the online self-administered questionnaire. Although this combination helped in meeting the targeted estimated representative sample size of a

population, there were cost and time implications (more details in Section 4.10). Table 4.6 below provides the distribution of the administered questionnaire.

Overall, there was no difference in the outcome between the questionnaires distributed online and those given out in hardcopies (see Appendix D for a detail report of analysis). Similar to the many studies that have used paper based questionnaire and an online based one, the advantage this method (that is, paper based questionnaire and an online based questionnaire) provides, is that the potential of bias is minimised (Berg et al. 2011).

Table 4.6: Questionnaire sample distribution

Distribution method	Total (Student – Teachers)	Male (Student – Teachers)	Female (Student – Teachers)
Online	145 (107 – 38)	77 (54 – 23)	68 (53 – 15)
Hardcopy	444 (270 – 174)	239 (126 – 113)	205 (144 – 61)

4.7.6 Data analysis

The data analysis stage began with data coding and cleaning the raw data. The coding process involved defining and labelling each question and respondent including the demographic information. This was converted into a numerical form and the data were then entered into a statistical package (SPSS) V21. In order to ensure the accuracy of entering the scores of each question, the data entry was checked. The next stage of the data analysis process was to discover any score(s) that fell outside the range of possible values for the question score. For example, the minimum and maximum as well as the frequency scores were checked. Finally, an assessment of the data was done to find any possible missing data.

The main analysis involved the use of both descriptive and inferential statistical analysis techniques. The descriptive statistics provided a summary of the main features of the data collected. Percentages were used as descriptive statistics in this study. On the other hand, the inferential statistics were used to draw conclusions about the broader population of the study including the use of Pearson’s correlation coefficient and *t*-test (for more details about Pearson’s correlation coefficient and *t*-test test, see Appendix E).

4.8 The Third Stage: Qualitative data gathering using individual interviews

This stage specifically aimed at developing a deeper insight into the findings of the first and second stages of this research. In order to achieve this aim, in-depth individual interviews were conducted. Individual interviewing is a very popular procedure in qualitative research of described as a conversation with purpose (Maykut and Morehouse 1994; Bryman 2004). It is seen as an effective means of gaining a deeper understanding of experiences, by delving beneath the superficial level of an ordinary conversation and turning it into “a rich discussion of thoughts and feelings” (Maykut and Morehouse 1994, p.76). According to Alrasbi (2013, p110), “interviews enable the detailed follow-up of points arising from the analysis of quantitative data of complex topics, a method of discovering other people’s thoughts and feelings, which cannot be directly observed”. The researcher therefore chose to use in-depth interviews at this stage of the research for the following reasons. Firstly, interviews protect the privacy of respondents. Secondly, they allow respondents to share sensitive issues that they might not otherwise raise in group interviews. Thirdly, they offer respondents the opportunity to be reflective in their responses (Ritchie and Lewis 2003; Bryman 2004). In-depth interviews were also used at this stage of the present research because the objective was to elicit in-depth information from relatively few respondents by exploring deeply the respondents’ feelings and perspectives on the outcomes of the preceding stages.

Specific research participant groups were included to help in addressing particular outcomes from the preceding stages of this research. For instance, educational officials at the national level (i.e. at the MoE) and regional level (i.e. at the Education Department Administration in Jazan province) were included to explore their views on why some schools are under-resourced (especially girls’ schools); and why a significant proportion of teachers/students lack E-learning capability. Further, the research outcome that some students and teachers lack access to computers and Internet at home was of grave concern and was pursued. Heads of families (i.e. fathers) on the other hand were included because it emerged from the preceding stages that some families constrain their children, especially girls, from using E-learning; and that some students lack access to computers and the Internet at home. Together, these provide a justification for the inclusion of national officials and heads of families at the third stage of the research. These conclusions were also used as guidance topics for developing the interview questions at this stage of the research (Appendix F gives

an overview of the interview questions). The procedure followed in this stage of the data gathering using the above four thematic areas as guidance topics are discussed below.

4.8.1 Sampling process and study sample

The outcome of the group interviews with students and teachers, as well as surveys with students and teachers, revealed broader issues relating to policy and culture. The researcher therefore decided to approach educational officials at the national and regional levels as well as heads of families of students, seeking to probe further and unpack some of the concerns that came out of the first and second stages of the research. The sampling process and study samples are presented below.

Considering the difficulties of gaining interview access to educational officials and families in Saudi Arabia, snowball sampling was used in the selection of educational officials as well as heads of families for interviews. Snowballing is a non-probability sampling technique in which known population and sample members are asked to nominate/arrange access to further respondents (Charmaz 2006). The use of the snowball sampling technique allowed the researcher access to an otherwise hidden sample. The disadvantage is trusting the judgement and accepting the limitations on the network of the initial contacts, which may introduce bias (Bryman and Bell 2011). In order to mitigate this, the researcher deliberately sought a diverse set of nominees and allowed nominated interviewees to make additional nominations i.e. not taking complete sample nominations from the first contact (Saunders et al. 2009). On the basis of the above the following samples were arrived at for educational officials and families respectively.

Educational officials at the national and regional levels. Usually in qualitative interviews, the number of interviews to be conducted and type of interviewees depend on the purpose of the interview (Cohen et al. 2007). In this research the reachability of the target sample was equally important. In terms of recruitment, the researcher personally knew two officials at the regional level and only one at the national level. These three officials were useful starting points in the snowball sampling process. For instance, the researcher's initial contact at the national level, NL-1, who had expertise on the pedagogical aspects of E-learning was particularly helpful. NL-1 was able to nominate NL-2 with expertise in resourcing and NL-3 with expertise in E-learning training. NL-3 then made arrangements for the successful recruitment of NL-4 who is centrally involved in the rollout of E-learning and

ensuring quality assurance of the programme in Saudi schools. Finally, NL-4 helped in the recruitment of NL-5 with general expertise in E-learning. Of all these five officials, only NL-3 is female but all interviews at this stage were conducted by the main researcher (NL-3 agreed to be interviewed via Skype by the main researcher). The above sample provided a diverse sample by way of expertise for the research. Table 4.7 below shows the respondents' backgrounds and positions.

Table 4.7: Respondents at the national level (NL)

National-level interviewees	
NL-1 (Male)	
Role/Position	General Manager of E-learning at MoE
Background	PhD in Education
NL-2 (Male)	
Role/Position	E-learning Supervisor at MoE for school resourcing
Background	MSc in Computer Science
NL-3 (Female)	
Role/Position	Manager, E-learning and training at MoE
Background	MSc in Information Systems
NL-4 (Male)	
Role/Position	E-learning Supervisor for Quality Control and Assurance at MoE (17 years)
Background	MSc in Information and Communications Technology
NL-5 (Male)	
Role/Position	Consultant on E-learning to MoE
Background	PhD in Software Engineering

A similar process and sampling procedure was followed at the regional level. At this level care was taken to have a representative from each educational districts under the education department in Jazan province, in order to have a diverse sample and to ensure that no two officials came from the same educational district. The snowballing process involved a contact with the two regional officials known to the researcher – that is, RL1 and RL2. RL2 then nominated RL3 and RL4. Finally, RL4 nominated RL5. There was no female at the regional level within the MoE in the education department in Jazan province. Table 4.8 below shows the respondents' background and position.

Table 4.8: Respondents at the regional level (RL)

Regional-level interviewees	
RL-1 (Male)	
Role/Position	E-learning supervisor at Education Department in Jazan province
Background	MSC Information Technology
RL-2 (Male)	
Role/Position	E-learning supervisor in Education Department in Jazan province
Background	MSc in Teaching English Language
RL-3 (Male)	
Role/Position	E-learning Supervisor in Education Department in Jazan province
Background	MSc in Teaching English Language, previously English language Teacher
RL-4 (Male)	
Role/Position	Manager of E-learning Support Centre in Jazan Department of Education province
Background	PhD in Information Systems
RL-5 (Male)	
Role/Position	E-learning Supervisor in Education Department in Jazan province
Background	MSc in Teaching English Language

In terms of families, since data from the group interviews and the survey revealed major influences on E-learning readiness in the home (especially for girls), the researcher decided to interview some parents to get their perspectives. Again this proved to be a challenge because of the lack of data and the conservative nature of the society. Initially, the researcher contacted the parents of students who had participated in the group interviews (first stage of the research) but only a few responded – that is, 7 out of 16 students who participated in the group interviews. A decision was then made to use snowball sampling technique as described above under the sampling of educational officials. This means that those parents who agreed to be interviewed from the original contact – that is, 4 females and 3 males were then asked to nominate or point to another parent they felt would like to participate and their contact details were taken.

Overall, 20 interviews were planned with families but only 18 interviews were carried out – that is, six interviews with families with only male children at high school (FR1 to FR6), six interviews with families with only female children at high school (FR7 to FR12), and six interviews with families with both gender at high school (FR13 to FR18). Participants with different professional backgrounds were selected across all the six educational districts under the education department in Jazan province, in order to ensure the diversity or representativeness of the research sample. Although the research does also include participants from different socio-economic backgrounds, this was not a criterion for selection. Table 4.9 below provides details about family respondents.

Table 4.9: Family respondents (FR)

Family interviewees			
Respondents	Educational districts	Professional background	Number of children
FR-1 (Male)	Office of Education in Jizan	Accountant	5 boys
FR-2 (Male)	Office of Education in Samtah	Policeman	2 boys
FR-3 (Male)	Office of Education in Samtah	soldier	2 boys
FR-4 (Male)	Office of Education in Samtah	Security man	1 boy
FR-5 (Male)	Office of Education in Samtah	Farmer	3 boys
FR-6 (Male)	Office of Education in Ahad-Almsarh	Salesman	1 boys
FR-7 (Male)	Office of Education in Jizan	Retired teacher	2 girls
FR-8 (Male)	Office of Education in Abu-Arish	Soldier	2 girls
FR-9 (Male)	Office of Education in Abu-Arish	Soldier	1 girl
FR-10 (Male)	Office of Education in Samtah	Security man	1 girl
FR-11 (Male)	Office of Education in Samtah	Farmer	1 girl
FR-12 (Male)	Office of Education in Al-Arethah	Salesman	3 girls
FR-13 (Male)	Office of Education in Al-Arethah	Soldier	2 boys and 1 girl
FR-14 (Male)	Office of Education in Al-Arethah	Soldier	2 boys and 3 girls
FR-15 (Male)	Office of Education in Ahad-Almsarh	Soldier	1 boy and 2 girls
FR-16 (Male)	Office of Education in Jizan	Salesman	4 boys and 2 girls
FR-17 (Male)	Office of Education in Ahad-Almsarh	Soldier	2 boys and 5 girls
FR-18 (Male)	Office of Education in Farsan	Salesman	1 boy and 4 girls

4.8.2 Piloting the interview questions

This was considered an important part of the third stage in order to test the scope of the topic guide, and to review whether it allowed the participants to fully engage with the central issues. The researcher was also looking to be sure that participants were not constrained in any way in expressing their views either through the environment or style of questioning. Therefore, six pilot studies were conducted, four interviews with families and two with national and regional officials.

In relation to families' interviews, only two relatively minor wording changes resulted from the pilots, and regarding national and regional officials, again, no serious revision was needed after the pilot. According to Bryman and Bell (2011) and Ritchie and Lewis (2003), if the pilot study suggested a minor revision and there was no radical change of direction, it was included in the main data collected. Therefore, the researcher used the first four interviews as pilots from the families, and the first two interviews as pilots from the national and regional officials, in the main study because the data collected were still significantly contributing to the research findings even if the emphasis changed slightly.

4.8.4 Conducting the interviews

This stage is concerned with the actual execution of the interview. The interviews were conducted over a period beginning October 2017 till end of March 2018, via Skype since the researcher was in the UK and the participants were in Saudi Arabia. Before the substantive interviews the researcher took time to introduce himself and explained to the participants the purpose of the study and the nature of the interview. This involved discussing with the interviewees ethical issues such as consent and confidentiality. Particularly on the issue of consent, the researcher sent out consent forms to officials by email and got the forms back before the interviews. For families, the researcher sent the consent forms to his brother to be given to the families. The forms were signed and returned to the researcher by email before the interviews were conducted. The researcher also thanked them by way of his appreciation for their time and contribution at the end.

Interviews were semi-structured, since in all cases the researcher was able to ask supplementary questions. Interview time ranged from 40 minutes to one hour. All interviews were conducted in the Arabic language and later direct quotations were translated. For consistency, parallel translation (with the proxy researcher) was adopted (see more details about translation in Section 4.6.5).

The interviews were audio recorded using a digital MP3 player with a recording feature. The advantage of using this is that allowed an immediate and easy transfer of files to the computer. The recording device also provided an opportunity to easily go back and forth during transcription in order to pay attention to important words and/or sentences (see more details in Section 4.6.4).

4.8.5 Data analysis

Strauss and Corbin (1998, p.3) define data analysis as, “the interplay between researchers and the data.” The procedure usually involves a constant comparison between data and the literature (Maykut and Morehouse, 1994). Accordingly, Bays (2001, p.53) points out that, “the main goals of the data analysis are to identify categories within the data, to identify properties and dimensions of those categories, and to establish how categories relate to one another”. In relation to qualitative data, many researchers believe that qualitative data gained through interviews should be analysed immediately after the interviews (e.g. Bryman

and Bell 2011; King and Horrocks 2010; Charmaz 2006; Bryman 2004). This strategy was used during this stage of the research process which helped to guide and direct the researcher by indicating where to focus and flagging which areas/issues remained unanswered. Following similar steps of analysis presented under Section 4.6.5, a thematic analysis was used to interpret the qualitative data. This means that data analysis started with data transcription, familiarisation with the data, coding and producing the analysis. Again, although these steps are somewhat sequential they did not always happen in isolation of each other – the researcher moved between and within the steps of analysis. Data from family and educational officials at the national and regional levels interviews is presented in Chapter Eight.

4.9 Ethical issues

Bryman (2004) makes the point that all social research involves ethical issues, choices and decisions since the researcher is interacting with other people. Cohen et al (2007) go further to suggest that the precise nature of these issues depends on the following: research context, procedures, data gathering methods, character of population and sample, and how the data are treated. In this present study, ethical approval was sought from all the institutions that were involved including the University of Edinburgh, the Saudi MoE and Jazan University. Clearance was received from all these institutions before the data collection commenced. The process involved the provision of clear information and guidance about the purpose of the research and what to do in writing in the form of a formal letter (see Appendix B and C). The following specific ethical issues needed dealing with.

Informed consent. This involved sending out consent letters with information about the aims of the study, to all research participants including students, parents, teachers and officials. The consent forms also stated that all the data, information and any recordings will be treated as anonymous and then destroyed at the end of the researcher's PhD study. Essentially, the information on the consent letter informed participants about their rights, and what to expect during and after their involvement. Parents signed for student participants under 18 years of age because, culturally the consent of children is considered invalid until they are 18 years and above within the Saudi context. This applied specifically to students who participated in the questionnaire. For those who took part in the group interview sessions and individual interviews, the researcher and the research assistant checked with the groups

whether everyone understood the information before the interviews took place. Similar checks were made with participants who participated in the manually distributed questionnaires. Participants were also assured that they would withdraw at any time during the research period. Assurances were given to participants that all data and information provided by them would be treated with strict confidentiality and used for the purpose of research only.

Anonymity. Throughout the research process, all data were anonymized in order to protect the identities of all participants. This involved the use of codes and pseudonyms rather than the real names of the participants during data transcription and the actual writing up of the thesis. For instance, members of group one which constituted female teachers were identified as (F.T.); members of group two which consisted of male teachers were identified as (M.T.); members of group three which consisted of female students were identified as (F.S.) and members of group four which consisted of male students were identified as (M.S.).

Confidentiality. Strauss and Corbin (1998) have argued that anonymising data does not necessarily guarantee confidentiality, and that the two are not mutually exclusive either. Steps were therefore taken to ensure that the research was conducted in a confidential manner. This involved carrying out interviews at places where other people could not intrude, ensuring that all participants agreed not to discuss anything that was said during the interview sessions outside the group, and ensuring that the recorder and transcribed data were kept in a safe place.

4.10 Chapter summary

The methodology chapter of any research always has substantial implications for the research because it guides how the research is conducted, and has implications for the outcome of the research. Precisely, this chapter restated the aims of this study. It also explored the possible paradigms and philosophies that underpin any piece of research, emphasising these that were used in this research. The chapter then discussed the research approach and emphasised why a mixed method approach was used for this study. Further, the various processes that were involved in carrying out both the qualitative and quantitative aspects of the research were presented. Finally, the ethical and practical challenges experienced in doing this research were highlighted and presented.

Overall, it is acknowledged in this chapter that there are numerous and diverse research methodologies and there is no agreement which is the best. The mixed-method approach (the use of quantitative and qualitative methods) was considered most suitable for this research because by each method individually helped in answering particular research questions and, collectively, they helped to mitigate the weaknesses in either approach and benefitted from their strengths. It was also approached in three stages. The first stage which involved group interviews (qualitative method) was conducted to explore the underlying factors affecting the readiness of students and English teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia. The second stage which involved the use of questionnaires (quantitative method) aimed to explore the current level of readiness of students and English teachers, and aimed to explore any gender and/or age differences in the students' and English teacher' readiness to use E-learning as a supplementary tool for EFL in Saudi Arabia. The third stage of data gathering involved the use of a qualitative method (individual interviews) seeking to: (a) develop a deeper understanding of the readiness of students and English teachers to use E-learning in Saudi Arabia and (b) to explore the perspective of national and regional officials and heads of families regarding the E-learning implementation. This aimed to provide further and deeper understanding of the findings gathered in the second stage of this research.

Finally, issues such as informed consent, data anonymity and the confidentiality of research participants were discussed as ethical challenges experienced in conducting this research. The main practical challenges encountered also included recruitment, time and cost of doing the research as well as organising the data. The next chapters focus on the reporting of data resulting from the first stage (group interviews), present the findings resulting from the second stage (questionnaire) and reporting the data resulting from the third stage (individual interviews).

Chapter Five: Findings from the group interviews – Underlying factors of readiness

5.1 Introduction

This chapter presents research findings on the underlying factors of readiness of students and English teachers to use E-learning for EFL in Saudi Arabia. These factors are identified either as personal factors or external factors in this study. While the personal factors are considered to indicate the readiness of students and teachers, external factors are perceived to influence these identified personal factors. The chapter is divided into three main sections. Firstly, the findings under personal factors that indicate the readiness of students and English teachers to use E-learning are explored and presented. Secondly, the findings under external factors that influence the identified personal factors are explored and presented. Finally, the main discussion points across the first two sections are highlighted by way of a chapter summary.

5.2 Personal factors

In this research personal factors are considered as those factors that indicate the readiness of individuals to use E-learning in Saudi Arabia. These factors have been identified in this research to include: self-efficacy, personal access to tools and personal drivers. It is to be acknowledged here that similar research in the past has limited factors under this to two – that is, self-efficacy and personal drivers (this is highlighted in Chapter 3, Section 3.4.2). The ensuing sub-sections present a synthesis of the research findings. This provides evidence to showcase what participants mainly considered under each personal factor and how this indicates their readiness to use E-learning.

5.2.1 Self-efficacy

Self-efficacy was identified as one of the main personal factors that indicate the readiness of both students and English teachers to use E-learning in Saudi Arabia. Self-efficacy was defined in the research as students' and English teachers' perceptions of their own individual related abilities, knowledge and skills to use E-learning. Across the board, students and English teachers showed how crucial a factor self-efficacy is and/or can be in indicating their readiness to use E-learning. For instance, it was clear from the data that persons who see themselves as having high E-learning self-efficacy considered themselves more ready to use E-learning for EFL compared to those whose perceptions were low. The

data are presented below under three sub-factors, skills and knowledge in E-learning, experience as well as training in E-learning.

5.2.1.1 Skill and knowledge in E-learning

In terms of skill and knowledge in E-learning, responses from all four group interviews were consistent in their views that this indicates their readiness to use E-learning. For instance, in the view of a member of the M.S. group:

... sometimes E-learning requires high skills in computer and use of the Internet... some students are not educated enough in schools to manage the use of computer.

The above quote provides a general view summarising the views of the majority of participants. Members of the group acknowledged the need for skills and knowledge in computing and use of the Internet, in general, for them to be able to use E-learning. They also highlighted the inadequacy of such skills and knowledge in Saudi schools. In addition, the group showed how the link between skill and knowledge in computer and Internet usage on the one hand, and school support on the other hand, can facilitate the acquisition of such skill and knowledge (school support is discussed in detail in Section 5.3.2). Teachers also made this connection, for example, a member of the F.T. group mentioned that:

We hope to see E-learning as a tool that can be used to support what the students are learning in the classroom. But to do this, managers in charge of the programme, first of all, need to give us and the students the appropriate assistance to raise our skills to a level that will enable us use this type of technology..

This suggests the need for the use of E-learning for EFL but at the same time calls for skill development by way of training both teachers and students (explored in detail under *Training in E-learning*, Section 5.3.1.3). Similarly, an F.S. noted that:

... We do not have enough skill in using the computer and Internet through the school to be able to use E-learning, but at least we have good skills in using computer and Internet outside the school.

This group recognised their inefficiencies in the use of technology for studying EFL in school but were quick to acknowledge their capability of using technology outside the school. Another contribution made by an F.T. emphasises the need for skill in using E-learning for teaching when she stressed that:

... it is not just the students who do not have enough skill to use E-learning. ... Some teachers also have difficulties in using E-learning.

The above raised a concern that both students and English teachers do not have the requisite skill and knowledge that facilitate their teaching and learning of EFL using E-learning. Further, the same F.T. attempted to trace the root cause of the problem when she identified that:

... based on weakness in teaching computer subject in the school from the early stages, this is why some students if not the majority have low level of knowledge and skill using computer and Internet needed to use E-learning successfully.

The narrative in the above quotation suggests the need to introduce students to computer literacy and IT skills, perhaps beginning in the primary school level. The lack of skill and knowledge was also suggested to discourage people from using E-learning in many respects. This is exemplified in the words of a member of the F.S. group who stated that:

Because we do not have any skill with this technology, we will have anxiety about E-learning, so, we think this kind of lack of skill will stop us using E-learning.

Perceived lack of technology skills creates anxiety and limits the ability to learn using E-learning by students and teachers. The next two sections explore and discuss how self-efficacy is promoted through experience and training.

5.2.1.2 Experience

This was identified as one of the sub-factors that promote self-efficacy in the use of E-learning. In general, only female student and teacher respondents identified with this as a significant personal factor that promotes the individual's self-efficacy to use E-learning. The groups cited personal instances to support their views on this issue. For instance, one F.S.'s perception on the value of experience was that:

... having some prior experience in E-learning generally is one of the factors which enhances students' use of E-learning

Specifically, a member of the group who was popular among the group for her self-efficacy in the use of computers admitted that her level of self-efficacy is as a result of her experience with such technology. In her words:

You know, my dad is a mathematics teacher, sometimes he helps me to access some websites which are designed to help students learn mathematics.

For her, this exposure to websites by her father allowed her some experience which is likely to have enhanced her self-efficacy to use E-learning, lacking experience is reported by another member of the F.S. group who said:

... using E-learning without experience is very difficult ... it is difficult to use E-learning for learning English without prior experience

Lack of experience in use of E-learning is not confined to female students. For example, a member of the F.T. group too suggested that:

... [having no experience] makes us feel a bit scared to use E-learning to teach students because we have no previous experience....

Lack of experience in E-learning makes the teachers reluctant to experiment and become conscious they may make mistakes. This was captured in the expression of another member of the F.T. group without E-learning experience. This view again supported the point raised by the F.T. These views collectively lay emphasis on the significance of how participants believe that prior E-learning experience can promote the self-efficacy of students and English teachers to use E-learning for EFL in Saudi Arabia.

5.2.1.3 Training in E-learning

This was the third sub-factor under self-efficacy that emerged from the data. Training, it was identified, plays a major role in building the self-efficacy of students and teachers to use E-learning. For instance, an F.T. expressed the need of prior training in E-learning as follows:

... for us, actually, to use E-learning in our teaching will require having training first...

Female teachers perceive training in E-learning as essential if they are to effectively and confidently use E-learning pedagogy with students, going on to suggest that as a supplementary tool, E-learning in EFL is desirable. Another F.T. noted that:

We are confident that E-learning would be good for teaching English, but this would involve training first on how to use E-learning in teaching.

Members of the F.S. group too called for training on E-learning before beginning the programme and/or during the implementation. A member of the group noted that:

We believe that providing for us and other students training is an important factor for E-learning success, before or during its implementation for learning English...

This point can be related to another point raised and discussed under *skill and knowledge in E-learning* above which suggested that the weakness of teaching IT literacy in schools negatively affects the self-efficacy of students. An M.S. expressed some similar views, which interestingly noted the need for training in and outside the school. In his words:

... providing training outside the school or inside the school will help student to be skilled in computer and that will help them to use E-learning. And it is very important to provide training to all users towards the use of E-learning. We think it is important to provide training for teachers before the actual implementation of E-learning....

F.S. group members were also emphatic in their views about the significance of prior training. According to a member of the group:

... the most important factor for us is some training before the actual use of E-learning, to encourage us to use it ... We think it is difficult to use E-learning without prior training...

An M.T. also focused on the need for teacher training suggesting that, “... *traditional teachers need some training regarding the use of E-learning*”.

In summary, all groups and both genders agreed on the importance of training for E-learning delivery or study prior to programme commencement, and that skill training should precede E-learning implementation.

5.2.2 Personal access to tools

Access to tools was another sub-factor under personal factors that was identified in relation to students' and English teachers' readiness to use E-learning as a supplementary tool for EFL in Saudi Arabia. However, little attention has been paid to access to tools in the E-learning readiness literature as an underlying factor that indicates the readiness of students and teachers to use E-learning. It is not clear whether this is an oversight or something deliberate from the existing literature. Simply put, access to tools relates to the availability of equipment, i.e. computer and Internet access at home. The basic argument here is that the more access users have to the equipment and technology, the more they are likely to be ready to use such technology for EFL. The groups interviewed expressed varied views on how the access to tools can and does (or would) indicate their readiness to use E-learning for EFL in Saudi Arabia. There were however variations in their emphasis. For instance, some members

of the F.T. group stressed the impact of lack of access to tools at home. According to a member of the group:

... it is not everyone that has access to a computer and Internet connection at home especially students

They ascribe lack of access as a major factor influencing readiness for E-learning, however, a contrary view was expressed by other members of the F.T. group. For example, another F.T. noted that:

... In our country, there aren't any homes without a computer and Internet, which makes the integration of E-learning easy.

Unlike the view expressed earlier, the view expressed here seemed to suggest that every home in Saudi Arabia has access to computer and Internet. This demonstrates the two divides in Saudi Arabia, that is, the rich versus the poor. While to the rich it seems unimaginable for families not to own computers and Internet facility, the poor seem to see it as something normal.

Further views about how access to tools impacts on students' and English teachers' readiness to use E-learning in Saudi Arabia were aired by other groups. For example, members of the F.S. group explained the cost implications of accessing these tools. According to one of the members of the F.S. group:

... E-learning will be very costly for parents to provide at home because of the cost of computers and the Internet....

What this meant was that the cost implication of using E-learning is and/or will be a defining factor for some families considering the social class groupings¹ explained above. Access to tools was hence seen as a reason that can impact on the readiness of students and teachers to use E-learning in Saudi Arabia.

¹ There are basically three classes of people in Saudi Arabia based on their socio-economic status – that is, upper, middle and lower classes. According to available statistics, the Saudi upper class constitutes only 3% of the total population, while the middle class constitutes 67% of the total population and about 30% of the total population constitutes the lower class. Although there is a wider gap between the upper and lower classes in terms of disposal income, the relatively stronger and larger middle class in the country helps to disguise the plight of low class families in the country (Alnuaim 2013).

The views of both male teachers and students were in agreement with those expressed by their female counterparts. Another dimension to the whole scenario was nonetheless flagged by a member of the M.T. group who noted that:

... Even if we have these tools, maybe the Internet is very slow, which will create some difficulties in making contact with teachers and students.

The group felt that they will need fast and reliable Internet access in order to facilitate their E-learning usage. Reliable and fast Internet connectivity will therefore encourage the use of E-learning more effectively. However, the general feeling was that the state of Internet connectivity in Saudi Arabia is unreliable even if one owns a computer and has access to the Internet. In summary, access to tools was fundamentally identified as a factor that indicates the readiness of students and English teachers to use E-learning.

5.2.3 Personal drivers

This was the third and final main factor identified as a personal factor by participants to indicate the readiness of students and English teachers to use E-learning. The related sub-factors identified here include: attitudes towards E-learning, motivation and time commitment. These sub-factors are presented below.

5.2.3.1 Attitudes toward E-learning

In the present study, participants were quite clear in their views on how the attitudes of students and English teachers indicate their readiness to use E-learning. A comment by a member of the F.T. group suggested that:

... if the teacher has a positive attitude about E-learning this will influence the students' attitudes positively to use E-learning. You know, positive attitudes will help users to use E-learning, if it is negative they will not use E-learning.

This view suggested that teachers with a positive attitude towards E-learning is an indication of their readiness to use the technology, while those with a negative attitude illustrate their lack of readiness. Another view expressed by another member of the F.T. group was that:

... Some students are growing up with this kind of technology with their daily lives. This means that most of the students have experience with those kind of technologies, so they for sure will have a positive attitude towards E-learning, because of their experience.

This view sought to link users' experiences to their attitudes towards E-learning and how this could indicate their readiness to use such technology for EFL in Saudi Arabia. Other views expressed included those of members of the M.T group and that of the M.S group. According to a member of the M.T. group:

... We like using technology, and we think the learning level of students using E-learning will be better than with traditional method of education....

This view expressed by this group demonstrated a positive attitude towards the use of technology for teaching and learning. The orientation that using E-learning will be better for teaching and learning than traditional educational methods also demonstrated the rationale behind this line of thinking (the benefit for using E-learning for EFL will be discussed in Section 5.3.3). This positive attitude towards E-learning, suggesting even that it is a better alternative than traditional classroom teaching for EFL is not echoed by the M.S. group. For instance, a member of the M.S. group said that:

... Sometimes we find difficulties to understand the context not because we can't use computers, it's about the explanation of substance which needs a teacher. So, for us, we do not think E-learning will enhance the learning of English process.

The members of the M.S. group had a negative attitude towards E-learning because they felt it was difficult to use such technology for learning. Here, it appeared that their attitudes were shaped by the fact that they felt certain things cannot be taught (only) by technology.

5.2.3.2 Motivation

This was another sub-factor identified under personal drivers. Motivation, broadly, was believed to be another factor that indicates the readiness of students and English teachers to use E-learning. A member of group F.T., for example, believed that:

... providing adequate incentives for teachers will help to integrate E-learning into the teaching process because teachers have to spend more time and more effort preparing the materials to the students.

The above comment suggests that using E-learning is time consuming, and in order for teachers to spend more time promoting E-learning, they should be provided with some additional incentives. Supporting this view, members of the M.T. group included the need to also motivate students. For example, one of the members noted that:

Giving incentives and awards to both students and teachers who use E-learning will encourage other students and teachers to use E-learning.

The additional dimension of this comment is that it included students as a group, who can also be motivated to use E-learning through rewards. This suggests that incentives and rewards can enhance the readiness of both students and teachers to use E-learning for EFL. Students appear more motivated, as a member of the F.S. group suggested that:

... they consider the use of E-learning to obtain information easily as a good motivator.

For this group of students, they will be motivated to use E-learning provided it helps them to access information easily. Finally, a member of the M.T. group explained that:

If you want to work, do not wait for someone to thank you. The stimulus is not an important aspect, but that could raise the morale of teachers.

Similar to the previous comments that underscore the significance of motivation, members of the M.T. group were of the opinion that stimulus or incentives as described by other research participants is not an end in itself but a means to an end. This suggests that motivation is another factor that indicates the readiness of teachers and students to use E-learning in Saudi Arabia.

5.2.3.3 Time commitment

This was the final sub-factor under personal drivers that was identified as an indicator of students' and English teachers' readiness. The data revealed that the issue of committing time may be an important factor to indicate the readiness of students and English teachers in using E-learning for EFL. This point was made against the backdrop that using E-learning as a supplementary tool means there will sometimes be an overlap with the traditional means of education such as face-to-face teaching and learning, which will require more time and individuals should be willing to commit such amounts of time. Quoting a member of the F.T. group, she noted that:

... it will require teachers to prepare some lessons through E-learning or some exercises or may be more than that, for example to be online to meet students or other teachers ...

This view demonstrated the perceived time commitment that will be required on the part of English teachers if E-learning is adopted in Saudi Arabia.

Expressing negativity towards becoming ready for E-learning, another member of the F.T. group included time spent training. In her words:

... using such kind of technology needs too much effort – more time and training.

This view also highlighted the demands of using E-learning not only in terms of time commitment but the need to make an effort and to undergo training. Similar sentiments were expressed by members of the M.T. group. In addition, a member of the M.T. group remarked that:

... shifting from traditional education to E-learning will require of us [teachers] a lot more time because it requires a lot of practice to learn and to apply it.

Neither group of teachers considers time spent from the viewpoint of the learners. Each is concerned with their own time and familiarity with traditional teaching methods – in this case rote learning and textbooks. Students on the other hand had a different perspective and appeared more willing to commit time for E-learning. They actually saw the use of E-learning as time saving, contrary to the views of teachers as stated above. For instance, a member of the F.S. group noted that:

... we're impressed by it because we can get information without effort and wasting time. It will really be amazing...

For this group the use of E-learning will save them some time. As a result, they were willing to commit time to use E-learning which was also indicative of their readiness to use such a technology for their studies. Overall, while teachers considered time commitment as a disincentive which inadvertently will impact on their readiness to use E-learning, students appeared excited about the prospects.

5.3 External factors

This section presents the identified underlying external factors that are perceived to influence the identified personal factors discussed above. In this study, what defines the underlying external factors involve a combination of what are considered as social factors, E-learning characteristic factors and in-school factors that influence individuals to use E-learning. These three main external factors were further put into sub-factors for analysis. For instance, the sub-factors under social factors are perceived family support and perceived peer support. Those under E-learning characteristic factors are E-learning usability (i.e. ease of use

and usefulness) and E-learning functionality (i.e. flexibility and interactivity). Finally, the sub-factors under in-school factors are perceived provision of equipment and perceived school support. These sub-factors are presented below.

5.3.1 Social factors

Social factors in this research mean the extent to which participants perceive the combined effect of family support and peer support as being available or not for their use of E-learning. It was the first main factor explored and discussed under external factors. The views here were put under two sub-factors, namely: family support and peer support. These two main factors according to the data influence the identified personal factors that indicate the readiness of students and English teachers to use E-learning.

5.3.1.1 Family support

Family support in relation to this study refers to the amount of help participants perceive their families are willing to offer them towards the use of E-learning. In general, participants in the group interviews expressed a diverse range of family values which will influence their use of E-learning. These values, the data suggest, will impact on the readiness of students towards the use of E-learning. The data identified that family support can come in one or more of the following ways: acceptance of the technology, prioritising the technology, and providing access to the technology. The discussion below provides detailed analysis of the data from the group interviews.

Family acceptance of the technology. This includes the views of participants on their families' acceptance of technology. Across all groups, it was demonstrated that family acceptance to use E-learning might be influenced by their beliefs, perceptions and attitudes towards the use of such technology, often posed in terms of safety. For example, a member of the F.T. group mentioned that:

They [Families] do not want their children to use Internet in order to protect them from the danger they hear about it. You know most of the families perceived the Internet as a dangerous place for the children.

What the F.T. group meant was that families have concerns about the children using E-learning because they consider the Internet as a dangerous and an unsafe place for the children.

Another view explaining the source of the potential danger and lack of safety was echoed in a comment by a member of the M.T. group who noted that:

... the Internet leads to contact between males and females which is unacceptable in the Saudi culture.

Collectively, the above views sought to stress the potential danger and lack of safety when male and female students are offered an opportunity to have contact even in the virtual world. At another level, there were suggestions that parents are less strict with boys compared with girls. Quoting a member of the F.S. group for example, she mentioned that:

... to be honest, our families are less strict with our brothers even if they are younger. Parents deal differently in some cases between girls and boys in our culture.

Thus, from a typical Saudi family perspective children are a vulnerable group and require family protection, especially so girls and especially when in spaces (including virtual spaces) un-policed by adults. In defence of their families, some members of the F.S. group agreed with the above view, when one of them noted that:

... parents deal differently with boys and girls regarding the use of Internet because they want to keep us [girls] safe and be away from many dangers that can occur via the Internet

Following the above discussion, it seems that safety or perceived lack of it has an impact on families' acceptance of E-learning. This was therefore considered a social factor that is capable of impacting on the readiness of students to use E-learning.

Regarding the perception and attitudes of families, a member of the F.S. group noted that: *... parents see the use of E-learning as more time consuming compared to the tradition ways of teaching and learning.* Therefore, some parents have a negative perception and attitude towards E-learning simply because they consider the use of technology as time-consuming. In addition, another member of the F.S. group suggested that this perception of parents towards the use of E-learning might be as a result of a generational gap in technology and the overall tendency for older people in Saudi Arabia to see technology as a bad thing which must be avoided if possible. She highlighted this point in the following quote:

... using E-learning will not be consistent with our parents' worldview They do not understand the advantages of using E-learning for our studies and won't allow us to use this technology.

This latest suggestion by members of the F.S. group flags the fact that the position of parents can be a significant factor that can influence the readiness of students to use E-learning since the readiness of families has direct influence on the readiness of students given the socio-cultural context of this research and other similar contexts.

In summary, in the absence of persuasive arguments and evidence to the contrary, students and teachers perceived most Saudi parents to have negative preconceptions of E-learning. Chapter Eight presents evidence from interviews with 18 families inquiring more deeply into the family perspective on E-learning.

Prioritising the technology and providing access to the technology. This is measured in terms of the significance families place on the usefulness of the technology, its perceived advantages, as well as allowing their children access to the technology. The main factor highlighted under this category was the family provision of equipment (e.g. laptop, and Internet). In relation to the provision of equipment, a member of the F.S. group cited the following as one possible way that can influence their readiness to use E-learning in Saudi Arabia. In her words:

Students who have laptops and their parents allow them to connect to the Internet anytime, means that their parents understand that technologies are very useful to their children's studies....

The above expressed view showed that parents who appear to have some knowledge about the usefulness of technology provide their children with such technology and access to the Internet. However, it was also suggested that the financial cost of acquiring this equipment can prevent families from providing the technology. For instance, a member of the M.S. group observed that:

... the high cost of Internet which will be an additional strain on the family budget... influences the readiness of the student to use E-learning ...

This view also demonstrated the potential of how the family's inability to provide such facilities can influence students' readiness to use E-learning. Students' lack of access to technology will therefore influence their use of E-learning.

Other members of the F.S. group also noted that parents who know the value of E-learning to a student will allow their children to use such technology to study. For instance, as

illustrated earlier in Section 5.3.1.2, a member of the group whose father is a mathematics teacher stated that:

... my dad is a mathematics teacher, sometimes he helps me to access some websites which are designed to help students learn mathematics. He knows that E-learning is useful for students, so he will let me use E-learning.

The experience of this student can be seen as a direct result of the priority her father places on using E-learning which leads him to provide her with the access.

In summary the section identified two main factors under family support: one, family acceptance of the technology; and two, prioritising and the provision of access to the technology. The latter was explained in terms of the family provision of equipment (e.g. laptop, and Internet) while the former included family beliefs, as well as perceptions and attitudes.

5.3.1.2 Peer support

Peer support is defined in this research as the assistance and encouragement students and teachers get from their friends and/or colleagues that could influence their readiness to use E-learning. Peer support also refers to the amount of help participants perceive their peers (including friends they associate with online) are willing to offer towards their use of E-learning. In the present study peer support, as another sub-factor under social factors, featured prominently in the coded data from group interviews. For example, a member of the F.S. group suggested that:

... sometimes it is possible to have chats with some people online. We might not know them, but the idea is to have some friends... that you can try to communicate in English with them.... These friends we meet online are really supportive in our communication in English.

Members of the group considered this as one of the possible ways that could influence their readiness to use E-learning as a supplementary tool for EFL in Saudi Arabia. However, other members of the group expressed that help from friends is not always available, but it is a good thing to know that one can rely on friends when in need. For instance, a member of the group expressed that:

... it is absolutely right ... the first time I used E-learning I found it so difficult, but I asked for some help from friends....

In this particular case, a member of the F.S. group mentioned that she initially had a difficulty in using E-learning which was mitigated by the support she got from the friends. This has enhanced her use of such technology and demonstrates how peer support can influence students to use E-learning.

Other views expressed by members of the other groups interviewed included that of a member of the F.T. group who stated that:

... a friend built my confidence to use the computer and Internet in my teaching when she introduced me to the technology and taught me how to use it. This has helped me prepare for my lessons....

Further, this view demonstrates how peer support can influence individuals to use E-learning. This member of the F.T. group also intimated how the support she got from the friend helped in boosting her confidence to use the computer and Internet in her teaching and lesson preparation. Another commented on imitative behaviour between peers. Another member of the F.T. group said that:

... I think, if I do not see my colleague using E-learning I will be less motivated to use it.

This means that people are more inclined to embrace and use E-learning if their peers are using such technology. So, a student and/or teacher who uses E-learning by themselves might do so with less interest compared to if they were doing it with a friend or colleague.

Finally, a viewpoint that expressed the possible lack of peer support that might impact on the readiness of users was captured by a member of the M.T. group who noted that:

Sometimes there is no encouragement from colleagues to use E-learning. I think we have more teachers who prefer the traditional teaching than the teachers who like to use E-learning. Traditional teachers will have negative influences over each other.

Traditional teaching here implies a face-to-face method of teaching without the use of technology. It also suggested that within groups where people are not amenable to use E-learning, this can have a debilitating effect on the individual who was originally inclined to use E-learning.

5.3.2 In-school factors

In-school factors in this research mean the extent to which participants perceive the combined effect of the technology required, management support and technical support as being available or not for their use of E-learning as a supplementary tool for EFL in Saudi Arabia. It was the second main factor explored and discussed under external factors. The views here were put under two sub-factors, namely: provision of equipment and school support. These two main factors according to the data influence the readiness of students and English teachers to use of E-learning. The two sub-factors are further explored and discussed below.

5.3.2.1 Provision of equipment

This is defined in this present study to mean the extent to which participants perceive the technology required for E-learning as being readily available or not available for their use in the school. This factor was considered important because the availability of tools such as computers and Internet connection in schools is one of the essential elements supporting the use of E-learning. From the data, all the groups considered the provision of equipment as an important sub-factor because they were able to identify the impact of its absence on students' and teachers' readiness to use E-learning in the school. For instance, a member of the F.S. group suggested that:

... [to use E-learning] that needs availability of Internet and computers [in schools].

This was similar to the view expressed by members of the M.T. group, when one of them noted uneven availability of technology even within the same province, that:

... unfortunately, there are a lot of schools here in Jazan without any equipment at all.

The lack of equipment in schools can affect the skill and attitudes of the students which in turn can impact negatively on their readiness to use E-learning. It also supplements and provides an explanation to earlier concerns raised in Section 5.3.1.1, which identified lack of skill as a contributory factor that impacts on the readiness of students and teachers to use E-learning.

Other responses included comments by members of the F.T. group and members of the M.S. group who spoke about the current state of equipment in their individual schools.

Both groups noted that what they have in their schools cannot support the use of E-learning. Quoting them respectively:

... if the equipment in the school remains the same as now, honestly speaking, the situation for applying E-learning will be very bad since the equipment is the most important part towards E-learning usage (F.T).

To be honest, this type of learning can't be at the school level, because the condition of the facilities in the school isn't helping to apply this type of learning; old machines and slow Internet (M.S).

These comments appear serious, since without the appropriate technology in sufficient numbers to be accessible, E-learning is doomed to fail. There is a clear disjuncture here between policy statements emanating from central government on investment in information technologies in schools and the experience of the groups interviewed (see Section 2.3.4 above on government spending).

Further, it was identified that the availability or having the equipment in better condition can motivate students and teachers to use the technology. Perhaps members of the M.T. group captured what needs to be done to help improve the current state of affairs more succinctly. A view expressed by a member of the group suggested that:

Providing the appropriate equipment in the classroom such as smart blackboards, computers and Internet will encourage the use of E-learning by both teachers and students.

This view expressed above supported the position that the provision of modern equipment will influence students' and teachers' use of E-learning in Saudi Arabia. This might require a range of diverse school management support. Explaining this further, a member of the F.S. group also noted that:

We will need the school's support to use E-learning. ... providing and selecting the appropriate requirement for E-learning, will influence us positively to use E-learning. For those of us who do not have access to the computer and Internet at home to use, if computers and Internet are available in the school, then that will influence us to use E-learning in the school.

This view expressed by this member of the F.S. group indicated that for students who do not have computers and Internet access at home, school management support through the provision of these resources can influence them to use E-learning in their study.

Overall, this section demonstrated how the provision of equipment influences the readiness of students and teachers to use E-learning. The general view was that participants were dissatisfied about the current state of their schools' equipment.

5.3.2.2 School support

School support is defined in this study as the extent to which participants perceive and believe that support is provided by the school management and technicians to encourage the use of E-learning as a supplementary tool for EFL in Saudi Arabia. This was the other sub-factor identified under In-School factors. In relation to this, two different kinds of support were identified. These were support by the school management, and technical support. These are explored and discussed below.

Support by the school management. Here, a range of diverse views were expressed to show how school management support or the lack of it can influence the readiness of students and English teachers to use E-learning. These views were expressed across all group interviews. For instance, a member of the M.T. group whose view was embraced by the entire group membership noted that:

I tried to motivate my students to use E-learning and I asked the school to help me to apply this method but there wasn't any support from the school which can help me to use E-learning.

Reflecting on the above view, members of the group shared their personal experiences on how the lack of school management support has thwarted their efforts to use E-learning in their teaching. A similar view was expressed by another member of the M.T. group who mentioned that:

... another barrier I can think of, is the absence of management support in the school, some head teachers can't differentiate between the traditional education and E-learning and how to mix the two methods together. So, the teacher who wants to apply E-learning in his teaching will stop because the lack of head teacher support.

Again, this view identified how the lack of school management support can manifest itself. In this case, it comes as a result of the lack of knowledge in relation to how such support can influence the readiness of students and English teachers to use E-learning. Finally, a member of the M.S. group suggested that:

We have strong financial support from the government to provide technologies in our school. But whether the schools are equipped with those kinds of technologies depend on the school managers. Unfortunately, some older managers prefer face-to-face teaching and learning rather than using both traditional teaching and learning with E-learning.

What this group felt was that although Saudi Arabia is a rich country and is capable of having the latest technology to facilitate teaching and learning using E-learning, some managers deliberately refuse to use these new technologies because they do not want change to take place. Overall, the study found that the provision of management support is crucial in influencing students and teachers use of E-learning.

Technical support. This is defined in this research to mean the availability of the needed expert support in order to facilitate the smooth operation of E-learning. It was identified as another significant factor that influences the readiness of students and English teachers to use E-learning in Saudi Arabia. Across all group interviews conducted in the present study, there were differences in the views of participants about how technical support can influence the readiness of students and English teachers to use E-learning. From the data, a member of the F.T group mentioned that:

... we do not have full technical support or sometimes the technical support does not exist in some schools which makes the situation even worse. This makes it scary for those without previous experience to use E-learning to teach students since there is no technical support in the school

The above was typical of the views and perhaps attitudes of users who have limited or no skills in using such technology and do not think that they have the appropriate technical support in place in their schools. The availability of technical support can therefore increase the motivation of teachers to use E-learning in teaching EFL. This view was shared by the majority of participants from other groups. For instance, sentiments expressed by a member of the F.S. group also showed that the lack of technical support is a problematic issue. Quoting a member each of the F.S. and M.T. groups who used the situation in their schools as examples, they noted respectively that:

... my school has few computers that my classmates and I can use, but we do not have basic maintenance support of these computers... (F.S.).

... even if the equipment is available in the school, you have a lack of maintenance for that equipment. (M.T.).

The above views highlighted the significance of technical support to both students and teachers respectively in schools. As illustrated in each individual quotation, the unavailability of technical support in schools means that those with E-learning facilities (computers and Internet) cannot maintain these facilities. The general view was that the availability of technical support will help those without such technology experience in many ways; not least, it will lower their level of apprehension and anxiety as well as guarantee them the needed guidance and support. For instance, members of the M.S. group expressed that the availability of sufficient technical support can help them overcome any lack of skills in relation to the use of E-learning. According to a member of the group:

... there should be a technical team in each school to help students with any skill related problems that might occur because we are not skilled enough to use E-learning without technical support....

This group believed that starting the use of E-learning requires some skills (explored in detail earlier in Section 5.3.1.1). They were confident that the availability of technical support in schools will ensure that the technicians are able to intervene and help in case they experience skill related problems. The availability of technical support will therefore help build the confidence of students and teachers to practice with the technology without fear. Overall, the findings demonstrated that the availability of technical support will have a significant positive influence on the readiness of students and teachers to use E-learning. Additionally, the section highlighted the level of support needed in order to influence users to use E-learning. It also suggested that the continued availability of technical support will increase users' skills, attitude, motivation and ultimately their readiness to use E-learning.

5.3.3 E-learning characteristic factors

E-learning characteristic factors is defined in this research to mean the extent to which participants perceive the combined effect of E-learning usability (i.e. ease of use and usefulness) and E-learning functionality (i.e. flexibility and interactivity) as being available or not for their use of E-learning as a supplementary tool for EFL in Saudi Arabia. Simply put, it means how far participants believe that E-learning is (or will be) easy to use, useful, flexible and interactive. This was the third and final main factor discussed under the external factors that were identified by participants to influence the identified underlying personal factors that indicate the readiness of students and English teachers to use E-learning in Saudi

Arabia. The discussion below explores and provides analysis under E-learning usability and E-learning functionality as sub-factors of E-learning characteristics identified by respondents.

5.3.3.1 E-learning usability

E-learning usability is defined in this research to mean the extent to which participants believe that it will be easy or not, and whether or not it will be useful for learning and teaching EFL in Saudi Arabia. The discussion below explores and interrogates the views of participants under two sub-factors – ease of use and usefulness.

Ease of use. It is defined in this research to mean the extent to which participants believe that using E-learning will require less effort and be easy (more details about ease of use in Sections 3.3.2 and 3.4.3.2). This section focuses on the perceptions of participants on how the ease of use of E-learning impacts on their attitudes and motivations to use the technology. Citing a member of the F.T. group for instance, she suggested that:

... if it [E-learning] is implemented in the right way, this will reduce the effort required to use it in the school, but that will mean teachers will do more work outside the school.

Principally, it is acknowledged in the quotation that less effort will be needed to apply E-learning in schools provided it is correctly and appropriately implemented. Additionally, the member of the F.T. group highlighted the point that more time is nonetheless required for preparation outside the school in the case of teachers by way of preparation.

Some members of the F.S. group also made a comment that was considered interesting. According to a member of the F.S group:

The one thing that stimulates students to use E-learning is the huge amount of information that is easily accessible on it. What I mean here is that relative to the traditional classroom which is restricted to the use of textbooks, E-learning offers students' opportunities such as videos and other recorded materials which can be easily accessible.

The above suggested that through E-learning a lot of information can be made readily available to students to enable learning regardless of place. This was the characteristic of technology that was considered by participants as user friendly. Other members of the F.S. group who had never used E-learning expressed their views about it nonetheless. One of them noted that:

You know, it will not be easy for students who do not have any experience with E-learning to use it.

The position of this member of the F.S. group was that it will not be easy to use E-learning as a supplementary tool for EFL without any experience (E-learning experience is discussed in detail in Section 5.3.1.2). Overall, the above were considered to impact on the attitudes and motivation of users to use E-learning.

Usefulness. Perceived usefulness is defined in this research to mean the extent to which participants believe that using E-learning will enhance their learning and teaching. From the data, a member of the F.T. group suggested that:

... it's hard to replace face-to-face teaching and communication, not because teachers do not want to change, or we do not have enough skill to use computer and Internet but the idea of applying it [E-learning] in our teaching is very hard, and E-learning is a new style of teaching and the outcome of it is not known.

The above comment suggested that although the member of the F.T. group saw the usefulness of applying E-learning to their teaching, they were nevertheless hesitant and seemed unsure of its comparative advantages to face-to-face teaching. Here, the focus centred on the fact that the member of the F.T. group above seemed to consider it less useful because it is something new. Another member of the F.T. group suggested further that:

... the adoption and use of E-learning in schools should not affect other skills that students acquire from face-to-face teaching and learning, such as handwriting skill....

This group cautioned against its potential negative impact on students – such as developing their handwriting skills. It therefore seemed that, overall, although the majority of the members of the F.T. group saw the usefulness of E-learning in their teaching, there were some dissenting views. The members of the F.S. group also saw E-learning as useful in many ways. For example, one of them mentioned that:

... E-learning gives feedback on time, which is sometimes helpful especially when you do not need a teacher to know if your answer is correct or not. ... this will really encourage us to use it.

This view saw the usefulness of E-learning in the fact that students are able to use it to learn on their own without their teachers watching over them. Another usefulness of E-learning raised in the quotation is that it offers students the opportunity to be able to access instant feedback without the need for teachers. All of the above corroborated the position of

members of the F.S. group who saw it as a motivation to use E-learning for EFL in Saudi Arabia.

The members of the male groups also had some comments regarding the usefulness of E-learning. According to one member of the M.S. group:

E-learning will open for students a big amount of information to use which will improve their English as opposed to traditional learning which students are restricted to the book. For example, nowadays with Google, translation is very easy and that will help learners to learn English. Also, listening is one of the most important skills in learning English. You know, E-learning can provide audio and video to listen and watch as much as you can, which will improve students with weak listening skills and something like this E-learning should be used.

The above quotation illustrated two significant points: a comparison between E-learning and traditional methods of learning and development of students' listening skills. Another quotation that was considered interesting from a different member of the M.S. group stated that:

There are many positive aspects, for example speaking ... E-learning can maintain openness in communication if used in the right way which can be extended to the community. ... E-learning can also support students' speaking skills by using chat rooms that are available in English. Since we are in a non-English speaking country, using E-learning will help to develop students' speaking skills.

This group also focused on speaking as a particular skill considered useful in E-learning. They specifically felt that students can rely on chat rooms to practice their speaking skills which they felt was missing in the traditional way of teaching and learning. In the case of this research the participants identified development in their speaking skills as the core benefit.

Overall, the analyses on usefulness identified the following benefits of E-learning: promoting independent learning with less intrusion from teachers, as well as helping to develop students listening and speaking skills. In the views of the majority of participants the above mentioned benefits influence their attitudes and motivation towards E-learning. The section therefore provides glimpses of participants' understanding of how E-learning usability influences the identified underlying personal factors that indicate the readiness of students and English teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia from the perspective of participants. The next section explores E-learning functionality as a factor.

5.3.3.2 E-learning functionality

E-learning functionality is defined in this research to mean the extent to which participants believe that the use of E-learning will provide flexible and interactive access to instructional and assessment material to facilitate teaching and learning EFL in Saudi Arabia. The views of participants on E-learning functionality (flexibility and interactivity) are explored and discussed below.

Flexibility. It is defined in this research to mean the extent to which participants believe that using E-learning will offer them options in their learning and teaching in relation to time and/or place. Here, participants provided suggestions to how the flexibility of E-learning systems can influence the teaching and learning of EFL. According to a member of the F.T. group:

Through [E-learning] students have access to coursework 24 hours/day which give them more flexibility on time to follow up what they missed in the classroom. This could help to improve their English.

Looking back to the comment above, the group thinks unlike the traditional face-to-face method of teaching and learning, E-learning provides a sort of flexibility in relation to time and place/space. This means that if E-learning is adopted as a supplementary tool for EFL in Saudi Arabia, the expectation is that students should be able to access coursework and other learning materials at any time. Further, another member of the same group suggested that:

... students can have access to coursework within the school or home. They can also access it where ever they have access to a computer and Internet connection. Teachers also can have the same flexibility to monitor students' progress.

This comment illustrated the flexibility in terms of place that is offered by the use E-learning. It means that the concept of flexibility here extends beyond time to include space as well. It also demonstrated that both students and teachers can benefit from the advantage(s) the flexibility of E-learning offers. For instance, both students and teachers can perform their respective duties at any place using E-learning. Similar viewpoints were presented by members of other groups. For instance, a member of the F.S. group mentioned that:

We can use it [E-learning] any time which means we have flexibility to use E-learning to do more exercises or to do homework.

The above supports earlier suggestions that E-learning provides students in particular the flexibility with regard to both time and place. The male group also provided insights as to how they consider E-learning to be flexible for their teaching and learning needs. Quoting a member of the M.S. group:

The traditional classroom offers limited time to learn but with the use of E-learning we will have unlimited access to the lessons. Most students spend a lot of time on the Internet and can learn at their free times. In our learning of English nowadays, we are restricted in learning only in the classroom, which means we do not have place flexibility. E-learning will help to overcome all geographical and spatial barriers for students to learn English and exchange knowledge.

The above comment also contributed to the debate on flexibility as an E-learning functionality by echoing the views previously raised by other groups. It also goes a step further to suggest that E-learning removes geographical and spatial barriers for students.

Overall, the analyses on flexibility highlighted that respondents associated E-learning flexibility to two different forms: first, flexibility in terms of time, and second, flexibility in terms of place. These two forms of flexibility, they demonstrated in their responses individually and jointly, can impact on the attitude and motivation of students and English teachers to use E-learning.

Interactivity. It is defined in this research to mean the extent to which participants believe that using E-learning will provide a platform that offers them the opportunity to exchange ideas in their learning and teaching both among students themselves and with their teachers. Here, the participants indicated that E-learning is an interactive tool that has the potential of facilitating very effective communication between students and/or with their teachers. Citing a member of the F.T. group:

... the E-learning environment is different to traditional learning because E-learning can be a complete set of technology tools which allow teachers and students to interact in a new style through the Internet...

The above comment suggested that learning and teaching English using E-learning will provide an interactive relationship among students and between teachers and students. This was supported by views expressed by a member of the F.S. group who noted that:

In our educational system now, the methods of teaching and learning in the classroom does not support interaction with students who come from different regions, while we in

the school come from the same area. The use of E-learning will help us to interact somehow with other students even from different countries...

The view expressed above acknowledges the non-interactive nature of the current methods of teaching and learning in Saudi Arabia. The implication of this is that students and teachers do not have any other means of interacting outside the classroom. The adoption and use of E-learning in Saudi Arabia can help to overcome the challenge the lack of interaction poses to students and teachers currently. The interactive component of E-learning can also help Saudi students to communicate with students from different regions which can be an avenue for them to learn from each other. The members of the male gender groups also expressed similar sentiments. Quoting a member of the M.S. and M.T. groups respectively, they noted that:

We will use it [E-learning], because it will add something new to our learning and allow us to interact with other students or teachers in a more open way even outside the school. (M.S.)

... the online interaction aspect that E-learning will provide to students and teachers is one of the most important advantages of E-learning. For instance, E-learning will increase the possibility of contact between students and teachers using email, discussion boards and chat rooms. It also helps in activities such as, marking, sending and receiving the homework as well as providing immediate feedback. I think in this way, so, the students will have more time to participate and interact in the learning of English outside the classroom. (M.T.)

The above two comments suggest that, although they considered interactivity between teachers and students as something important in the learning of EFL, they identified that E-learning facilitates this better outside the classroom setting. For instance, E-learning systems encourage students and teachers to be proactive in the learning and teaching of EFL through various forms of interaction, including online collaboration and providing instant feedback.

Overall, the view of the participants sought to show that the interactions and collaboration between teachers and students are key to an effective teaching and learning process. Based on the above, it was instructive that the interactivity component of E-learning serves as a motivation to students and teachers as well as developing a positive attitude in them. Interactivity was therefore considered an important factor that can influence the attitude and motivation of students and teachers to use E-learning in Saudi Arabia.

5.4 Chapter summary

The chapter explored and discussed the identified personal factors that indicate the readiness of students and English teachers to use E-learning for EFL in Saudi Arabia and the external factors that influence these personal factors. In summary, the section has highlighted the need to examine the interrelationships between and among these identified factors, in exploring the readiness of students and teachers to use E-learning for EFL in practice. In addition, it was observed that the external factors have a crucial role in shaping the decisions of students and teachers. For instance, it was identified that the broader social and educational setting of the students and teachers will have important hidden implications concerning e.g. the underlying conceptualisations of teaching and learning using E-learning, the roles of students and teachers, and the relationships between families and students. From the literature review, it was also observed that the majority of studies on the readiness of students and teachers for E-learning have been carried out in settings that can be broadly characterised as Western. The settings of the existing literature tend to be somewhat similar to each other at least in social terms. This research outcome is in line with Vygotsky's (1934) approach to individual learning in a social setting that highlights the importance of culture and context. He argues that these factors are inseparable and inter-determining. Accordingly, a list of hypotheses is postulated to test the correlation within the personal factors, on one the hand, and between the personal factors and external factors, on the other hand (see Chapter Seven, Section 7.4, for the lists of hypothesises). These correlations will be tested in Chapter Seven. Figure-5.1 below illustrates the inter-connectivity between the identified underlying factors of E-learning readiness.

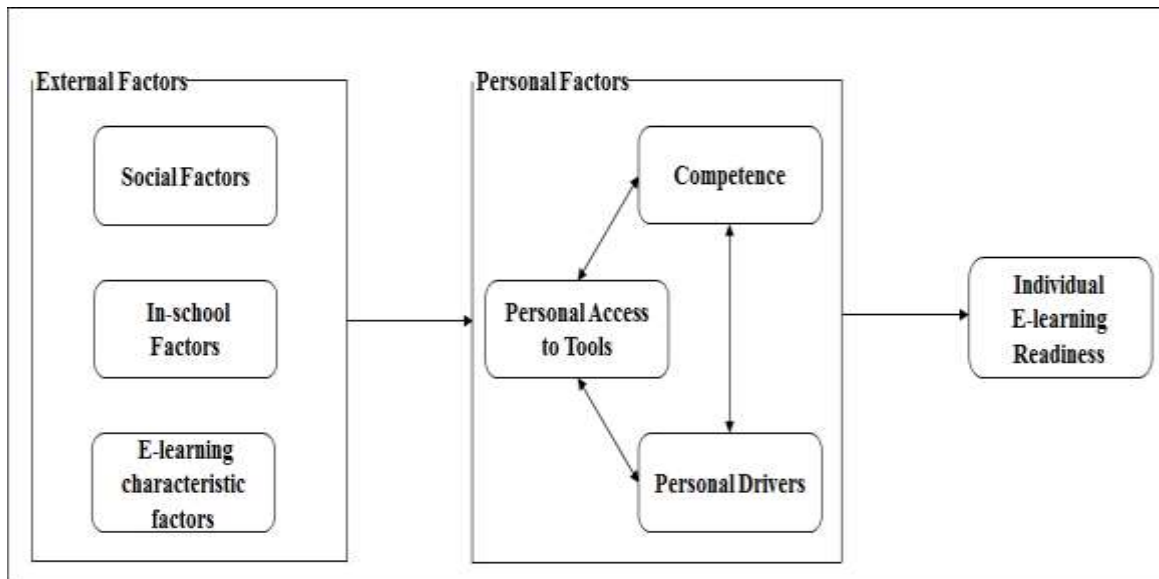


Figure 5-1: Individual E-learning readiness – Relationship between personal and external factors

The next three chapters will explore the current level of readiness of students and English teachers, as well as any age and/or gender differences in the readiness of students and English teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia. Specifically, Chapter Six will explore the validation of the questionnaire that was designed to explore the readiness of students and teachers to use E-learning for EFL in Saudi Arabia; Chapter Seven will present the findings from the quantitative data on the readiness of students and teachers; and Chapter Seven will present the qualitative data findings from the national and regional officials as well as families on the readiness of students and teachers.

Chapter Six: Validation of the research questionnaire

6.1 Introduction

Following from the first stage of data collection that explored the underlying factors of the readiness of students and English teachers to use E-learning in Saudi Arabia using a qualitative study, two major groups of factors were identified namely: personal and external factors (see details in Chapter Five). However, the current level of readiness of students and English teachers to use E-learning in Saudi Arabia could not be explored in the first stage of data collection. As a result, a questionnaire was built to explore this based on the findings of the first stage (for more details about designing the questionnaire of the present study see Chapter Four, Section 4.7.1). This chapter focuses on validation of the research questionnaire, using both content and construct validity.

Questionnaire validation simply refers to whether an instrument measures what it was designed to measure (Field 2013). This process is considered a “prior and primary” requirement in empirical survey research (Straub 1989, p.8). Basically, the process of validating a questionnaire involves establishing the validity and reliability of the survey instrument in order to enhance the credibility of the conclusions that are to follow (Straub et al. 2004). This has a number of advantages. Firstly, it is suggested that, “greater attention to instrumentation brings more rigour to the scientific endeavour in general” (Al-Harbi 2010, p.118). This enhances greater confidence in the findings. Secondly, it strengthens research efforts and promotes triangulation in the sense that tested questionnaires can be adapted, modified and utilised by other researchers across contexts and times (Straub 1989). Thirdly, by engaging in the process of questionnaire validation, the researcher in many ways is engaged in a very real sense in a reality check (Straub 1989). He/she is able to find out in relatively short order how well conceptualisation of problems and solutions matches with actual experience of the research participants. Finally, the steady comparison of theory and practice leads to more theoretically meaningful variables and variable relationships throughout the process of questionnaire validation (Bagozzi 1980; Straub 1989). Therefore, it stands to reason that researchers validate survey instruments in the interests of scholarly transparency to increase public confidence in methods employed in published research (Nunnally 1978).

Across disciplines, researchers either design their own questionnaires at any given time or adopt previously validated ones with the knowledge that both have their strengths and weakness. For instance, a previously validated questionnaire is often considered to be reliable and saves time (Straub et al. 2004). However, one can only adopt a previously validated questionnaire if significant changes have not been made to it. Otherwise there will be a need for re-validation (Straub et al. 2004; Straub 1989). In the present study, the researcher has chosen to adapt some questions from a previously validated questionnaire, in addition to adding a few developed from scratch, in order to meet the needs of the current study (see Chapter Four, Section 4.7.1). This chapter discusses the process of validity and reliability of the present research's questionnaire. The first section addresses content validity. The second section discusses construct validity and is followed by the final section, which discusses the reliability of the questionnaire.

6.2 Content validity

Content validity assesses, “the degree to which individual items represent the construct being measured, and cover the full range of the construct” (Field 2013, p12). In other words, it is a subjective measure of “how appropriate items or scales seem to a set of reviewers who have some knowledge of the subject matter” (Litwin 2003, p. 33). It is an essential first step in the questionnaire validation process, although it is not particularly simple to assess (Rubio 2005; Straub et al. 2004). In order to assess the content validity, the current research relied on the expert judgement method. This meant that expertise was sought based on their experience, standing in the field and qualifications as well as research output (Rubio 2005). Regarding the ideal number of experts' reviews, no firm consensus exists in the field, although a minimum of three appears to be the norm (see Lynn 1986; Rubio et al. 2003). In this study, six expert reports were used to assess the content validity of the research questionnaire: Four doctoral candidates in the field from Manchester Metropolitan University, one professor of educational technology at Jazan University, and a professor of educational technology at King Saud University in Saudi Arabia were recruited.

The selected experts were contacted by email and asked to participate. Those who agreed were forwarded a package of documents, that is, an introductory letter introducing the research and the questionnaire (see Appendix I). All experts were invited to identify and include in the reviews errors, repetition, ambiguities or possible points of misunderstanding

on the questionnaire. The reviewers were also invited to recommend any changes, such as questions to be removed, amended, and/or clarified. Three reminder emails were sent to ensure the experts returned completed response forms within three weeks of dispatch, all six did so. A few judgements that found room for clarity of parts of the questionnaire. For example, Question 25: “E-learning offers multimedia types to be used for learning and teaching English” was revised to “E-learning offers multimedia (audio/video and text) types to be used for learning and teaching English”, following suggestions by the experts. The researcher then sought a second review of the amendments before the changes were finalised. No other concerns were raised, indicating that, overall, the content validity of the questionnaires had been supported by the experts.

Although content validity is an important step in evaluating a questionnaire (Brown 2015; Rubio 2005; Straub et al. 2004; Straub 1989; Bagozzi 1980), its process is inherently subjective, even with a reasonable sample of expertise, meaning that the process is subject to potential expert bias (Ary et al. 2010; Brown 2015; Gay et al. 2009). Therefore, another process of validation, that is construct validity, was conducted in order to ensure that the questionnaire in fact is able to measure what it is intended to measure. The process of construct validity for the questionnaire is discussed below.

6.3 Construct validity

Construct validity is “the extent to which a measured variable actually measures the conceptual variable (the construct) that it is designed to assess” (Stangor 2007, p.92). Construct validity is typically assessed by a factor analysis technique, which is defined as a class of multivariate statistical methods, “whose primary purpose is to delineate the underlying structure among the variables in the analysis” (Hair et al. 2006, p.104). In a general sense, factor analysis is used to “analyse the structure of the interrelationships (correlations) among a large set of items/questions by identifying a set of common underlying dimensions, known as factors” (Al-Harbi 2010, p140). A factor is essentially, a “unidimensional construct within a data set which is characterised by the variables of which it is comprised” (Watson 1998, p.1361). This means that, by using factor analysis, the researcher can initially determine the separate dimensions of the structure before describing the degree to which each variable is explained by each dimension (Hair et al. 2006). Some of the unidimensional variables of interest in this research were self-efficacy, personal drivers

and personal access to tools related to E-learning readiness which was considered multidimensional.

There are two main methods used in factor analysis namely, exploratory factor analysis (hereafter, EFA) and confirmatory factor analysis (hereafter, CFA). EFA is usually performed in the early stages of research seeking to describe the relationships between variables without determining the extent to which the outcomes fit a particular model – that is, exploring the structure of a questionnaire (Brown 2015; Bryman and Cramer 2001). CFA, on the other hand, is a more complex method used in the advanced stages of the research to test hypotheses about latent variables² (Field 2013). Fundamentally, both EFA and CFA analysis help to establish validity by assessing the factor loadings, resulting from such factor analysis. The analysis also helps to check for clean-loadings (convergence of factors), and cross-loadings (divergence of factors) on constructs/factors on which they are theorised to load or not to load (Bagozzi 1980; Straub et al. 2004). The following sub-sections illustrate how construct validity was established for the research questionnaire using EFA.

6.3.1 Exploratory factor analysis

EFA was conducted at the beginning of the research process. It details the basic structure of relations between variables but does not seek to provide any answers as to how they fit any particular theoretical model of explanation (Bryman and Cramer 2001). This process is widely applied in the social sciences (Brown 2015) and can help researchers: (1) to understand the structure of a set of variables, (2) to aid in the construction of a questionnaire, and (3) to reduce a dataset to a more manageable size while retaining as much of the original information as possible (Field 2013). To perform EFA for the present study, a number of key decisions were taken in consideration including: (a) deciding the adequacy/suitability of the study sample for the analysis; (b) choosing factor extraction methods for identifying the unique factors; and (c) choosing the rotational method(s) to interpret the factors. The three key decisions made in this research process are discussed in more details below.

² Latent variables are latent in the sense that they are not immediately observable, i.e. there are no direct and obvious measures that capture the essence of the variable (Straub et al. 2004).

6.3.1.1 Key decisions

In relation to *sample adequacy*, this was guided by the assumption that the sufficiency of the research sample is a pre-condition for conducting EFA (Tinsley and Tinsley 1987; Field 2013). There is also consensus in the literature that suggests that a sample of 300 or more will most probably provide a stable EFA (Comrey and Lee 1992). Tinsley and Tinsley (1987) have also suggested that at least 5-10 participants per question is good enough when conducting EFA. Based on the above pre-conditions, the questionnaires for the present research were designed consisting of 38 questions and distributed to a total sample of 589 participants, with the ratio of 15 participants per question (see Appendix B for the questionnaire). This demonstrated, to a large extent, the adequacy of the sample of the present study to conduct EFA. Additionally, a statistical technique known as Kaiser-Meyer-Olkin (hereafter, KMO) was used to measure the sample adequacy in the present study. KMO is a statistical technique that is used to measure the suitability of the data for EFA. The KMO statistical result varies between 0 and 1 which indicates the likely inappropriateness or appropriateness respectively, for using EFA (Field 2013). Further, the recommendation is that values greater than 0.5 are acceptable and values below 0.5 calls for either the gathering of more data or a reconsideration of the variable(s) to include or not (Kaiser 1974). Furthermore, “values between 0.5 and 0.7 are considered ordinary; values between 0.7 and 0.8 are good; values between 0.8 and 0.9 are great; and values above 0.9 are superb” (Field 2013, p.647). The KMO value for the present study is 0.8, an indication that the sampling was adequate for EFA.

In relation to *factor extraction methods*, which is a process of deciding whether a factor in factor analysis is statistically important enough to be extracted from the data and interpreted based on the magnitude of the eigenvalue³ associated with the factor. In order to determine the magnitude of the eigenvalue, two different average communalities⁴ needed interpretation in this present research – that of the personal and external factors. The average of communalities for the personal factors was 0.69 (see details in Appendix G) and that for the external factors was 0.73 (see details in Appendix G). Because the communalities in both cases are close to 0.7 or greater, it was considered appropriate to use the magnitude of the

³ Eigenvalue indicates the substantive importance of that factor.

⁴ A communality is the extent to which an item correlates with all other items.

eigenvalue as recommended by Kaiser (i.e. > 1), over other choices available in this situation (Field 2013).

In relation to *settling on the rotational method(s)* to interpret the factors. Rotation is a strategy to simplify and clarify the data structure so as to improve the interpretability of factors. As earlier noted in the literature, it highlighted the interrelationship among the personal factors and even between the personal and external factors. In this situation it was considered appropriate to use the promax method under oblique rotation rather than the orthogonal rotation. The decision was informed by the fact that, unlike orthogonal rotation, oblique rotation allows for a correlation among identified factors (Field 2013). Additionally, for the substantive importance of factor loadings, in the present study, the researcher also interpreted only factor loadings greater than 0.6 as recommended by Alosaimi (2013).

6.3.1.2 Results of EFA

The presentation of the results of the EFA were done under each substantive identified underlying factors – personal and external.

Personal factors result

Overall 12 questions were designed to measure the personal factors, which were subjected to EFA in order to determine the construct validity of personal factors. The result of EFA indicated a three factor solution explaining 68.85% of the variance (see Table 6.1 below). This means that there are three underlying reasons (factors) that explained all the inter-question correlations that have occurred. The three factor solution is explained in detail below.

Factor 1 had five questions which loaded highly ranging between 0.83-0.61 (see Table 6.1 below). All the questions loaded onto Factor 1 were named as personal drivers as defined in the qualitative findings.

Factor 2 also had five questions which loaded highly ranging between 0.93-0.61. All the questions loaded onto this factor were related to self-efficacy as defined in the qualitative findings (see Table 6.1 below). However, two questions (Q4 and Q5), which asked about respondents' computer and Internet skills respectively, cross-loaded with Factor 3, which was about respondents' personal access to tools. This means that computer and Internet skills

under Factor 2 were found to be highly associated with personal access to tools under Factor 3. Upon careful consideration, it was decided to include these two questions under Factor 2 in the analysis because skill in computer and Internet is regarded as an aspect of self-efficacy.

Factor 3 had two questions of high loading ranging between 0.81-0.72 (see Table 6.1 below). These questions were designed to measure respondents' personal access to tools to use E-learning as defined in the qualitative findings.

Table 6.1: Factors' loading component matrix – Personal factors

Extraction Method		Principal Component Analysis
Rotation Method		Promax
Total Variance Explained		68.845%
Questions Loaded		Loading Values
Factor 1 (Personal Drivers)	14. I would devote some time to use E-learning for my learning/teaching of English	0.833
	15. In general, I would have available time to use E-learning for my learning/teaching of English	0.829
	16. I would use E-learning in my learning/teaching of English even if I were not rewarded for it.	0.805
	12. Using E-learning in learning/teaching English is a good idea	0.774
	13. Overall, I like using E-learning	0.606
Factor 2 (Self-efficacy)	7. I am skilled enough to use E- learning in my learning/teaching of English even if there is no one around to show me how to use it	0.927
	8. I am skilled enough to use E- learning in my learning/teaching of English even if I have not used such a system before	0.888
	4. I am skilled enough to use E- learning in my learning/teaching of English without help	0.879
	5. I have enough skills to use the Internet	0.627
	4. I have enough skills to use the computer	0.614
Factor 3 (Personal Access to Tools)	11. In my home I have Internet connection to use for E-learning whenever I need it	0.813
	10. In my home I have a computer to use for E-learning whenever I need it	0.715

From the above discussion, EFA results based on the factor loadings show evidence of construct validity of the identified personal factors in this research – this is, each question is loaded into the factors that is theorised to load into it. The next section will discuss the construct validity of the external factors.

External factors results

An initial EFA with eigenvalues greater than 1 was conducted on the questions that are related to in-school factors, peer support factors, E-learning functionality and E-learning usability, in order to determine the construct validity of these factors. This gave a five factor solution of which one question (Q18) was loaded alone to form a single factor and had no cross-loading with any other factor (see Appendix H for the result of EFA). In this situation, it was considered appropriate to eliminate question 18 from the set of questions since the minimum number of questions to form a factor are two, as recommended by Costello and Osborne (2005). A second EFA was then run after eliminating question 18 was conducted. The EFA produced a four factor solution explaining 65.82% of the variance (see Table 6.2 below). The ensuing section discusses the four factors in detail below.

Factor 1 had five questions with a loading range between 0.85-0.66. One more question (Q22) had a cross-loading between Factor 1 and 3. This might have happened due to the high level of association between these two factors. In this situation and upon careful consideration, it was considered appropriate to count it with Factor 3 because it fitted logically with Factor 3 (see Table 6.2 below). Factor 1 was designed to be about perceived E-learning functionality.

Factor 2 also had six questions with high loading ranging between 0.88-0.65 and without any cross-loading with other factors (see Table 6.2 below). These six questions were all related to students' perceptions about in-school support to use E-learning as defined in the qualitative findings.

Factor 3 also had five questions with high loadings ranging between 0.85-0.68. There was another cross-loading between this factor and Factor 1, which is (Q24) this time. In this situation, it was considered appropriate to count question 24 with Factor 3 because it loaded highly with this factor and fitted logically with it (see Table 6.2 below). Factor 3 was termed perceived E-learning usability as defined in the qualitative findings.

Lastly, **Factor 4** had only two questions with high loadings ranging between 0.94-0.85 (see Table 6.2 below). These two questions were both related to peer support as defined in the qualitative findings.

Table 6.2: Factors' loading component matrix – External factors

Extraction Method		Principal Component Analysis
Rotation Method		Promax
Total Variance Explained		65.824%
	Questions Loaded	Loading Values
Factor 1 (E-learning functionality)	26. E-learning allows (or would allow) interactive communication between me and students/teachers	0.849
	27. E-learning enables interactive communication among students to develop their English.	0.822
	25. E-learning offers multimedia (audio, video, and text) types to use for learning/teaching of English.	0.814
	28. The communicative tools that E-learning provides are effective (email, message board, chat room, etc.)	0.724
	23. E-learning offers (or would offer) me flexibility in learning/teaching with respect to time and place.	0.664
Factor 2 (In-school support)	42. I think that the technical support in the school where I'm studying/teaching is good	0.879
	38. The school where I'm studying/teaching provides the necessary Internet connectivity for E-learning	0.837
	37. The school where I'm studying/teaching provides the necessary computer equipment for E-learning	0.778
	41. In the school where I'm studying/teaching, an IT technician is available to provide assistance when I need help	0.740
	40. In the school where I'm studying/teaching, the school management would support my use of E-learning	0.724
	39. In the school where I'm studying/teaching, the school management would allow me to use the school's facilities for E-learning	0.651
Factor 3 (E-learning usability)	19. Using E-learning in my learning/teaching of English is (or would be) easy for me	0.854
	20. Overall, I believe that E-learning is (or would be) easy to use	0.807
	17. Interacting with E-learning systems is (or would be) clear and understandable.	0.791
	21. Using an E-learning system improves (or would improve) my learning/teaching performance of English	0.738
	22. In general, I think an E-learning system is (or would be) useful in my learning/teaching of English.	0.692
	24. E-learning offers (or would offer) me control over learning/teaching activity.	0.682
Factor 4 (Peer support)	36. My friends/colleagues help (or would help) me with E-learning when I need it	0.936
	35. My friends/colleagues encourage (or would encourage) me to use E-learning in my learning/teaching of English	0.846

In relation to the family support as a factor, six related questions were distributed among students only. Hence a separate EFA was conducted for this factor. The result indicated that there was only one factor solution explaining 67.76% of the variance; and all the six questions loaded highly, on this factor, ranging from 0.92-0.71 (see Table 6.3 below).

Table 6.3: Factor’s loading component matrix – Family factor

Extraction Method		Principal Component Analysis
Rotation Method		Promax
Total Variance Explained		67.76%
Questions Loaded		Loading Values
Factor 1 (Family support)	29. My family believes that using E-learning for learning English is a good idea	0.922
	34. In general, my family sees E-learning systems as something that is (or could be) useful for learning English	0.921
	33. My family sees E-learning as something that improves (or could improve) my performance in learning English	0.890
	30. My family encourages (or would encourage) me to use E-learning for learning English	0.858
	31. My family perceives that using E-learning is (or would) be safe for me to use (protection of personal information, images etc)	0.802
	32. Overall, I think my family would like me to continue (or start) using E-learning	0.707

From the above discussion, EFA results based on the factor loadings, show evidence of construct validity of external factors – this is, each question is loaded into the factors that is theorised to load into it.

6.3.1.3 Computing the factor scores

After the EFA had been concluded, as shown above, the researcher decided to calculate factor scores by using the factor loadings and regression method, for all eight sub-factors derived from both personal and external factors (that is, self-efficacy, personal drivers, personal access, E-learning usability, E-learning functionality, peer support, in-school support and family support). Conceptually, a factor score is the score that would have been observed for a person if it had been possible to measure the factor directly. It is a single score from an individual entity representing their performance on some latent or dependent variable, which can be used to carry out further analysis based on the factor scores rather than the original data (Brown 2015; Field 2013). The rationale for using factor scores in the

analysis is to reduce a large set of data to a smaller subset of measurement variables, then the factor scores tell us an individual's score on this subset of measures.

Since the resulting factor scores are positive (+) and negative (-) a normalising method was followed to compute these values (for each factor) to range between 0 and 1. In the next chapter, the eight identified sub-factors are used as dependent variables and measured against the two independent variables associated with this research (that is, age and gender) using factor scores. The next section explores the reliability of the research questionnaire.

6.4 Reliability

This final section addresses the reliability of the questionnaire, which is defined as, “the extent to which a questionnaire yields consistent results over repeated observations” (Eagly and Chaiken 1993, p.67). Checking reliability is essential because if the questionnaire of a piece of research is not reliable, the research is unlikely to yield useful information (Graziano and Raulin, 2007). There are two methods to check reliability, that is test-retest reliability and internal reliability (Field 2013; Straub 1989). The test-retest reliability is the extent to which test scores are consistent when applied to the same sample repeated over an extended period (Field 2013). However, this procedure can introduce a problem known as “practice effect⁵” (Litwin 2003). Internal reliability, on the other hand, is the degree to which a given measure is consistent within itself (Stangor 2007). The later method is used in this research and can be assessed by a statistical method known as Cronbach's coefficient, symbolised as alpha (α). Alpha (α) assesses the average correlation between all the items/questions on a questionnaire (Field 2013). It is given as an alpha (α) score that ranges between 0-1.0 (Eagly and Chaiken 1993; Stangor 2007). Hinton et al. (2004) proposed four cut-off points for describing reliability scores: score of 0.90 and above implies excellent reliabilities, 0.70–0.90 implies high reliability, and 0.50–0.70 implies moderate reliability, 0.50 and below implies low reliability.

Overall, only one sub-factor (family support) had an alpha score of 0.91 which indicated excellent reliability; and another sub-factor (personal access to tools) had an alpha

⁵ Practice effect is the tendency of research participants answering a questionnaire partly based on their memory or familiar with the items of what is being asked.

score of 0.69, indicating moderate reliability. The remaining sub-factors had alpha values scored above 0.80 which are also regarded as high reliabilities. The overall instrument reliability of 0.87 also indicates a scale of high reliability. The summary of the alpha (α) scores for all the sub-factors in this study are presented in Table 6.4 below.

Table 6.4: Reliability of the whole questionnaire and sub-factors

Scale	α
Personal drivers	0.84
Self-efficacy	0.81
Personal access to tools	0.69
E-learning functionality	0.85
In-school support	0.86
E-learning usability	0.87
Peer support	0.83
Family support	0.91
Whole questionnaire	0.87

6.5 Chapter summary

This chapter has described how the research survey questionnaire was validated using content validity and construct validity methods. Overall, the above discussion shows evidence of content validity of the questionnaire based on expert judgement and construct validity of the questionnaire based on EFA. Further, the chapter demonstrates the internal reliability of the questionnaire using Cronbach's alpha (α). Based on the above results, it was considered appropriate thereafter to conduct the main analysis in order to answer the research questions 2 and 3 – discussed in the next chapter.

Chapter Seven: Findings from the quantitative data on readiness – Students’ and teachers’ perspective

7.1 Introduction

The findings presented in this chapter sought to address the following research questions. Firstly, it explores the current level of readiness of students and teachers to use E-learning as a supplementary tool in learning EFL based on what are referred to as personal factors in this research (i.e. self-efficacy, personal drivers and personal access to tools) and explores the extent to which external factors (i.e. E-learning usability, E-learning functionality, peer support, school support and family support) influence these personal factors. Secondly, the chapter explores the differences and similarities in the readiness of students and teachers in relation to gender and age on all personal and external factors.

A total of 589 questionnaires from student and teacher respondents were completed and retained for the final analysis. Regarding the students, the findings are based on a survey with a sample of 377 Saudi students (180 male; 197 female) in high school who were selected randomly. Further details of the survey sample were, 297 students within the *normal school age*, that is ages between 14-18 years (165 male; 132 female); and 80 students in the *older age*, that is, 19-26 years (15 male; 65 female)⁶. On the part of teachers, the outcome is based on a survey involving a sample of 212 Saudi English teachers (136 male; 76 female) in high schools, with an age range of between 27 and 58 years. Based on the age distribution⁷, 35 years and less were classified as younger teachers (64 male; 48 female) and above 36 years were considered older (72 male; 28 female). Table 7.1 below provides a snapshot of respondents’ demographics.

⁶ This group is predominantly female for a number of reasons. The reason advanced most forcefully was that females normally get married while in school, which eventually leads them to stop schooling (e.g. AlMunajjed 2009). They however are encouraged to go back to school when they are settled in their marital homes, with children more often than not. The long-held belief is that females who have children are less prone to misconduct of any kind (e.g. Al Alhareth 2013).

⁷ As shown in the histogram, the teachers age distribution is bimodal distribution with age 35 as the middle point of the age distribution. As a result, the researcher decided to divide teachers age into two groups with age 35 as the middle point (see the histogram in Appendix L).

Table 7.1: Demographics and statistics of the student and teacher respondents of the questionnaire

	Groups	Frequency	Percentage	Mode
Students respondents				
Gender	Male	180	47.75	Female
	Female	197	52.25	
Age	Normal school age	297 (165 male - 132 female)	78.78	Normal school age
	Older age	80 (15 male - 65 female)	21.22	
Total number of students	377			
Teacher respondents				
Gender	Male	136	64.15	Male
	Female	76	35.85	
Age	Younger	112 (64 male - 48 female)	52.8	Younger
	Old	100 (72 male - 28 female)	47.2	
Total number of teachers	212			

The chapter contains three sections: the first section presents the descriptive statistics showing the distribution of responses across all the underlying factors of readiness in order to explore the current level of students' and teachers' readiness. The second section explores gender and age differences among students and teachers across all the underlying factors readiness using *t*-test as inferential statistic. Lastly, the correlations between these factors based on Pearson's correlation coefficient as inferential statistic are presented. This is followed by a chapter summary.

7.2 Descriptive statistics

This section presents the descriptive statistical data of all identified eight sub-factors with the aim to examine the current level of student readiness. The presentation is done based on the individual factors beginning with personal drivers.

7.2.1 Personal drivers

Personal drivers are defined in this research in relation to students' and teachers' attitudes, their motivation and time commitment to use E-learning in their teaching and learning. In order to explore further the views of students and teachers on personal drivers, five questions about personal drivers were included in the larger questionnaire which was administered to the student and teacher respondents.

In relation to students, the outcome showed that about two thirds of students appeared to be positively inclined towards E-learning (the proportion of respondents choosing *agree* or *strongly agree* ranged from 58.1% to 68.5%). On the other hand, a third of the student respondents appeared uncertain or showed a more negative perspective (the proportion of respondents choosing *strongly disagree*, *disagree* or *neutral* ranged from 31.6% to 42.0%).

The outcome for teachers also demonstrated that over two thirds of teachers who responded to the survey appeared to be positively inclined towards E-learning (that is, the proportion of respondents choosing *agree* or *strongly agree* ranged from 66.1% to 83.1%). The remaining third of respondents appeared uncertain or to have a more negative perspective (that is, the proportion of respondents choosing *strongly disagree*, *disagree* or *neutral* ranged from 17.0% to 34.0%). Tables 7.2a and 7.2b below provide the statistical analysis in terms of percentages and frequencies showing the descriptive statistical data for students and teachers respectively.

Table 7.2a: Descriptive statistics for students – Personal drivers

Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Using E-learning in learning English is a good idea.	37 (9.8%)	12 (3.2%)	70 (18.6%)	172 (45.6%)	86 (22.8%)
Overall, I like using E-learning.	33 (8.8%)	10 (2.7%)	115 (30.5%)	155 (41.1%)	64 (17.0%)
I would devote some time to use E-learning for my learning of English.	27 (7.2%)	22 (5.8%)	70 (18.6%)	174 (46.2%)	84 (22.3%)
In general, I would have available time to use E-learning for my learning of English.	20 (5.3%)	15 (4.0%)	90 (23.9%)	169 (44.8%)	83 (22.0%)
I would use E-learning in my learning of English even if I were not rewarded for it.	33 (8.8%)	22 (5.8%)	79 (21.0%)	138 (36.6%)	105 (27.9%)

Table 7.2b: Descriptive statistics for teachers – Personal drivers

Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Using E-learning in teaching English is a good idea.	14 (6.6%)	6 (2.8%)	24 (11.3%)	76 (35.8%)	92 (43.4%)
Overall, I like using E-learning.	10 (4.7%)	10 (4.7%)	22 (10.4%)	108 (50.9%)	62 (29.2%)
I would devote some time to use E-learning for my teaching of English.	12 (5.7%)	6 (2.8%)	18 (8.5%)	118 (55.7%)	58 (27.4%)
In general, I would have available time to use E-learning for my teaching of English.	22 (10.4%)	10 (4.7%)	12 (5.7%)	117 (55.2%)	51 (24.1%)
I would use E-learning in my teaching of English even if I were not rewarded for it.	14 (6.6%)	12 (5.7%)	46 (21.7%)	82 (38.7%)	58 (27.4%)

7.2.2 Self-efficacy

Self-efficacy in this research is understood to mean the perception of students and teachers of their own individual abilities, knowledge and skills to use E-learning. In order to explore further the views of respondents on self-efficacy, five questions about self-efficacy were included in a larger questionnaire which was administered to both student and teacher respondents. These questions reflected on how the respondents perceived their skills on using computers, the Internet and E-learning.

Overall, while the students appeared reasonably confident in using computers and the Internet (that is, the proportion of respondents choosing *average skill*, *high skill* or *very high skill* ranged between 70.6% and 77.5%), their confidence appeared much less in areas where they were required to use the technology in learning (that is, the proportion of respondents choosing *average skill*, *high skill* or *very high skill* ranged between 36.8% and 38.7%).

Similarly, the outcome showed that teachers appeared reasonably confident in using computers and the Internet (that is, the proportion of respondents choosing *average skill*, *high skill* or *very high skill* ranged between 87.5% and 87.7%). However, their confidence appeared less in areas where they were required to use the technology in learning (that is, the proportion of respondents choosing *average skill*, *high skill* or *very high skill* ranged between 52.8% and 65.1%). Tables 7.3a and 7.3b below provide the statistical analysis in terms of percentages and frequencies showing the descriptive statistical data for students and teachers respectively.

Table 7.3a: Descriptive statistics for students – Self-efficacy

Questions	No Skill	Low Skill	Average Skill	High Skill	Very High Skill
I have enough skills to use the computer.	49 (13.0%)	62 (16.4%)	130 (34.5%)	86 (22.8%)	50 (13.3%)
I have enough skills to use the Internet.	54 (14.3%)	31 (8.2%)	112 (29.7%)	110 (29.2%)	70 (18.6%)
I am skilled enough to use E-learning in my learning of English without help.	128 (34.0%)	109 (28.9%)	108 (28.6%)	25 (6.6%)	7 (1.9%)
I am skilled enough to use E-learning in my learning of English even if there is no one around to show me how to use it.	149 (39.5%)	82 (21.8%)	102 (27.1%)	31 (8.2%)	13 (3.4%)
I am skilled enough to use E-learning in my learning of English even if I have not used such a system before.	143 (37.9%)	95 (25.2%)	91 (24.1%)	22 (5.8%)	26 (6.9%)

Table 7.3b: Descriptive statistics for teachers – Self-efficacy

Questions	No Skill	Low Skill	Average Skill	High Skill	Very High Skill
I have enough skills to use the computer.	6 (2.8%)	20 (9.6%)	82 (38.5%)	84 (39.6%)	20 (9.4%)
I have enough skills to use the Internet.	10 (4.7%)	16 (7.5%)	50 (23.6%)	108 (50.9%)	28 (13.2%)
I am skilled enough to use E-learning in my teaching of English without help.	34 (16.0%)	40 (18.9%)	96 (45.3%)	36 (17.0%)	6 (2.8%)
I am skilled enough to use E-learning in my teaching of English even if there is no one around to show me how to use it.	40 (18.9%)	46 (21.7%)	76 (35.8%)	44 (20.8%)	6 (2.8%)
I am skilled enough to use E-learning in my teaching of English even if I have not used such a system before.	48 (22.6%)	52 (24.5%)	66 (31.1%)	44 (20.8%)	2 (0.9%)

7.2.3 Personal access to tools

Personal access to tools in this research is thought of as the availability of computers and Internet for the students and teachers to use at home for E-learning. In order to explore further the views of students and teachers on personal access to tools, two questions about computers and the Internet were included in the larger questionnaire which was administered to student and teacher respondents.

Overall, the result showed that about two thirds of student respondents appeared to own or have access to computers at home either *all the time* (36.9%) or *sometimes* (31.3%); whereas a third of respondents appeared to have *no* access to computers at all (31.8%). In terms of the Internet, a slightly higher proportion appeared to have access to the Internet access at home (that is, about 40.8% of respondents appeared to have access to Internet connectivity *all the time* and 39.0% have access *sometimes*; whereas 20.2% appeared to have *no* access to Internet connectivity at all).

On the part of teachers, the outcome of the questionnaire demonstrated that 55.7% of respondents appeared to own or have access to the computer at home *all the time*; while 33.0% of respondents appeared to have access to the computer at home *sometimes*. In addition, a minority of 11.3% appeared to have *no* access to the computer at home at all. In terms of the Internet, the outcome of the questionnaire demonstrated that 40.6% of respondents appeared to have access to Internet connectivity *all the time*; 50% appeared to have access *sometimes*; and 9.4% appeared to have *no* access at all. Tables 7.4a and 7.4b

below provide the statistical analysis in terms of percentages and frequencies showing the descriptive statistical data for students and teachers respectively.

Table 7.4a: Descriptive statistics for students – Access to Internet and computers

Questions	No	Sometimes	All the Time
In my home I have a computer to use for E-learning whenever I need it.	120 (31.8%)	118 (31.3%)	139 (36.9%)
In my home I have Internet connection to use for E-learning whenever I need it.	76 (20.2%)	147 (39.0%)	154 (40.8%)

Table 7.4b: Descriptive statistics for teachers – Access to Internet and computers

Questions	No	Sometimes	All the Time
In my home I have a computer to use for E-learning whenever I need it.	24 (11.3%)	70 (33.0%)	118 (55.7%)
In my home I have Internet connection to use for E-learning whenever I need it.	20 (9.4%)	106 (50.0%)	86 (40.6%)

7.2.4 E-Learning usability

E-learning usability is defined in this research to mean the extent to which participants believe that it will be easy to use or not, and whether or not it will be useful for teaching and learning. In order to explore further the views of students and teachers on E-learning usability, six questions about E-learning usability were included in the larger questionnaire which was administered to student and teacher respondents.

Overall, the outcome demonstrated that a majority of students who responded to the survey appeared to be positively inclined towards E-learning, based on E-learning usability (that is, the proportion of respondents choosing *agree* or *strongly agree* ranged from 55.9% to 71.6%); while the remaining of respondents appeared uncertain or showed a more negative perspective (that is, the proportion of respondents choosing *strongly disagree*, *disagree* or *neutral* ranged from 28.4% to 44.1%).

On the part of teachers, the results revealed that over two thirds of teachers who responded to the survey appeared to be positively inclined towards E-learning based on E-learning usability (that is, the proportion of respondents choosing *agree* or *strongly agree* ranged from 70.8% to 84.9%), while the remaining respondents appeared uncertain or expressed a more negative perspective (that is, the proportion of respondents choosing *strongly disagree*, *disagree* or *neutral* ranged from 15.0% to 29.2%). Tables 7.5a and 7.5b

below provide the statistical analysis in terms of percentages and frequencies showing the descriptive statistical data for students and teachers respectively.

Table 7.5a: Descriptive statistics for students – E-learning usability

Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Interacting with E-learning systems is (or would be) clear and understandable.	23 (6.1%)	44 (11.7%)	99 (26.3%)	172 (45.6%)	39 (10.3%)
Using E-learning in my learning of English is (or would be) easy for me.	31 (8.2%)	35 (9.3%)	95 (25.2%)	171 (45.4%)	45 (11.9%)
Overall, I believe that E-learning is (or would be) easy to use.	51 (13.5%)	27 (7.2%)	55 (14.6%)	151 (40.1%)	93 (24.7%)
Using an E-learning system improves (or would improve) my learning performance of English.	22 (5.8%)	18 (4.8%)	67 (17.8%)	178 (47.2%)	92 (24.4%)
In general, I think an E-learning system is (or would be) useful in my learning of English.	27 (7.2%)	27 (7.2%)	58 (15.4%)	183 (48.5%)	82 (21.8%)
E-learning offers (or would offer) me control over learning activity.	31 (8.2%)	29 (7.7%)	99 (26.3%)	168 (44.6%)	50 (13.3%)

Table 7.5b: Descriptive statistics for teachers – E-learning usability

Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Interacting with E-learning systems is (or would be) clear and understandable.	17 (8.0%)	5 (2.4%)	38 (17.9%)	131 (61.8%)	21 (9.9%)
Using E-learning in my teaching of English is (or would be) easy for me.	27 (12.7%)	7 (3.3%)	24 (11.3%)	103 (48.6%)	51 (24.1%)
Overall, I believe that E-learning is (or would be) easy to use.	10 (4.7%)	10 (4.7%)	26 (12.3%)	95 (44.8%)	71 (33.5%)
Using an E-learning system improves (or would improve) my teaching performance of English.	12 (5.7%)	4 (1.9%)	32 (15.1%)	89 (42.0%)	75 (35.4%)
In general, I think an E-learning system is (or would be) useful in my teaching of English.	2 (0.9%)	2 (0.9%)	28 (13.2%)	116 (54.7%)	64 (30.2%)
E-learning offers (or would offer) me control over teaching activity.	18 (8.5%)	6 (2.8%)	38 (17.9%)	128 (60.4%)	22 (10.4%)

7.2.5 E-Learning functionality

E-learning functionality is defined in this research to mean the extent to which participants believe that the use of E-learning will provide flexible and interactive access to instructional and assessment material to facilitate teaching and learning. In order to explore further the views of students and teachers on E-learning functionality, five questions about E-learning functionality were included in the larger questionnaire which was administered to student and teacher respondents.

Overall, the outcome showed that over two thirds of students who responded to the survey appeared to be positively inclined towards E-learning based on E-learning functionality (that is, the proportion of respondents choosing *agree* or *strongly agree* ranged from 67.3% to 76.7%); while the remaining of respondents appeared uncertain or a more negative perspective (that is, the proportion of respondents choosing *strongly disagree*, *disagree* or *neutral* ranged from 23.3% to 32.6%).

On the part of teachers, it can be seen that over two thirds of teachers who responded to the survey appeared to be positively inclined towards E-learning based on E-learning functionality (that is, the proportion of respondents choosing *agree* or *strongly agree* ranged from 73.6% to 87.7%). The remaining of respondents appeared uncertain or expressed a more negative perspective (that is, the proportion of respondents choosing *strongly disagree*, *disagree* or *neutral* ranged from 12.3% to 26.4%). Tables 7.6a and 7.6b below provide the statistical analysis in terms of percentages and frequencies showing the descriptive statistical data for students and teachers respectively.

Table 7.6a: Descriptive statistics for students – E-learning functionality

Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
E-learning offers (or would offer) me flexibility in learning with respect to time and place.	13 (3.4%)	20 (5.3%)	90 (23.9%)	195 (51.7%)	59 (15.6%)
E-learning offers multimedia (audio, video, and text) types to use for learning of English.	9 (2.4%)	25 (6.6%)	54 (14.3%)	210 (55.7%)	79 (21.0%)
E-learning allows (or would allow) interactive communication between me and students/teachers.	26 (6.9%)	21 (5.6%)	67 (17.8%)	177 (46.9%)	86 (22.8%)
E-learning enables interactive communication among students to develop their English.	21 (5.6%)	24 (6.4%)	59 (15.6%)	175 (46.4%)	98 (26.0%)
The communicative tools that E-learning provides are effective (email, message board, chat room, etc.).	9 (2.4%)	22 (5.8%)	67 (17.8%)	190 (50.4%)	89 (23.6%)

Table 7.6b: Descriptive statistics for teachers – E-learning functionality

Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
E-learning offers (or would offer) me flexibility in teaching with respect to time and place.	14 (6.6%)	2 (0.9%)	18 (8.5%)	120 (56.6%)	58 (27.4%)
E-learning offers multimedia (audio, video, and text) types to use for teaching of English.	4 (1.9%)	8 (3.8%)	22 (10.4%)	110 (51.9%)	68 (32.1%)
E-learning allows (or would allow) interactive communication between me and students/teachers.	12 (5.7%)	2 (0.9%)	12 (5.7%)	106 (50.0%)	80 (37.7%)
E-learning enables interactive communication among students to develop their English.	8 (3.8%)	10 (4.7%)	38 (17.9%)	96 (45.3%)	60 (28.3%)
The communicative tools that E-learning provides are effective (email, message board, chat room, etc.).	8 (3.8%)	6 (2.8%)	36 (17.0%)	116 (54.7%)	46 (21.7%)

7.2.6 In-school support

In-school support is defined in this research as how much students and teachers believe that schools would support their use of E-learning – that is, through the provision of school management and technical support, as well as the provision of equipment. In order to explore further the views of students and teachers on in-school support, six questions about in-school support were included in the larger questionnaire which was administered to student and teacher respondents.

Overall, over half of the students did not believe that school management would support E-learning usage (that is, the proportion of respondents choosing *strongly disagree*, *disagree* or *I do not know* ranged from 52.9% to 57.3%). In terms of technical support, around two thirds of students perceived poor technical support (that is, the proportion of respondents choosing *strongly disagree*, *disagree* or *I do not know* ranged from 58.9% to 60.4%). Finally, in regard to provision of equipment, around two thirds of students perceived lack of computers and Internet connectivity (that is, the proportion of respondents choosing *strongly disagree*, *disagree* or *I do not know* ranged from 51.0% to 62.1%).

On the part of teachers, the outcome showed that while around two thirds of the teachers believed that school management would support E-learning usage (that is, the proportion of respondents choosing *agree* or *strongly agree* ranged from 57.5% to 68.9%), their belief was much less in relation to provision of equipment and technical support (that is, the proportion of respondents choosing *agree* or *strongly agree* only ranged from 40.5% to 40.6%; 26.5% to 32.1% respectively). Tables 7.7a and 7.7b below provide the statistical

analysis in terms of percentages and frequencies showing the descriptive statistical data for students and teachers respectively.

Table 7.7a: Descriptive statistics for students – In-school support

Questions	Strongly Disagree	Disagree	I Do not Know	Agree	Strongly Agree
The school where I'm studying provides the necessary computer equipment for E-learning.	27 (7.2%)	79 (21.0%)	86 (22.8%)	125 (33.2%)	60 (15.9%)
The school where I'm studying provides the necessary Internet connectivity for E-learning.	74 (19.6%)	70 (18.6%)	90 (23.9%)	99 (26.3%)	44 (11.7%)
In the school where I'm studying, the school management would allow me to use the school's facilities for E-learning.	50 (13.3%)	44 (11.7%)	105 (27.9%)	141 (37.4%)	37 (9.8%)
In the school where I'm studying, the school management would support my use of E-learning.	55 (14.6%)	67 (17.8%)	94 (24.9%)	120 (31.8%)	41 (10.9%)
In the school where I'm studying, an IT technician is available to provide assistance when I need help.	32 (8.5%)	107 (28.4%)	83 (22.0%)	103 (27.3%)	52 (13.8%)
I think that the technical support in the school where I'm studying is good.	39 (10.3%)	119 (31.6%)	70 (18.6%)	102 (27.1%)	47 (12.5%)

Table 7.7b: Descriptive statistics for teachers – In-school support

Questions	Strongly Disagree	Disagree	I Do not Know	Agree	Strongly Agree
The school where I'm teaching provides the necessary computer equipment for E-learning.	64 (30.2%)	50 (23.6%)	12 (5.7%)	68 (32.1%)	18 (8.5%)
The school where I'm teaching provides the necessary Internet connectivity for E-learning.	54 (25.5%)	56 (26.4%)	16 (7.5%)	66 (31.1%)	20 (9.4%)
In the school where I'm teaching, the school management would allow me to use the school's facilities for E-learning.	22 (10.4%)	18 (8.5%)	26 (12.3%)	118 (55.7%)	28 (13.2%)
In the school where I'm teaching, the school management would support my use of E-learning.	30 (14.2%)	24 (11.3%)	36 (17.0%)	94 (44.3%)	28 (13.2%)
In the school where I'm teaching, an IT technician is available to provide assistance when I need help.	42 (19.8%)	68 (32.1%)	46 (21.7%)	44 (20.8%)	12 (5.7%)
I think that the technical support in the school where I'm teaching is good.	46 (21.7%)	64 (30.2%)	34 (16.0%)	56 (26.4%)	12 (5.7%)

7.2.7 Peer support

Peer support is defined in this research as the assistance and encouragement students and teachers get from their friends and/or colleagues to use E-learning. In order to explore further the views of students and teachers on peer support, two questions about peer support

were included in the larger questionnaire which was administered to student and teacher respondents.

Overall, the outcome revealed that over two thirds of students who responded to the survey appeared to be positively inclined in relation to peer support (that is, the proportion of respondents choosing *agree* or *strongly agree* ranged from 69.0% to 70.5%). The remaining number of respondents appeared uncertain or expressed a more negative perspective (that is, the proportion of respondents choosing *strongly disagree*, *disagree* or *neutral* ranged from 29.5% to 31.1%).

On the part of teachers, the outcome revealed that over two thirds of teachers who responded to the survey appeared to be positively inclined in relation to peer support (that is, the proportion of respondents choosing *agree* or *strongly agree* ranged from 62.3% to 70.8%). The remaining number of respondents appeared uncertain or expressed a more negative perspective (that is, the proportion of respondents choosing *strongly disagree*, *disagree* or *neutral* ranged from 29.3% to 37.8%). Tables 7.8a and 7.8b below provide the statistical analysis in terms of percentages and frequencies showing the descriptive statistical data for students and teachers respectively.

Table 7.8a: Descriptive statistics for students – Peer support

Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
My friends/colleagues encourage (or would encourage) me to use E-learning in my learning of English.	15 (4.0%)	27 (7.2%)	69 (18.3%)	160 (42.4%)	106 (28.1%)
My friends/colleagues help (or would help) me with E-learning when I need it.	30 (8.0%)	20 (5.3%)	67 (17.8%)	156 (41.4%)	104 (27.6%)

Table 7.8b: Descriptive statistics for teachers – Peer support

Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
My friends/colleagues encourage (or would encourage) me to use E-learning in my teaching of English.	32 (15.1%)	8 (3.8%)	22 (10.4%)	132 (62.3%)	18 (8.5%)
My friends/colleagues help (or would help) me with E-learning when I need it.	28 (13.2%)	12 (5.7%)	40 (18.9%)	114 (53.8%)	18 (8.5%)

7.2.8 Family support

Family support is defined in this research as the amount of help participants perceive their families are willing to offer them towards the use of E-learning. In order to explore further the views of student respondents on family support, six questions about family support were included in the larger questionnaire which was administered to student respondents.

Overall, the outcome revealed that around half of student respondents to the survey perceived family support (that is, the proportion of respondents choosing *agree* or *strongly agree* ranged from 45.4% to 61.6%), while the remaining number appeared not to perceive family support in relation to E-learning usage (that is, the proportion of respondents choosing *strongly disagree*, *disagree* or *neutral* ranged from 38.5% to 54.6%). Table 7.9a below provides the statistical analysis in terms of percentages and frequencies showing the descriptive statistical data for students.

Table 7.9a: Descriptive statistics for students – Family support

Questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
My family believes that using E-learning for learning English is a good idea.	35 (9.3%)	41 (10.9%)	84 (22.3%)	137 (36.3%)	80 (21.2%)
My family encourages (or would encourage) me to use E-learning for learning English.	53 (14.1%)	26 (6.9%)	66 (17.5%)	150 (39.8%)	82 (21.8%)
My family perceives that using E-learning is (or would) be safe for me to use (protection of personal information, images etc).	59 (15.6%)	51 (13.5%)	96 (25.5%)	105 (27.9%)	66 (17.5%)
Overall, I think my family would like me to continue (or start) using E-learning.	34 (9.0%)	29 (7.7%)	91 (24.1%)	141 (37.4%)	82 (21.8%)
My family sees E-learning as something that improves (or could improve) my performance in learning English.	23 (6.1%)	41 (10.9%)	86 (22.8%)	153 (40.6%)	74 (19.6%)
In general, my family sees E-learning systems as something that is (or could be) useful for learning English.	25 (6.6%)	33 (8.8%)	97 (25.7%)	177 (46.9%)	45 (11.9%)

7.3 Inferential statistics showing gender and age differences

It is worth noting that, in order to identify differences within gender (male versus female) and age (younger versus older) in the readiness, based on the identified underlying factors of readiness, of students and teachers to use E-learning, factor scores of each factor were used (for more details about factor scores see Section 6.3.1.3). Since factor score is a

continuous variable, a decision was made to use independent *t*-tests to identify differences within gender and age in the readiness of students and teachers to use E-learning. An independent *t*-test allows for the examination of the hypotheses associated with particular independent variables – that is, gender and age in this case – against the identified underlying factors (dependent variables) of readiness (for more details about *t*-test see Appendix E). In doing so, a number of hypotheses were tested with a value of $p < 0.05$ reflecting acceptance of the hypothesis and a value of $p \geq 0.05$ rejecting the hypotheses. Before conducting the independent sample *t*-test, all eight identified underlying factors of readiness were also assessed for normality (± 2 in kurtosis and skewness levels) and for outliers. Again, the assessment was conducted separately for gender and age, and the outcomes indicated that the data are normally distributed and there were no extreme outliers to indicate problematic distribution of the results (see Appendix E for the outcomes of normality and outliers tests).

The following section will expand on the results of all the independent *t*-tests for gender and age against all eight identified underlying factors of readiness for students and teachers.

7.3.1 Gender differences

What are the differences in the readiness of students and English teachers to use E-learning for EFL in Saudi Arabia based on gender?

In answering this question, a number of hypotheses based on the eight identified underlying factors of readiness for students and teachers were tested. The results under each of the eight factors based on the independent *t*-test results is presented below.

Personal drivers

H1a: There is a significant difference in the perceptions of male and female students in Saudi Arabia in relation to personal drivers for their use of E-learning for EFL.

For H1a, the mean score for the male students ($M = 0.73$, $SD = 0.17$) showed a higher agreement with the personal drivers compared to female students ($M = 0.59$, $SD = 0.25$). This difference was significant [$t(353.74) = 6.37$, $p < 0.001$], where Cohen's d is 0.67, which is a medium-sized effect according to Cohen (1988). Thus, H1a was supported.

H1b: There is a significant difference in the perceptions of male and female teachers in Saudi Arabia in relation to personal drivers for their use of E-learning for EFL

For H1b, the mean score for male teachers ($M = 0.70$, $SD = 0.20$) compared to the mean score of female teachers ($M = 0.74$, $SD = 0.22$) showed no significant difference. This means that the t -test value [$t(210) = 1.12$, $p > 0.05$] was not significant, and H1b was rejected. The t -test for students and teachers in relation to personal drivers is presented in Tables 7.10a and 7.10b respectively.

Self-efficacy

H2a: There is a significant difference in the perceptions of male and female students in Saudi Arabia in relation to self-efficacy for their use of E-learning for EFL.

For H2a, the mean scores were ($M = 0.38$, $SD = 0.24$) and ($M = 0.36$, $SD = 0.22$) for males and females students respectively. This means that the t -test value [$t(375) = 0.93$, $p > 0.05$] was not significant, and H2a was rejected.

H2b: There is a significant difference in the perceptions of male and female teachers in Saudi Arabia in relation to self-efficacy for their use of E-learning for EFL.

For H2b, the male teachers level of self-efficacy ($M = 0.52$, $SD = 0.22$) was found to be significantly different compared to the female teachers ($M = 0.36$, $SD = 0.19$). This means that the t -test value [$t(210) = 5.13$, $p < 0.001$] was significant, and Cohen's d is 0.78, which is considered a medium-sized effect (Cohen 1988). Thus, H2b was supported. The t -test for students and teachers in relation to self-efficacy is presented in Tables 7.10a and 7.10b respectively.

Personal access to tools

H3a: There is a significant difference in the perceptions of male and female students in Saudi Arabia in relation to personal access to tools for their use of E-learning for EFL.

For this hypothesis, the mean score of personal access to tools for female students ($M = 0.57$, $SD = 0.22$) was very close to the mean score of male students ($M = 0.55$, $SD = 0.23$).

This means that the t -test value [$t(375) = -0.82, p > 0.05$] was not significant, and H3a was rejected.

H3b: There is a significant difference in the perceptions of male and female teachers in Saudi Arabia in relation to personal access to tools for their use of E-learning for EFL

On the part of teachers, the mean score of personal access to tools for male teachers ($M = 0.66, SD = 0.17$) varied marginally from that for female teachers ($M = 0.64, SD = 0.19$). This also means that the t -test value [$t(210) = 0.72, p > 0.05$] was not significant, and H3b was rejected. The t -test for students and teachers in relation to personal access to tools is presented in Tables 7.10a and 7.10b respectively.

Peer support

H4a: There is a significant difference in the perceptions of male and female students in Saudi Arabia in relation to peer support for their use of E-learning for EFL.

For this hypothesis, the mean score of personal access to tools for male students ($M = 0.69, SD = 0.18$) varied significantly from that of female students ($M = 0.61, SD = 0.22$). This means that the t -test value [$t(370.12) = 3.77, p < 0.001$] was significant with a small-sized effect – Cohen's d is 0.39 (Cohen 1988). Thus, H4a was supported.

H4b: There is a significant difference in the perceptions of male and female teachers in Saudi Arabia in relation to peer support for their use of E-learning for EFL

On the part of teachers, the mean score of personal access to tools for female teachers ($M = 0.63, SD = 0.21$) appeared significantly more compared to male teachers ($M = 0.54, SD = 0.23$). This means that the t -test value [$t(210) = 2.81, p < 0.01$] was significant, and Cohen's d is 0.42, which is considered a small-sized effect (Cohen 1988). Thus, H4b was supported. The t -test for students and teachers in relation to peer support is presented in Tables 7.10a and 7.10b respectively.

In-school support

H5a: There is a significant difference in the perceptions of male and female students in Saudi Arabia in relation to in-school support for their use of E-learning for EFL.

For this hypothesis, the mean score for male students ($M = 0.61$, $SD = 0.23$) was significantly higher compared to that of female students ($M = 0.41$, $SD = 0.21$). Students' perception of school support was considered significant based on gender [$t(359.91) = 8.78$, $p < 0.001$], and Cohen's d is 0.91, which is a large-sized effect according to Cohen (1988). Hence, H5a was supported.

H5b: There is a significant difference in the perceptions of male and female teachers in Saudi Arabia in relation to in-school support for their use of E-learning for EFL

On the part of teachers, the mean score for male teachers ($M = 0.44$, $SD = 0.24$) appeared similar to that of female teachers ($M = 0.45$, $SD = 0.28$). This means that the perceptions of teachers in relation to school support showed no significant difference in terms of gender [$t(113.70) = -0.21$, $p > 0.05$]. Accordingly, H5b was rejected. The t -test for students and teachers in relation to in-school support is presented in Tables 7.10a and 7.10b respectively.

E-Learning usability

H6a: There is a significant difference in the perceptions of male and female students in Saudi Arabia in relation to E-learning usability for EFL.

For this hypothesis, the mean score for male students ($M = 0.65$, $SD = 0.19$) compared to that of female students ($M = 0.58$, $SD = 0.21$) showed a significant difference. This means that the t -test value [$t(374.92) = 3.66$, $p < 0.001$] was considered significant, and Cohen's d is 0.38, which is a small-sized effect (Cohen 1988). Thus, H6a was supported.

H6b: There is a significant difference in the perceptions of male and female teachers in Saudi Arabia in relation to E-learning usability for EFL

On the part of teachers, the mean score for male teachers ($M = 0.70$, $SD = 0.18$) compared to that of female teachers ($M = 0.68$, $SD = 0.23$) showed no significant difference on their perception about E-learning usability. This means that the t -test value [$t(111.10) =$

0.92, $p > 0.05$] was considered not significant, and H6b was rejected. The t -test for students and teachers in relation to E-learning usability is presented in Tables 7.10a and 7.10b respectively.

E-Learning functionality

H7a: There is a significant difference in the perceptions of male and female students in Saudi Arabia in relation to E-learning functionality for use of E-learning for EFL.

For this hypothesis, the mean score for male students ($M = 0.70$, $SD = 0.16$) compared to that of female students ($M = 0.59$, $SD = 0.21$) showed a significant difference in relation to their perception about E-learning functionality. This means that the t -test value [$t(364.51) = 5.40$, $p < 0.001$] was significant, and Cohen's d is 0.55, which is a medium-sized effect (Cohen 1988). Consequently, H7a was supported.

H7b: There is a significant difference in the perceptions of male and female teachers in Saudi Arabia in relation to E-learning functionality for use of E-learning for EFL

On the part of teachers, the mean score for male teachers ($M = 0.72$, $SD = 0.13$) compared to that of female teachers ($M = 0.67$, $SD = 0.20$) showed a higher mean score in relation to E-learning functionality. This means that the t -test value [$t(187.78) = 2.20$, $p < 0.05$] was significant, and H7b was supported. However, Cohen's d is 0.30, which is a small-sized effect according to Cohen (1988). The t -test for students and teachers in relation to E-learning functionality is presented in Tables 7.10a and 7.10b respectively.

Family support

H8a: There is a significant difference in the perceptions of male and female students in Saudi Arabia in relation to their family support to use E-learning for EFL.

For this hypothesis, the mean score for male students ($M = 0.68$, $SD = 0.24$) compared to that of female students ($M = 0.56$, $SD = 0.22$) showed a significant difference in relation to their family support. This means that the t -test value [$t(375) = 4.89$, $p < 0.01$] was considered significant, and it did represent a medium-sized effect – Cohen's d is 0.50 (Cohen 1988). Accordingly, H8a was supported. The t -test for students in relation to family support is presented in Table 7.10a.

Table 7.10a: Results of *t*-tests and descriptive statistics for H1a to H8a by gender – Students

Hypothesis	Group						<i>t</i>	df
	Male students			Female students				
	M	SD	n	M	SD	n		
Personal drivers (H1a)	0.73	0.17	180	0.59	0.25	197	6.37*** ^a	353.74 ^a
Self-efficacy (H2a)	0.38	0.24	180	0.36	0.22	197	0.93	375
Personal access to tools (H3a)	0.55	0.23	180	0.57	0.22	197	-0.82	375
Peer Support (H4a)	0.69	0.18	180	0.61	0.22	197	3.77*** ^a	370.12 ^a
In-school support (H5a)	0.61	0.23	180	0.41	0.21	197	8.78*** ^a	359.91 ^a
E-Learning usability (H6a)	0.65	0.19	180	0.58	0.21	197	3.66*** ^a	374.92 ^a
E-Learning functionality (H7a)	0.70	0.16	180	0.59	0.21	197	5.40*** ^a	364.51 ^a
Family support (H8a)	0.68	0.24	180	0.56	0.22	197	4.89**	375

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; ^a The *t* and df were adjusted because variances were not equal

Table 7.10b: Results of *t*-tests and descriptive statistics for H1b to H7b by gender – Teachers

Hypothesis	Group						<i>t</i>	df
	Male teachers			Female teachers				
	M	SD	n	M	SD	n		
Personal drivers (H1b)	0.70	0.20	136	0.74	0.22	76	1.12	210
Self-efficacy (H2b)	0.52	0.22	136	0.36	0.19	76	5.13***	210
Personal access to tools (H3b)	0.66	0.17	136	0.64	0.19	76	0.72	210
Peer Support (H4b)	0.54	0.23	136	0.63	0.21	76	2.81**	210
In-school support (H5b)	0.44	0.24	136	0.45	0.28	76	-0.21 ^a	113.70 ^a
E-Learning usability (H6b)	0.70	0.18	136	0.68	0.23	76	0.92 ^a	111.10 ^a
E-Learning functionality (H7b)	0.72	0.13	136	0.67	0.20	76	2.20* ^a	187.78 ^a

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; ^a The *t* and df were adjusted because variances were not equal

7.3.2 Age differences

What are the differences in the readiness of students and English teachers to use E-learning for EFL in Saudi Arabia based on age?

In answering this question, a number of hypotheses based on the eight identified underlying factors of readiness for students and teachers were tested. The results under each of the eight factors based on the *t*-test is presented below.

Personal drivers

H9a: There is a significant difference in the perceptions of younger and older students in Saudi Arabia in relation to personal drivers for their use of E-learning for EFL.

For this hypothesis, the mean score for younger students ($M = 0.67$, $SD = 0.22$) showed higher agreement compared to that of older students ($M = 0.60$, $SD = 0.24$). This means that the *t*-test value [$t(375) = 2.59$, $p < 0.05$] was significant, and Cohen's *d* is 0.31, which is a small-sized effect (Cohen 1988). Thus, H9a was supported.

H9b: There is a significant difference in the perceptions of younger and older teachers in Saudi Arabia in relation to personal drivers for their use of E-learning for EFL.

On the part of teachers, the mean score for younger teachers ($M = 0.75$, $SD = 0.20$) was considered higher compared to older teachers ($M = 0.68$, $SD = 0.21$) in relation to their personal drivers. This means that the *t*-test value [$t(210) = 2.54$, $p < 0.05$] was significant, and it did represent a small-sized effect – Cohen's *d* is 0.35 (Cohen 1988). As a result, H9b was supported. The *t*-test for students and teachers in relation to age-related personal drivers is presented in Tables 7.11a and 7.11b respectively.

Self-efficacy

H10a: There is a significant difference in the perceptions of younger and older students in Saudi Arabia in relation to self-efficacy for their use of E-learning for EFL.

For this hypothesis, the mean score for younger students ($M = 0.37$, $SD = 0.23$) was very close to the mean score of older students ($M = 0.34$, $SD = 0.19$). This means that the t -test value [$t(149.16) = 1.55$, $p > 0.05$] was not significant, and H10a was rejected.

H10b: There is a significant difference in the perceptions of younger and older teachers in Saudi Arabia in relation to self-efficacy for their use of E-learning for EFL.

On the part of teachers, the mean score for younger teachers ($M = 0.47$, $SD = 0.18$) was also very close to the mean score of older teachers ($M = 0.46$, $SD = 0.26$). This means the t -test value [$t(174.41) = 0.22$, $p > 0.05$] was statistically not significant, and H10b was rejected. The t -test for students and teachers in relation to age-related self-efficacy is presented in Tables 7.11a and 7.11b respectively.

Personal access to tools

H11a: There is a significant difference in the perceptions of younger and older students in Saudi Arabia in relation to personal access to tools for their use of E-learning for EFL.

For this hypothesis, the mean score for younger students ($M = 0.55$, $SD = 0.23$) showed less personal access compared to older students ($M = 0.62$, $SD = 0.19$). This means the t -test value [$t(375) = -2.56$, $p < 0.05$] was significant, and Cohen's d is 0.34, which is a small-sized effect (Cohen 1988). Therefore, H11a was supported.

H11b: There is a significant difference in the perceptions of younger and older teachers in Saudi Arabia in relation to personal access to tools for their use of E-learning for EFL.

For H11b, the mean scores for younger teachers ($M = 0.69$, $SD = 0.18$) showed significantly more personal access to tools compared to that of older teachers ($M = 0.61$, $SD = 0.17$). This means that the t -test value [$t(210) = 3.27$, $p < 0.001$] was significant, and Cohen's d was estimated at 0.45, which is a small-sized effect based on Cohen's (1988) gaudiness. Thus, H11b was supported. The t -test for students and teachers in relation to age-related personal access to tools is presented in Tables 7.11a and 7.11b respectively.

Peer support

H12a: There is a significant difference in the perceptions of younger and older students in Saudi Arabia in relation to peer support for their use of E-learning for EFL.

For this hypothesis, the mean score for younger students ($M = 0.64$, $SD = 0.21$) showed a perception of more peer support compared to that of older students ($M = 0.59$, $SD = 0.23$). This means that the t -test value [$t(375) = 1.75$, $p > 0.05$] was not significant, and H12a was rejected.

H12b: There is a significant difference in the perceptions of younger and older teachers in Saudi Arabia in relation to peer support for their use of E-learning for EFL.

On the part of teachers, the mean score for younger teachers ($M = 0.57$, $SD = 0.23$) showed no significant difference compared to that of older teachers ($M = 0.56$, $SD = 0.22$). This means that the t -test value [$t(210) = -0.04$, $p > 0.05$] was not significant, and H12b was rejected. The t -test for students and teachers in relation to age-related peer support is presented in Tables 7.11a and 7.11b respectively.

In-school support

H13a: There is a significant difference in the perceptions of younger and older students in Saudi Arabia in relation to in-school support for their use of E-learning for EFL.

For this hypothesis, the mean score for younger students ($M = 0.53$, $SD = 0.25$) showed more perceived school support compared to that of older students ($M = 0.47$, $SD = 0.23$). This means that the t -test value [$t(375) = 1.63$, $p > 0.05$] was not significant, and H13a was rejected.

H13b: There is a significant difference in the perceptions of younger and older teachers in Saudi Arabia in relation to in-school support for their use of E-learning for EFL.

On the part of teachers, the mean score for younger teachers ($M = 0.43$, $SD = 0.21$) showed no significant difference compared to that of older teachers ($M = 0.45$, $SD = 0.28$). This means that the t -test value [$t(179.95) = -0.39$, $p > 0.05$] was not significant, and H13b was rejected. The t -test for students and teachers in relation to age-related in-school support is presented in Tables 7.11a and 7.11b respectively.

E-Learning usability

H14a: There is a significant difference in the perceptions of younger and older students in Saudi Arabia in relation to E-learning usability for EFL.

For this hypothesis, the mean score for younger students ($M = 0.61$, $SD = 0.20$) showed more E-learning usability compared to that of older students ($M = 0.57$, $SD = 0.23$). This means that the t -test value [$t(375) = 1.73$, $p > 0.05$] was not significant, and H14a was rejected.

H14b: There is a significant difference in the perceptions of younger and older teachers in Saudi Arabia in relation to E-learning usability for EFL.

On the part of teachers, the mean score for younger teachers ($M = 0.70$, $SD = 0.16$) showed no significant difference compared to that of older teachers ($M = 0.68$, $SD = 0.23$). This means that the t -test value [$t(172.71) = 0.62$, $p > 0.05$] was considered not significant, and H14b was rejected. The t -test for students and teachers in relation to age-related E-learning usability is presented in Tables 7.11a and 7.11b respectively.

E-Learning functionality

H15a: There is a significant difference in the perceptions of younger and older students in Saudi Arabia in relation to E-learning functionality for use of E-learning for EFL.

For this hypothesis, the mean score for younger students ($M = 0.59$, $SD = 0.21$) showed more E-learning functionality compared to that of older students ($M = 0.54$, $SD = 0.24$). This means that the t -test value [$t(375) = 1.92$, $p > 0.05$] was not significant, and H15a was rejected.

H15b: There is a significant difference in the perceptions of younger and older teachers in Saudi Arabia in relation to E-learning functionality for use of E-learning for EFL

On the part of teachers, the mean score for younger teachers ($M = 0.66$, $SD = 0.20$) showed no difference compared to that of older teachers ($M = 0.70$, $SD = 0.13$). This means that the t -test value [$t(194.14) = -1.70$, $p > 0.05$] was considered not significant, and H15b was rejected. The t -test for students and teachers in relation to age-related E-learning functionality is presented in Tables 7.11a and 7.11b respectively.

Family support

H16a: There is a significant difference in the perceptions of younger and older students in Saudi Arabia in relation to their family support to use E-learning for EFL.

For this hypothesis, the mean score for younger students ($M = 0.62$, $SD = 0.24$) was similar compared to that of older students ($M = 0.60$, $SD = 0.24$). This means that the t -test value [$t(375) = 0.73$, $p > 0.05$] was considered not significant, and H16a was rejected. The t -test for students in relation to age-related family support is presented in Table 7.11a.

Table 7.11a: Results of *t*-tests and descriptive statistics for H9a to H16a by age – Students

Hypothesis	Group						<i>t</i>	df
	Younger students			Older students				
	M	SD	n	M	SD	n		
Personal drivers (H9a)	0.67	0.22	297	0.60	0.24	80	2.59*	375
Self-efficacy (H10a)	0.37	0.23	297	0.34	0.19	80	1.55 ^a	149.16 ^a
Personal access to tools (H11a)	0.55	0.23	297	0.62	0.19	80	-2.56*	375
Peer Support (H12a)	0.64	0.21	297	0.59	0.23	80	1.75	375
In-school support (H13a)	0.53	0.25	297	0.47	0.23	80	1.63	375
E-Learning usability (H14a)	0.61	0.20	297	0.57	0.23	80	1.73	375
E-Learning functionality (H15a)	0.59	0.21	297	0.54	0.24	80	1.92	375
Family support (H16a)	0.62	0.24	297	0.60	0.24	80	0.73	375

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; ^a The *t* and df were adjusted because variances were not equal

Table 7.11b: Results of *t*-tests and descriptive statistics for H9b to H15b by age – Teachers

Hypothesis	Group						<i>t</i>	df
	Younger teachers			Older teachers				
	M	SD	n	M	SD	n		
Personal drivers (H9b)	0.75	0.20	112	0.68	0.21	100	2.54*	210
Self-efficacy (H10b)	0.47	0.18	112	0.46	0.26	100	0.22 ^a	174.41 ^a
Personal access to tools (H11b)	0.69	0.18	112	0.61	0.17	100	3.27***	210
Peer Support (H12b)	0.57	0.23	112	0.56	0.22	100	-0.04	210
In-school support (H13b)	0.43	0.21	112	0.45	0.28	100	-0.39 ^a	179.95 ^a
E-Learning usability (H14b)	0.70	0.16	112	0.68	0.23	100	0.62 ^a	172.71 ^a
E-Learning functionality (H15b)	0.66	0.20	112	0.70	0.13	100	-1.70 ^a	194.14 ^a

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; ^a The *t* and df were adjusted because variances were not equal

7.4 Inferential statistics: Correlations between factors

It is worth noting that, in order to explore the association within personal factors on the one hand and external factors on the other hand, factor scores of each factor were used (for more details about factor scores see Section 6.3.1.3). Since factor score is a continuous variable, a decision was made to use Pearson's correlation coefficient as an inferential statistic to examine the correlations between factors. Pearson's correlation coefficient examines if any two factors are positively or negatively correlated with each other (for more details about Pearson's correlation coefficient see Appendix E). In doing so, a number of hypotheses proposing at least moderate correlations (> 0.3) were tested with a value of $p < 0.05$ reflecting acceptance of the hypothesis and a value of $p \geq 0.05$ rejecting the hypothesis. Before conducting the Pearson's correlation coefficient, all eight identified underlying factors of readiness were also assessed for normality (± 2 in kurtosis and skewness levels) and for outliers. Again, the assessment was conducted separately for gender and age, and the outcomes indicated that the data are normally distributed and there were no extreme outliers to indicate problematic distribution of the results (see Appendix E for the outcomes of normality and outliers tests). The following section will expand on the results of all the Pearson's correlation coefficient within personal factors on the one hand, and external factors on the other hand.

Personal drivers

In order to examine the correlation between personal drivers, on one hand, and self-efficacy, personal access, peer support, school support, E-learning functionality and E-learning usability, on the other, seven hypotheses (H17a-H23a) were formulated, postulating significant correlations between personal drivers and each of these factors. The following hypotheses were tested on the part of students.

H17a: There is a significant positive correlation > 0.3 between students' perceptions of their personal drivers and their self-efficacy to use E-learning for EFL.

H18a: There is a significant positive correlation > 0.3 between students' perceptions of their personal drivers and their personal access to tools to use E-learning for EFL.

H19a: There is a significant positive correlation > 0.3 between students' perceptions of their personal drivers and their peer support to use E-learning for EFL.

H20a: There is a significant positive correlation > 0.3 between students' perceptions of their personal drivers and their in-school support to use E-learning for EFL.

H21a: There is a significant positive correlation > 0.3 between students' perceptions of their personal drivers and their E-learning usability to use E-learning for EFL.

H22a: There is a significant positive correlation > 0.3 between students' perceptions of their personal drivers and their E-learning functionality to use E-learning for EFL.

H23a: There is a significant positive correlation > 0.3 between students' perceptions of their personal drivers and their family support to use E-learning for EFL.

As shown in Table 7.12, personal drivers had a weak positive correlation with self-efficacy, $r(377) = 0.240, p < 0.001$; personal access, $r(377) = 0.293, p < 0.001$; E-learning usability, $r(377) = 0.283, p < 0.001$; and E-learning functionality, $r(377) = 0.136, p < 0.01$; as well as a moderate positive correlation with family support, $r(377) = 0.457, p < 0.001$ and in-school support, $r(377) = 0.359, p < 0.001$. However, no significant correlation was found with peer support, $r(377) = 0.100, p > 0.05$. Hypotheses H20a and H23a, were therefore supported statistically with different degrees of correlation as explained above, but H17a, H18a, H19a H21a and H22a were rejected. This means that the student respondents who were positively inclined towards E-learning based on personal drivers also perceived themselves to have more in-school and family support.

Table 7.12: Pearson's correlation coefficient between personal drivers and other underlying factors of students' readiness

		Self- efficacy	Personal access	Family support	Peer support	In-school support	E-learning usability	E-learning functionality
Personal drivers	<i>r</i>	0.240	0.293	0.457	0.100	0.359	0.282	0.136
	<i>p</i>	0.001	0.001	0.001	0.052	0.001	0.001	0.008

On the part of teachers, six hypotheses (H17b-H22b) were formulated, postulating significant correlations between personal drivers and each of these factors. The following hypotheses were tested in relation to teachers.

H17b: There is a significant positive correlation > 0.3 between teachers' perceptions of their personal drivers and their self-efficacy to use E-learning for EFL.

H18b: There is a significant positive correlation > 0.3 between teachers' perceptions of their personal drivers and their personal access to tools to use E-learning for EFL.

H19b: There is a significant positive correlation > 0.3 between teachers' perceptions of their personal drivers and their peer support to use E-learning for EFL.

H20b: There is a significant positive correlation > 0.3 between teachers' perceptions of their personal drivers and their in-school support to use E-learning for EFL.

H21b: There is a significant positive correlation > 0.3 between teachers' perceptions of their personal drivers and their E-learning usability to use E-learning for EFL.

H22b: There is a significant positive correlation > 0.3 between teachers' perceptions of their personal drivers and their E-learning functionality to use E-learning for EFL.

As shown in Table 7.13, personal drivers had a moderate positive correlation with self-efficacy, $r(212) = 0.463$ $p < 0.001$; personal access to tools, $r(212) = 0.545$ $p < 0.001$; E-learning functionality, $r(212) = 0.479$ $p < 0.001$; and strong correlation with in-school support, $r(212) = 0.712$ $p < 0.001$; as well as a weak correlation with E-learning usability, $r(212) = 0.258$ $p < 0.001$. However, no significant correlation was found with peer support, $r(212) = -0.005$ $p > 0.05$. Hypotheses H17b, H18b, H20b and H22b were therefore supported statistically with different degrees of correlation as explained above, but H19b and H21b were rejected. This means that the teacher respondents who were positively inclined towards E-learning based on personal drivers were also perceived to have more self-efficacy, had more personal access to tools and were more inclined towards E-learning based on functionality. They also perceived themselves to have more in-school support.

Table 7.13: Pearson's correlation coefficient between personal drivers and other underlying factors of teachers' readiness

		Self-efficacy	Personal access	E-learning functionality	peer support	In-school support	E-learning usability
Personal drivers	<i>r</i>	0.463	0.545	0.479	-0.005	0.712	0.258
	<i>p</i>	0.001	0.001	0.001	0.937	0.001	0.001

Self-efficacy

Regarding self-efficacy, seven hypotheses (H24a-H30a) were formulated, postulating significant correlations between self-efficacy on one hand, and personal drivers, personal access, peer support, in-school support, E-learning functionality and E-learning usability, on the other. The following hypotheses were tested on the part of students.

H24a: There is a significant positive correlation > 0.3 between students' perceptions of their self-efficacy and their personal drivers to use E-learning for EFL.

H25a: There is a significant positive correlation > 0.3 between students' perceptions of their self-efficacy and their personal access to tools to use E-learning for EFL.

H26a: There is a significant positive correlation > 0.3 between students' perceptions of their self-efficacy and their peer support to use E-learning for EFL.

H27a: There is a significant positive correlation > 0.3 between students' perceptions of their self-efficacy and their in-school support to use E-learning for EFL.

H28a: There is a significant positive correlation > 0.3 between students' perceptions of their self-efficacy and their E-learning usability to use E-learning for EFL.

H29a: There is a significant positive correlation > 0.3 between students' perceptions of their self-efficacy and their E-learning functionality to use E-learning for EFL.

H30a: There is a significant positive correlation > 0.3 between students' perceptions of their self-efficacy and their family support to use E-learning for EFL.

As reflected in Table 7.14, Pearson's correlation coefficient tests reveal that self-efficacy had a moderate significant positive correlation with personal access, $r(377) = 0.520$, $p < 0.001$; in-school support, $r(377) = 0.367$, $p < 0.001$; and family support, $r(377) = 0.342$, $p < 0.001$; as well as a weak significant positive correlation with personal drivers, $r(377) = 0.240$, $p < 0.001$; E-learning functionality, $r(377) = 0.177$, $p < 0.01$; and E-learning usability, $r(377) = 0.294$, $p < 0.001$. On the other hand, students' self-efficacy was not correlated with their peer support, $r(377) = 0.062$, $p > 0.05$. Hypotheses H25a, H27a and H30a were therefore supported statistically with different degrees of correlation as explained above, but H24a, H26a, H28a and H29a were rejected. This means that the student respondents who were perceived to have positive self-efficacy were also perceived to have more personal access to tools as well as more in-school and family support.

Table 7.14: Pearson's correlation coefficient between self-efficacy and other underlying factors of students' readiness

		Personal drivers	Personal access	E-learning functionality	E-learning usability	In-school support	Peer support	Family support
Self-efficacy	<i>r</i>	0.240	0.520	0.177	0.294	0.367	0.062	0.342
	<i>p</i>	0.001	0.001	0.001	0.001	0.001	0.229	0.001

On the part of teachers, six hypotheses (H24b-H29b) were formulated, postulating significant correlations between self-efficacy on one hand, and personal drivers, personal access, peer support, school support, E-learning functionality and E-learning usability, on the other. These hypotheses are listed below.

H24b: There is a significant positive correlation > 0.3 between teachers' perceptions of their self-efficacy and their personal drivers to use E-learning for EFL.

H25b: There is a significant positive correlation > 0.3 between teachers' perceptions of their self-efficacy and their personal access to tools to use E-learning for EFL.

H26b: There is a significant positive correlation > 0.3 between teachers' perceptions of their self-efficacy and their peer support to use E-learning for EFL.

H27b: There is a significant positive correlation > 0.3 between teachers' perceptions of their self-efficacy and their in-school support to use E-learning for EFL.

H28b: There is a significant positive correlation > 0.3 between teachers' perceptions of their self-efficacy and their E-learning usability to use E-learning for EFL.

H29b: There is a significant positive correlation > 0.3 between teachers' perceptions of their self-efficacy and their E-learning functionality to use E-learning for EFL.

As reflected in Table 7.15, Pearson's correlation coefficient tests reveal that self-efficacy had a moderate significant positive correlation with personal drivers, $r(212) = 0.463$, $p < 0.001$; personal access to tools, $r(212) = 0.407$, $p < 0.001$, and in-school support, $r(212) = 0.495$, $p < 0.001$ as well as a weak correlation with E-learning functionality, $r(212) = 0.272$, $p < 0.001$. Hypotheses H24b, H25b and H27b were therefore supported statistically with different degrees of correlation as explained above. On the other hand, no significant correlation was found between self-efficacy and E-learning usability, $r(212) = -0.045$, $p > 0.05$; and peer support, $r(212) = -0.040$, $p > 0.05$. Thus, hypotheses H26b, H28b and H29b were rejected. This means that the teacher respondents who were perceived to have positive self-efficacy were also perceived to have more personal access to tools as well as being more inclined towards E-learning based on personal drivers. They also perceived themselves to have more in-school support.

Table 7.15: Pearson's correlation coefficient between self-efficacy and other underlying factors of teachers' readiness

		Personal drivers	Personal access	E-learning functionality	E-learning usability	In-school support	Peer support
Self-efficacy	<i>r</i>	0.463	0.407	0.272	-0.045	0.495	-0.040
	<i>p</i>	0.001	0.001	0.001	0.511	0.001	0.560

Personal access to tools

In order to test the correlation between students' personal access to tools, on the one hand, and their self-efficacy, personal drivers and family support, on the other, three hypotheses (H31a-H33a) were formulated, postulating significant correlations between personal access to tools and these factors. The following hypothesis were tested on the part of students.

H31a: There is a significant positive correlation > 0.3 between students' personal access to tools and their perceptions of self-efficacy to use E-learning for EFL.

H32a: There is a significant positive correlation > 0.3 between students' personal access to tools and their perceptions of personal drivers to use E-learning for EFL.

H33a: There is a significant positive correlation > 0.3 between students' personal access to tools and their perceptions of family support to use E-learning for EFL.

The results of the Pearson's correlation coefficient analyses, as presented in Table 7.16, showed personal access to tools had a moderate significant positive correlation with family support, $r(377) = 0.356, p < 0.001$; and self-efficacy, $r(377) = 0.520, p < 0.001$; as well as a weak significant positive correlation with personal drivers, $r(377) = 0.293, p < 0.001$. Accordingly, hypotheses H31a and H33a were supported statistically with different degrees of correlation as explained above, but H32a was rejected. This means that the student respondents who were perceived to have access to personal access to tools were also perceived to have more self-efficacy, as well as more family support.

Table 7.16: Pearson's correlation coefficient between personal access, self-efficacy, personal drivers and Family support – Student

		Self-efficacy	Personal drivers	Family support
Personal access	<i>r</i>	0.520	0.293	0.356
	<i>p</i>	0.001	0.001	0.001

In relation to teachers, the correlation between personal access to tools on one hand, and self-efficacy and personal drivers on the other hand, were tested on the following two hypotheses (H31b-H32b).

H31b: There is a significant positive correlation > 0.3 between teachers' personal access to tools and their perceptions of self-efficacy to use E-learning for EFL.

H32b: There is a significant positive correlation > 0.3 between teachers' personal access to tools and their perceptions of personal drivers to use E-learning for EFL.

The results of the Pearson's correlation coefficient analyses, as presented in Table 7.17, showed personal access to tools had a moderate significant positive correlation with self-efficacy, $r(212) = 0.407, p < 0.001$; and personal drivers, $r(212) = 0.454, p < 0.001$. Accordingly, hypotheses H31b and H32b were supported statistically with different degrees of correlation as explained above. This means that the teacher respondents who were perceived to have access to personal access to tools were also perceived to have more self-efficacy, as well as being more inclined towards E-learning based on personal drivers.

Table 7.17: Pearson's correlation coefficient of personal access with self-efficacy and personal drivers – Teachers

		Self-efficacy	Personal drivers
Personal access	<i>r</i>	0.407	0.545
	<i>p</i>	0.001	0.001

7.5 Chapter summary

This chapter presented the results from the questionnaire survey, beginning with a detailed description of the findings in relation to all identified underlying factors of readiness of students and teachers to use E-learning in this research. In summary, the analysis showed that the majority of the student and teacher respondents were inclined to use E-learning with the majority of them giving positive responses. However, their responses about their level of self-efficacy showed that the majority of respondents indicated a lack of self-efficacy to use E-learning. In terms of provision of equipment and technical support in school, the analysis showed that around two thirds of the student and teacher respondents indicated that the current level of school support for E-learning usage is inadequate, especially in female schools. In addition, the outcome revealed that a little over half of student respondents perceived that they are likely to be given family support. In spite of this, a sizable percentage of students also perceived a lack of family support to use E-learning, especially female students. Moreover, the outcome revealed that over two thirds of student and teacher respondents thought they are likely to be given peer support.

On the gender specific questions, the analysis showed that although there were no differences between male and female students in terms of their personal access to tools and self-efficacy, male students appeared more inclined to use E-learning in terms of their personal drivers, E-learning usability and E-learning functionality compared to female students. Further, the analysis showed a significant difference between male and female students' perceptions regarding family support, peer support and in-school support – female students perceived less in all three factors to use E-learning in Saudi Arabia (Table 7.10a provides a summary of the results of *t*-tests and descriptive statistics for students).

On the part of teachers, the analysis demonstrated that there was no difference between male and female teacher respondents in terms of personal drivers, access to tools, in-school support and E-Learning usability. However, the analysis revealed a statistically significant difference between male and female teachers in relation to self-efficacy, peer support and E-Learning functionality – that is, male teachers exhibited greater scores in all three factors (Table 7.10b provides a summary of the results of *t*-tests and descriptive statistics for teachers).

In terms of age, the results demonstrated three significant outcomes. Firstly, older students perceived higher personal access to tools. Secondly, younger students appeared more inclined to use E-learning in terms of personal drivers, E-learning usability and E-learning functionality as well as higher in-school support to use E-learning. Thirdly, there was no significant difference between younger and older students in terms of self-efficacy (Table 7.11a provides a summary of the results of *t*-tests and descriptive statistics for students).

On the part of teachers, the analysis demonstrated that there was no difference between older and younger teacher respondents in terms of self-efficacy, peer support, in-school support, E-learning usability and E-learning functionality. However, the analysis revealed a statistically significant difference between older and younger teachers in relation to personal drivers and personal access to tools – that is, younger teachers appeared to be more inclined to use E-learning in terms of personal drivers and had more access to personal tools (Table 7.11b provides a summary of the results of *t*-tests and descriptive statistics for teachers).

Finally, in terms of correlation, personal drivers were found to be significantly associated with both personal and external factors at different degrees of correlation. Table 7.18 below shows the correlations between personal drivers and personal and external factors.

Table 7.18: Correlations between personal drivers and other underlying factors of students' and teachers' readiness

Students respondents							
	Self- efficacy	Personal access	Family support	Peer support	In-school support	E-learning usability	E-learning functionality
Personal drivers	x	x	*	x	*	x	x

Teachers respondents							
	Self-efficacy	Personal access	E-learning functionality	peer support	In-school support	E-learning usability	
Personal drivers		*	*	*	x	**	x

x correlation not supported; * moderate correlation; ** strong correlation

Self-efficacy was also found to be significantly associated with both personal and external factors at different degrees of correlation. Table 7.19 below shows the correlations between Self-efficacy and personal and external factors.

Table 7.19: Correlations between self-efficacy and other underlying factors of students' and teachers' readiness

Students respondents							
	Personal drivers	Personal access	E-learning functionality	E-learning usability	In-school support	Peer support	Family support
Self-efficacy	x	*	x	x	*	x	*

Teachers respondents						
	Personal drivers	Personal access	E-learning functionality	E-learning usability	In-school support	Peer support
Self-efficacy		*	*	x	x	*

x correlation not supported; * moderate correlation; ** strong correlation

Further, personal access to tools was found to be significantly associated with both personal and external factors at different degrees of correlation as shown in Table 7.20.

Table 7.20: Correlations between personal access and other underlying factors of students' and teachers' readiness

Students respondents			
	Self-efficacy	Personal drivers	Family support
Personal access	*	x	*

Teachers respondents		
	Self-efficacy	Personal drivers
Personal access	*	*

x correlation not supported; * moderate correlation; ** strong correlation

The discussion chapter (Chapter Nine) attempts to discuss the implications of these findings against the research questions presented in Section 1.5. The next chapter (Chapter Eight), presents the data in the third stage of data gathering, which sought to gain deeper insights into the findings of this chapter (Chapter Seven) and Chapter Six, based on in-depth interviews with educational officials at the national level (that is, at the MoE) and regional level (that is, at Education Department Administration in Jazan province), as well as heads of families.

Chapter Eight: Findings from individual interviews – Perspectives of national and regional officials as well as families

8.1 Introduction

This research has involved three stages: first stage, group interviews with 16 students and eight teachers (both of mixed gender) with the aim to explore the underlying factors of readiness of students and English teachers to use E-learning for EFL in Saudi Arabia. Analysis of the qualitative data at this stage informed the design of the questionnaire for the second stage of the research. At the second stage, a questionnaire was distributed to 212 English teachers and 380 final year students (both of mixed gender) in Jazan province. This stage aimed to explore the current level of readiness of students and English teachers to use E-learning for EFL in Saudi Arabia, and to explore any age and/or gender differences. The third stage of data gathering, reported here, was considered in order to explore and interrogate the findings of the first and second stages. It involved using qualitative interviews with five national level officials at MoE with involvement in E-learning, five regional level officials from the Education Department at Jazan province with involvement in E-learning, and 18 heads of families (all male). The specific questions asked and other details about the research participants at this stage are presented in Section 4.8 of this thesis. The aim here was to dig deeper into the findings of the first and second stages (see Section 4.8). This chapter presents the findings of this third stage of data-gathering.

8.2 Perspectives of national education officials

The themes explored in this section include the following: government commitment to E-learning, skill level of teachers, the current state of infrastructure for E-learning, access at home and gender issues, implementing E-learning and E-learning evaluation. These themes are explored further below.

8.2.1 Government commitment to E-learning

The data gathered from participants at the national level suggested that government commitment to E-learning can be perceived to be driven by three main factors: their quest to internationalise Saudi education, their bid to cut down cost and towards building a knowledge-based economy. These three broad views are further explored below.

8.2.1.1 Internationalising Saudi education

The participants suggested that part of the reasons why Saudi Arabia has embraced the use of E-learning in schools is the desire of the Saudi government to internationalise education drawing from international experiences. NL-5, for instance notes that:

During the reign of King Abdullah, education was made a higher priority for Saudi Arabia. The King setup a committee of experts who met on numerous occasions to discuss the Saudi education and to show the way forward. The committee was also tasked to compare education in Saudi Arabia with education elsewhere. This is what resulted from the current E-learning project... The committee came out with a vision of E-learning which was accepted by the King and we are now trying to implement it....

NL-3 agreed with NL-5's comment stating further that:

The King called for a collaboration between the experienced people in Saudi Arabia to partner with expert companies outside the Kingdom in order to develop curricula that will meet both international and Saudi standards... As you can imagine there were a lot of disagreements. But one of the strategic goals that was eventually agreed on was to develop and use E-learning systems. So, we introduced E-learning and we are improving it step-by-step – that is, a percentage every year....

Some participants also mentioned that although the government quest to internationalise Saudi education was carried out in the usual top-down and centralised manner, they think things could and should have been done differently given the magnitude and future implications of this E-learning project. According to NL-2:

I understand we are a centralised state and all decisions are taken by the minster and his advisors, but on matters like the implementation of E-learning in our schools we needed to consult broadly to gather stakeholders' views on the matter. ... You know, I appreciate that we are trying to meet global standards but our efforts to achieve that must not be the usual top-down approach. At least the experts from the MoE and Department of Education should be invited to express their opinion on the matter. But this is only my opinion....

On the above comment, NL-4 seemed to disagree when he suggested that:

... this seems to be a genuine commitment on the part of the government to improve the current educational standards. But there are also suggestions from external organisations such as UNESCO and UNICEF for Saudi Arabia to meet agreed global standards and to make our education more competitive and attractive E-learning is seen as a way forward...

The viewpoints presented here appear to have a historic undertone and a futuristic undercurrent. King Abdullah, whose vision this is attributable to, reigned from 2005 – 2015,

but the data suggest that it is as a result of his vision that E-learning is being implemented in Saudi Arabia today. While the majority seem to embrace the idea, others think it would have worked better if other stakeholders, particularly experts in the field of education, were consulted. The goal at the end of the day, nonetheless, is to help raise the standards of education in Saudi Arabia to that of international standards.

8.2.1.2 Cutting down cost

On this sub-theme, participants suggested that the strategy is to use the few competent and experienced teachers in the cities and urban areas through E-learning as a medium to teach a wider population, particularly those in the rural areas who lack the expertise of such competent and experienced teachers in the classroom. This is considered cost effective relative to the cost of recruiting such teachers, usually from abroad. So, in essence part of the reason for the adoption of E-learning is to cut down cost in teacher recruitment. According to NL-2, ... *in order to cut down cost, the mission is to use the few experienced teachers in the system only as monitors for students via an online system (E-learning) instead of having teachers for each subject... This is thought to be cost-saving ...* This view is echoed by NL-4 who remarked that:

By using E-learning, yeah. We have a lot of problems actually in education. Some of the rural areas, okay, you spend a lot of money hiring teachers who are not well educated and have limited knowledge in the subject area. Okay. This situation is worse in the rural areas compared to cities for a number of reasons. For example, while the majority of teachers in Riyadh are qualified with degrees, only teachers with diploma and with less experience are hired to teach in most villages. Okay. So, when you have E-learning in place, our thinking is that it would help to solve this problem by providing students in the rural areas the opportunity to learn from the most qualified and experienced teachers. We are doing this to ensure that all the students have a good education with a professional teacher using a virtual classroom. This plan is also cost effective....

Another contribution made to explain the cost effectiveness of adopting and using E-learning was by NL-5. In his view:

We think the use of E-learning will be cost effective. As you know, Saudi Arabia is a big country and there is always the shortage of qualified teachers in our schools. So, by introducing E-learning which allows students to learn from anywhere, for example in their home, the provision of a virtual school can help to cover a wider range of schools with fewer but highly qualified teachers without compromising the quality of service. This is going to be very good for subjects with skill shortage such as EFL.

In addition to the money that will be saved from recruiting competent and experienced teachers from abroad, another way E-learning is going to help cut government expenditure is in relation to the printing of textbooks. Both NL-1 and NL-2 suggested, respectively, that:

... Cost-wise, to reduce printing some books. ... We have about 3,070 textbooks needing to be printed based on the number of students distributed over this education types. ... Most of the textbooks are to be in digital forms like pdf, and like videos, and like SCORM or interactive materials. (NL-1).

... MoE for some time now has been saying that the government spends a lot of money in printing and importing textbooks in order to meet the needs of students. These books keep changing from time to time and the old books become obsolete. As a result, the government thinks that it will reduce the cost of printing textbooks if students are able to learn using E-learning (NL-2).

It therefore seems clear that one goal of introducing E-learning in Saudi Arabia is cost-saving, by reducing teacher numbers and printed materials.

8.2.1.3 Towards building a knowledge-based economy

Participants at the national level also identified that the adoption of E-learning in Saudi Arabia is in order to help a knowledge-based economy. All five national officials made connections between the Government strategies (Vision 2030) of building a knowledge-based economy diversified from oil and the implementation of E-learning in schools. However only four out of the five were positive about the project. The view expressed by NL-1 seemed to encapsulate the position of the other three participants. According to NL-1:

I think Saudi Arabia is ambitious and part of our ambition is to build a knowledge-based economy. If the country is able to implement the use of E-learning in our schools effectively, I am sure that will help in improving our educational system and our desire not to rely solely on oil revenue in the long term. I think this is a good plan because I do not know what else the country can do if the oil runs out and the people have no other way of making ends meet.

NL-5 appeared to have doubts about Saudi Arabia's quest to building a knowledge-based economy. He suggested that building a knowledge-based economy is a distant possibility in Saudi Arabia. In his view:

... I have my doubts. There are inadequate computers and no Internet connectivity in schools throughout Saudi Arabia. We also have many rural schools that find it difficult to recruit teachers. I am aware of the MoE Tatwer's programme, a project called

knowledge gift, through which computer tablets are supplied to students. These are given to students free of charge, but this is insufficient for all students in the country. I think more needs to be done if indeed we are working towards building a knowledge-based economy.

In summary, national officials differed in their views regarding the possible contribution of E-learning towards building a knowledge-based economy in Saudi Arabia with the majority professing a positive view.

8.2.2 Skill level of teachers

Officials at the national level made the following contributions regarding the skill level of teachers. For example, NL-2 pointed out that:

... the majority of teachers were trained for face to face teaching ... most of them need to be trained how to use E-learning system ... ideally schools should have technical assistant units to help teachers... But there is a shortage of such units in the country ... I know that we have trained all the head-teachers of the 150 schools are running E-learning right now. We have also trained about 500 male teachers and 500 female teachers in those schools, and some of them are also now qualified to provide training to other teachers. ...

In agreement, NR4 also noted that:

... a large number of teachers lack the right skills to use E-learning. For example, teachers will need to acquire skills in how to use E-learning tools such as virtual classroom, how to create culturally appropriate videos and upload them to the E-learning system and so on. So, for me this is a big challenge that needs to be looked at before we implement the E-learning programme. There must be training programmes for all teachers.

As a result of these challenges, the MoE has put in place an online training scheme to train a wider population of teachers to sharpen their skills to enable them to use E-learning in their teaching. However, the current infrastructure poses a barrier for this online training. How the current state of the infrastructure poses a barrier is explored below.

8.2.3 The current state of the infrastructure for E-learning

Although Saudi Arabia is a rich country and outsiders might expect the country to have a sophisticated ICT infrastructure, the reality is different. Indeed, the country is vast in terms of landmass and depends solely on oil and gas as the main source of foreign exchange. The country is also at an early stage of development and has limited state of the art

infrastructure particularly in the rural areas. The lack of infrastructure is therefore one of the barriers to E-learning implementation in Saudi Arabia. According to NL-2:

The MoE is facing many obstacles when it comes to infrastructure of the schools. ... There are around 7000 computer labs in our schools, or more, 70% of the computers in those schools are very old, and 80% without Internet. I am also aware that the quality of the Internet varies from one school to other. There are schools, for example, with DSL connection with speed of 4MB and others with 1MB. The new contract signed by the MoE is to ensure that all schools have up to 4MB speed. Other schools have mobile broadband Internet service, either 3G or 4G. But overall this is not good news for the proposed implementation of E-learning in these schools, is it? I think before the MoE take any further steps, these schools will need to be equipped with new computers and provided with good Internet access. It is really an obstacle. ... Yes.

The lack of proper school infrastructure is mentioned by NL-3 and NL-4. For example, NL-4 suggests that:

... schools are not ready to implement E-learning because most of our schools lack computers and Internet facility. Most schools have old buildings, and some are even not big enough to have learning resource centres which can be equipped with enough number of computers for students to use...

NL-5 also appeared frustrated by the fact that schools lack the needed infrastructure. He however alluded to the fact that the government might be struggling to meet competing priorities with limited resources. In his view:

If the money is mine, I would spend it on education, but the government has some priorities as well. Health and other sectors need to be improved as well as....

Participants were quizzed whether they felt or experienced any differences between the male and the female schools in terms of infrastructure. Only two out of five national level officials agreed to discuss this point, while the others refused because it is a sensitive subject. The regional officials were a little more forthcoming on this issue (see Section 8.3.4). Both national level officials, NL-1 and NL-4 rejected suggestions that girl's schools are less well equipped than boy's schools. According to NL-1:

[Girls] have very, very good school complexes for education. I have not heard that girls' schools have less good computer resources in the schools. It just isn't true that schools for girls are worse resourced than schools for boys. They are treated equally. And we do not care about the gender at all. ...

NL-4 in agreement also suggested that:

All schools, male and female are similar in their situation, both need to be reformed again, but it is difficult to reform because of the high numbers of schools. We can't be sure that the readiness of schools in terms of infrastructure meet the required standard to implement E-learning. Boys' and girls' schools are similar to each other, they are almost non-existent of computers or very old computers as well as Internet contact is poor.

This section suggests that though a rich country with highly developed cities, the technical ICT infrastructure for E-learning is a major barrier to readiness in Saudi Arabia.

8.2.4 Access at home and gender issues

Another major issue that was flagged by research participants at the national level is the issue of access at home. This was discussed at two broad levels – that is, how culture and gender segregation as well as related issues might impact on access; and how government support or the lack of it impact on access and parents' awareness.

8.2.4.1 Culture and gender issues

Like many other cultures, the way things are done in Saudi Arabia is shaped by the culture and religion of the people which differ in many ways from that of other people, particularly that of western cultures. According to NL-1:

... Even when we provide the students with laptops, the parents ... they break it because they do not want the student - girl student - to access the Internet. But the culture has been changing for the last three years....

NL-3 also suggested that the gendering of Saudi Arabia education is big issue that needs to be looked at if E-learning is to work in Saudi Arabia. In his words:

We have a problem. The culture of the people is not to accept different genders to be in the same class even online. ... This makes the use of E-learning in our teaching and learning difficult...

NL-5 endorses this view when he noted that:

... some parents still have resistance against E-learning in general. ... They still have very strong cultures in terms of the segregation between girls and boys. The irony for me is that some parents are willing to give their daughters and sons mobile devices, or smart devices to text with strangers. But, they do not want to allow their children to be

part of an E-learning classroom. I believe these parents are the minority, not majority and such mentality is fast changing.

Interestingly, other participants felt the government is using E-learning to de-gender education in Saudi Arabia. According to NL-4:

... the MoE is trying to make many programmes to support education including online learning which encourages in many ways the mixing of males and females. I will give you an example of what we do in in the Ministry. We provide lessons for students online and this is mixed girls with boys all together and virtual classroom.

But NL-2 cited a historical narrative to suggest that the Saudi governments is likely to succeed overtime if it perseveres. In his view the resistance is usually because of the lack of awareness of the projects to be implemented. Hence, he calls for the need to educate the family about E-learning and the potential gender mixing. In his words:

In general, the Saudi society culture, their resistance and refusal to any change grows under such similar circumstances. For example, we faced such resistance with the beginning of TV and then with mobiles and now with the Internet... I think when the people begin to know the importance of E-learning in their children's education, they will accept it But until they learn these benefits, families will continue to say no to their children using E-learning because of their cultural and religious views ... Families are even more restricted with their girls than their boys ...

Gender separation is a prominent feature of Saudi society, found in education and though expected by parents in E-learning environments. It appears challenging for at least some participants at the national level, which they feel might impact on the readiness strategy.

8.2.4.2 Government support and parents' awareness

As Section 7.2.3 reveals, around a third of students who participated in the survey lack computer and Internet access at home. This section explores the availability of governmental support or the lack of it for families in Saudi Arabia. Quoting RL-4:

About 70% of family households in Saudi have access to computers and Internet, but one computer in a household might not be enough because of the large family sizes. We live in big families, the average number of children per family is six to eight. Suppose that a family has six students in the household and only one computer. What will happen if all of them need to attend an online lesson or need to do some homework or activities? So, this is a challenge for the MoE and for families with a lot of children. This could also mean that E-learning is likely to only benefit families that have the financial ability to provide equipment for all their children, unless the government is willing to provide these families with such equipment.

Some parents cannot or choose not to provide computers in the home. In the view of NL-2 some families simply prefer the use of traditional pedagogy. In his words:

E-learning is an option for students, parents who know the benefits of E-learning and what its future results will allow their children to use it. But parents always prefer their children to have traditional learning. This is actually because they [families] learned in this way by going to the schools and the teachers talk and use the chalk.

NL-2 further suggested that:

... They [families] do not have the ability to provide the needed computer and Internet connection to their children

NL-5 believes the benefits of E-learning will alter parents' attitudes and NL-4 suggests endorsement by the MoE is influencing parents. According to NL-5:

I think, when students use E-learning in their schools and see its benefits, they will influence their families at home, and this will change in the near future, but this will take time.

NL-3 (the only woman official) made the following comment:

I do not have, now, a real statistic regarding how many people can access the computer from home. But ... more than 50% or 60% of the Saudi people, nationality, use the Internet. And we can access the Internet from mobiles ... in Riyadh ... it seems to be 90%. We are using Internet access by mobile. If we talk about the south, for example, we are more poor people. We start up 12 TV channels.

In summary, the MoE is hopeful that parents will support E-learning when its benefits become apparent, a view that is discussed further in Section 8.4 below from the perspective of parents.

8.2.5 Implementing E-learning

The government has adapted a gradualist strategy in relation to how E-learning is implemented in Saudi Arabia. Some research participants at the national level attested to this fact and suggested reasons for the current government strategy. For instance, NL-2 suggested that:

... we launched the Future Gate Project which aims to have both educational systems, traditional learning and E-learning. A total of 150 schools consisting of 75 boys' schools and 75 girls' schools, in three provinces out of 13 provinces, have so far implemented this project. The aim is that next year we will have reached 1500 schools and by 2020 we are aiming that all schools in Saudi Arabia will be using both educational systems... The plan now is that any school that becomes ready in terms of

equipment, computers and Internet connection, we provide to their teachers with online training for all aspect they need to use E-learning.

Implementation appears guided by the readiness of ICT infrastructure (Internet connectivity and availability of computers), followed by the training of teachers. Both the form and content of E-learning implementation is centrally controlled as a result of which some feel there is no flexibility. The view expressed by NL-4 is that:

There is currently no flexibility in the implementation of the E-learning project in Saudi Arabia because of the centralised nature of the MoE. Things are difficult right now because teachers and students lack the basic skills to use E-learning if it is implemented in Saudi schools. We need to train our people and provide them with the needed resources for a successful implementation of the E-learning project... We are now trying to provide online training courses for those who need training.

NL-1 also mentioned that although the MoE began with EFL, other subjects followed immediately and up to three courses are now studied using E-learning in Saudi Arabia. He further suggested that: ... *the MoE thus seem to have an expansion criterion although we do not know the details for now. We have moved from English to maths to science now, to computer, step by step.* It also seems that the implementation of E-learning has been initially in areas where foreign E-learning partners have content for E-learning, though this is not the official position of the Saudi MoE.

NL-5 bemoans the lack of long-term strategy fearing significant mid-stream project changes. In his view:

... there is no long-term educational strategy in Saudi Arabia. This is because successive MoE constantly effect policy changes depending on what they think is right for the country at any given time. This is making it difficult for teachers and schools to follow particular policies through. Things would better if there is a long term plan in place...

Other views expressed by the national officials include that of NL-3 who noted that:

The MoE currently does not have a systematic plan to raise awareness of the society about the benefits of E-learning, we do some adverts using Facebook, Twitter and YouTube. I think education departments in each province should establish educational centres in the markets centres.

The above provide diverse glimpses of participants' views about the current state of affairs in relation to the implementing strategy of E-learning Saudi Arabia.

8.2.6 E-learning evaluation

The importance of having a clear evaluative mechanism for the implementation of the E-learning project cannot be overemphasised if the MoE is to accurately assess the benefits of the project. The participants at the national level thought the MoE has no form of evaluation mechanisms in place at the moment, although this could be part of their future plans. For instance, NL-3 noted that:

... Our E-learning project has been evaluated by international organisations such as UNESCO and has given us a good evaluation report.

In agreement, NL-5 also suggested that:

The 150 schools that are now using E-learning will give us the opportunity to judge and evaluate the success of E-learning. So, the MoE is trying to put in place some form of evaluation... but not so far.

Further, NL-2 suggested that E-learning is still in its early implementation stage and there are no known studies showing whether it has successfully improved the learning process in Saudi Arabia or not. In his words:

... there are no clear evaluation criteria and no ability to compare E-learning assisted exam results with those from traditional teaching. The MoE has no criteria to evaluate the impact E-learning is making in our schools in terms of effective teaching and learning.... We think when schools are equipped with computers and Internet connectivity, such schools will automatically start to do better academically.... But this might not be the situation at all.

Agreeing with NL-2, NL-1 also noted that:

Actually we do not have accurate statistics showing that E-learning is helping to improve teaching and learning in this country... I think what we need are comparative studies evaluating the results between the use of E-learning and other traditional learning methods... We can do this either in terms of subject areas or using the entire educational system. But because we are still in the beginning with E-learning projects, these data are not available... We are still working on the governance of E-learning.

NL-4 also agreed with both NL-1 and NL-2 when he commented that:

The current situation of the schools implementing E-learning are not known and I am not sure if we have any clear cut strategy of evaluating the E-learning project... I am not sure....

In short, E-learning is a complex innovation requiring robust qualitative and quantitative evaluation, no persuasive criteria or processes appear to be in place to officially evaluate the introduction of E-learning or E-learning readiness.

8.2.7 Section summary

This section has recorded the views of national level officials on E-learning. The findings suggest mixed reasons for the government's introduction of E-learning – that is, rural reach and cost reduction along with a variety of educational aims including good teaching practice in rural areas. The findings also suggest that E-learning can be used to complement the existing traditional pedagogy in line with the national Vision 2030 of building a knowledge-based economy and the need to improve educational quality.

Readiness for E-learning appears significantly constrained by infrastructure deficits and implementation seems to follow rather than lead readiness (Section 8.2.3). Other significant barriers identified include: access at home and other gender related challenges (Section 8.2.4). Home support for E-learning is a major constraint on readiness for E-learning, with many officials (against their hopes) pointing to parental concerns that E-learning de-segregates education. Finally, Section 8.2.6 suggests that a robust framework and evaluation criteria of E-learning readiness are not in place.

8.3 Perspectives of regional education officials

This section reports on the perceptions of officials at the regional level. The themes explored in this section include the following: regional commitment to E-learning, education and Saudi Arabia's knowledge economy strategy, levels of teacher and student skills, the current state of the infrastructure for E-learning, access at home and gender issues, as well as E-learning evaluation. These themes are explored further below.

8.3.1 Regional commitment to E-learning

Regional officials appeared unanimous in the view that the introduction of E-learning has nothing to do with them but comes directly from the MoE – that is, another example of the top-down approach of doing things in Saudi Arabia. They gave different opinions for their observation. According to RL-4: “... *the region is committed to E-learning because*

we're told to do so..." RL-2 also expressed that: "... the only reason for introducing E-learning in the region is that we are tasked to follow the lead by the MoE".

The above views were also endorsed by RL-5 who said that:

We at the regional level has no involvement in any policy formation about E-learning implementation. Always such policies, and decisions are made at a senior level at the MoE. ...

RL-3 also expressed some frustration when he noted that:

... MoE has proposed so many reforms in the schools education for the past few years, but not all has succeeded. This is because their decisions are based on their expectations but do not meet the expectations of the people in the field. I can see the same strategy with E-learning implementation, which brings a big question mark about the successful implementation of E-learning...

Another view expressed by RL-1 was that:

We face a problem in our traditional education as being talk and chalk, and the MoE wants to take advantage financial support by the government to support excellence in teaching and learning through the optimal implementation of E-learning in order to achieve national goals. Actually, there is a belief in E-learning from the MoE that E-learning will have a big positive impact on the educational system. In my viewpoint, the main driver behind this was the desire and need to make our education one of the best in the world. The MoE is behind the introduction of E-learning, but, I personally think this project makes the MoE look better than it actual is in relation to their support for teaching and learning. We in Jazan Education Department have no involvement in E-learning strategic planning, we only have to apply the strategy.

Following on from the above, it appears that officials at the regional level generally saw the E-learning project as something that comes from the MoE. Some of the officials identified the advantages of the E-learning project. For instance, RL-4 suggested that:

... E-learning will provide students and teachers with different tools that they can use in their teaching and learning. For example, teachers will be able to post homework to the students online and track their progress. In terms of students, for example, self-assessment tools online tutorials etc.

RL-2 also noted that the advantage of the E-learning project is based on the fact that it will provide 24-hour access to materials and interaction for both students and teachers. In his view:

... There is a huge belief in the importance of E-learning, and how it will help students who are studying EFL. For example, students can have alongside the face-to-face teaching in the school, a 24 hour online tutorial to develop themselves.

In summary, for regional officials E-learning is a top-down centralised policy which they are obliged to implement without questioning. However, some regional officials saw some merit in the E-learning project.

8.3.2 Education and Saudi Arabia's knowledge-based economy strategy

Similar to the views expressed by officials at the national level, officials at the regional level expressed that one of the key factors driving the implementation of E-learning in Saudi Arabia is in order to fulfil the government's drive to become a knowledge-based economy. The views of this group of participants were entirely in agreement with that expressed by officials at the national level. The details will not be repeated in this section. However, it is significant to mention that more officials at the national level (see Section 8.2.1.3) were able to draw connections between building a knowledge-based economy and modernising education, than officials at the regional level. By way of a summary, it is important to re-echo the commitment of the Saudi government to use E-learning in its desire to build a knowledge-based economy as stated clearly in its Vision 2030 document.

8.3.3 Level of teacher and student skills

Participants at the regional level made the following contributions regarding the skill level of teachers and students. In terms of teachers, for example, RL-1 pointed out that:

I have visited a large number of schools over the last year to explain the idea of E-learning, its goals and benefits for teaching and learning. Generally, I think most if not all of the teachers under my supervision in my area hold positive attitudes towards using E-learning in their teaching and are willing to use it in their daily teaching activities. Unfortunately, most of the teachers lack basic skills and knowledge on how to use E-learning although they are looking forward to apply it. So, I think teachers need to have training to build up their skills....

He also pointed to the possibility of difference in the teachers' skills based on age. In his words: "... I think there is a possible difference between older teachers and younger ones..."

RL-2 argued that teachers need adequate training, but there is no good infrastructure. In his words:

... although we have an online training programme for teachers in how to use E-learning, we are not able to execute such training programmes because we cannot do so without the right infrastructure in the schools – computers and Internet...

Participants were quizzed whether they felt or experienced any differences between males and females in terms of their skills. According to RL-1:

Male teachers are normally introduced more to technology than female teachers in their pre-service teacher training since there are more male lecturers in this area. And, normally, the MoE starts to train the male teachers before the female teachers, again because there are more male trainers available than the female trainers. So, because of these I think there would be a gender differences...

The above raises an issue of inequality and a need for investment in relation to female education in order to bring about parity.

RL-3 referred to the *cultural situation* separating men and women in Saudi Arabia. He suggested that:

Yes, there are gender differences at all levels and in the way we do things. Maybe this is a cultural problem but it affects the way things are done in Saudi Arabia including how E-learning is implemented. For example, out of the number of regional supervisors trained by the MoE so far, there is no female supervisor. In my opinion this is not good enough because male supervisors cannot work in female schools...

RL-4 supported the above claim when he noted that:

There isn't any female E-learning supervisors right now. So far I'm the manager and there are five E-learning supervisors for each Education Office – Jazan office, Abu-Arish office, Al-Arethah office, Ahad-Almsarh office, Samtah office and Farsan office. Normally, we should have five male and five female supervisors. But currently, I am only working with male supervisors because there is a lack of female supervisors. Either they are not qualified or most of them are not interested in such jobs. It is a lot of responsibility and female supervisors will have to work with males most the time. But you know our culture This is why we lack female supervisors

In relation to students, for example, RL-2 is of the view that lack of ICT skills by students make implementation difficult. He noted that:

... Students will face challenges to use E-learning as a result of the lack of skill to use E-learning. This lack of skill, I think is also a result of most Saudi students usually do not have a proper computer literacy preparation program in the schools. They usually study computer literacy theoretically but not practically. When they come to use E-learning, they will then need more training and preparation to use E-learning otherwise students will find it difficult to use and they might avoid using it at all.

The participants were also quizzed about whether they felt or experienced any differences between males and females in terms of their skills. They provided various views to show of the lack of data in this area. According to RL-1:

... We lack prior research into students' skills regarding the use of technology in general and E-learning in particular. We also appear not to know how much the impact of the lack of data is affecting us.

RL-5 showed a different perception of the question of gender and stated:

I think there is no difference since we have unified education system for both male and female student.

However, RL-3 recognised the lack of resources in female schools noting that, “girls’ schools have less computers and Internet, which means that they have less IT literacy introduction...”

Saudi regional education officials expressed concern at teachers’ skills for E-learning, in particular women teachers, for whom supervisor trainers are in short supply. They believe students too lack ICT skills. Overall regional officials suggest that teacher and student skills are limiting readiness for E-learning.

8.3.4 The current state of the infrastructure for E-learning

In Section 8.2.3 national officials expressed concern that infrastructure deficiencies were retarding E-learning readiness. Being closer to implementation and school capacities, regional officials too expressed concerns that ICT infrastructure holds back readiness for E-learning. The views of these regional officials are explored below. From the data, two regional officials appeared sanguine about the current state of infrastructure. RL-5, for instance suggested that:

Apart from the rural areas, most of the schools have a good Internet access. I do not have an exact number but maybe the ratio is one computer for every two students. ... Some students also use their mobile phones for online learning... So, as a supervisor I would say that I am satisfied with the level of infrastructure in the country... But the MoE can do more to cover the parts of the country where infrastructure is lacking

RL-3 offers a similar viewpoint, highlighting the lack of infrastructure in rural areas but maintaining at the same time that the level of infrastructure is good generally. He noted that:

In general, it [ICT infrastructure] is good. But in the rural areas maybe we have a low level of infrastructure... no Internet access. The official explanation is that the lack of Internet access is for security reason. But, some days it works and some days it does not work ...

Other regional officials pointed to some deficiencies in the level of ICT infrastructure in the country and calls for decentralisation of budgets. According to RL-4 who appeared outspoken and desiring that the challenges are addressed:

I do not think there is adequate IT infrastructure all over the country. In general, most of the schools are not fully equipped by computers and Internet connection. Here in Jazan province, I have sent several requests to the MoE to equip both our male and female schools but we have not had any response yet. ... You know, it's really a sad situation... The last request was sent to the MoE a year ago but I understand the MoE has a lot of responsibilities and can't fulfil them all... Most of my colleagues in other province have the same problem. ... I think with this many schools over the country, each Education Department in each province needs to have the powers to make its own decision in terms of processing infrastructure for schools and so on.

RL-2 also pointed to deficiencies in infrastructure and calls for decentralised budgets/decision as well as the need to eschew bureaucracy.

In my opinion, schools are not ready to implement E-learning, schools infrastructure are almost all bad.... For me the solution is to improve the quality of school buildings and quality of IT in schools. Part of the problem is the centralised nature of the Saudi system. I think each Education Department in each province in the country should be allowed some autonomy. For example, independent budgets and should be allowed to make their own decisions...

Participants were also quizzed whether they felt or experienced any differences between the male and the female schools in terms of infrastructure. RL-1 suggested that “girls’ schools have fewer computers and Internet, compared to male schools because of the priority given to male education in Saudi Arabia generally ...” This is similar to the views expressed earlier regarding issues that concerns systematic inequality and gender discrimination against females in Saudi Arabia. Other participants traced the differences in infrastructure between male and female schools to the lack of direct communication between female schools and the Education Department. RL-2 mentioned that:

The girls schools are in worse situation and with less learning resource centres than boys schools. You know, we have a problem, for example, if female head teachers want to ask for computers and Internet for their schools, they cannot go to the education department directly because all the workers there are men. So, such female head teachers will need to send the request by post which can either get lost or sometime be ignored.

RL-5 also suggested the lack of proper school building; in his words:

... Male schools are much better than the female schools. As far as I'm aware, there is a large number of female schools that are not even in government buildings which makes those schools difficult to have computer labs since they are small buildings with huge numbers of students...

Finally, RL-4 argued that good infrastructure is insufficient and suggests that infrastructure is a major drag on E-learning readiness. He mentioned that teachers are more likely to give up on E-learning in the midst of infrastructure failure. He also thinks female teachers are more likely than their male colleagues to use E-learning when the infrastructure is good. According to him:

When there is good infrastructure in the schools to support E-learning usage, teachers, but particularly female teachers; will be more inclined to use E-learning in their teaching.... I think females are more motivated to use technology than males but they can only do so if it is available and in good condition....

In summary, all regional officials point to infrastructure deficiencies, though two participants believed it is only limited to the rural areas. Others point to old buildings, obsolete technology and absence of technical support justifying their call for decentralisation of budgets to the regions. It seems fair to conclude that infrastructure deficiencies are holding back E-learning readiness in a significant number of Saudi schools.

8.3.5 Access at home and gender issues

This was another substantive issue raised by research participants at the regional level demonstrating their awareness of the importance role this plays in E-learning readiness in the research context. In order to facilitate understanding, this was explored at two broad levels – that is, culture and gender issues, as well as parents' awareness.

8.3.5.1 Culture and gender issues

Participants at the regional level also noted the importance of culture to implement E-learning. According to RL-4:

We have a very strong culture and parents would not allow their children to go online and interact with people not known to the parents. You are talking about students at school age. What is common is, parents allow their children to only engage with other children within the society... their exposure is limited ... that is to teachers, family friends and their friends in school.

In agreement RL-1 also noted that:

The reluctance of people to allow their children to use E-learning can be traced back to two important points. One, families worry about gender-mixing online; and two, the fact that parents think they cannot control or do not know what is happening online and who is at the other end. As you know, Saudi society has its own culture and people always try to keep their own privacy. For example, the society's view of the woman is completely different from western countries, they will not allow her even in an online gender-mixing environment. I'm sure some families will restrict mixing in the virtual world, especially girls more than boys.

Finally, RL-3 suggested that:

The main problem for Saudi culture with E-learning is with regard to synchronous E-learning lessons. Even in the MoE, there is divided opinion on the idea of an online mix-gender education. Those who are in support of gender-mixing argue that it is the only choice available to break any existing barriers that stop boys and girls from sitting in the same classroom. Those who object to the idea on the other hand stress the need to keep the society's culture while we can have a gender segregated E-learning.

The views expressed here is an illustration of how cultural and gender issues are highly sensitive within the Saudi context. Although these may be considered emotive in other contexts, they are definite influential factors in Saudi Arabia.

8.3.5.2 Parents' awareness

This section explores the how the regional level perceives the family awareness of E-learning. RL-2 noted that:

Most families lack the awareness of the importance of E-learning and fear its unexpected results about their children studies as most of the families prefer face to face ... if MoE informs families about the importance of E-learning, in this case, the mother and the father will see their children being on the computer and Internet, would be part of their learning.

Further, RL-5 noted that:

It depends on the family itself, actually. I can see that male students have more access to computers and Internet than the female students. This is true, families restrict girls to access the Internet to avoid gender mixing in the Internet. But this would change in the future if the families are educated enough by the advantages of technology in their children education for both male and female.

RL-4 also suggested that the MoE should aim to dispel parent's fears about E-learning. In his view:

Rising up parents' awareness about E-learning is a very important strategy which will help to expand E-learning all over the country faster and with less parents' reluctant. ... Unfortunately, there no such programme to build parents' awareness in online learning and that is supervised by the MoE. ... You know, we cannot say that the MoE is the only one responsible, head-teachers should take the initiative to meet with parents and explain to them that online learning and that is supervised by the MoE and this would help to mitigate the restrictions on girls from parents.

RL-3 also argued that closer liaison between parents and school would help. According to him:

When a student registers for his first time in the schools, the schools ask for the parents' contact details such as phone number and email, and we keep all of these information in my system called Nor. Unfortunately, we accessed these information to directly build accounts for parents and their children in the E-learning system and sent the details to them, but all the information is very old. There has been no update for them for many years... The lack of such information itself is a problem for us as E-learning support centre to spread the culture of E-learning in the society.

In summary, regional officials express concern at lack of parental understanding of E-learning, suggesting this particularly disadvantages female students.

8.3.6 E-learning evaluation

Although regional officials acknowledge that it is officially part of their role in the implementation of E-learning in Saudi schools to evaluate, what they do in practice by way of evaluation is limited. RL-1 for example said that:

... part of our duty is to gather data which help us to evaluate the level of participation at the individual and school level. But what we actually do is gather information, then forward this data to the MoE. Whatever they then decide to do with the data is up to them...

RL-5 explained the type of data they gather at regional level. According to him:

We are as a support centre, there is a form supervision at the end of term when we prepare a report to our headmaster. In this report, we are able to say the number of schools which have activated their online accounts and the schools which have not done so. We are also able to provide the number of teachers and students who did activate their E-learning accounts or those who have not done so... At the end we have some points about the obstacles or difficulties that face us.

However, RL-2 expressed that he was unaware of any form of evaluation of the E-learning project. In his words:

I'm not aware that the MoE even asks for any feedback about E-learning implementation. What I am aware of is that the committee in-charge of E-learning designing and development in the MoE takes decisions and circulates them to all schools throughout the Kingdom. But not how they evaluate what they do or at least I do not know about it...

In summary, regional officials suggested that their only recognised role in the evaluation process was the gathering of data that they considered as limited at best.

8.3.7 Section summary

To take stock, regional officials appeared committed to E-learning as directed by the central MoE. They reported that schools will be more willing to embrace the introduction of EFL if materials are made available by the MoE and the advantage of a more active learning pedagogy is made palpable. Though divided in opinions, regional officials believe the current state of school infrastructure will impact negatively on the readiness for E-learning, citing lack of investment in (poor quality) girl's schools and bureaucracy (especially for women head teachers). The participants also suggested a decentralisation of education budgets to regional level in order to minimise such bureaucracy. Regional officials believe teachers are enthusiastic about E-learning but that teacher training is slow, especially for women – given the lack of supervisors. Further, it has been suggested that families obstruct readiness for E-learning seeking to protect girls and because of their preference for traditional pedagogy; thus, home support for E-learning is limited and regional officials believe information campaigns by the MoE and closer parental involvement with schools would help build readiness. Finally, it was highlighted that participants at the regional level are limited in evaluating the E-learning project or readiness.

8.4 Perspectives of heads of families

Both national and regional level officials believe that family opposition to E-learning is powerful and particularly disadvantages girls. This section investigates these points from the point of view of the family heads. In the Saudi context the man is the head of household: the husband and father speak for the household; it is therefore only possible to interview male heads of household (see Section 4.8.1 for sample demography). In coding, three themes emerged: (a) access at home and parental control; (b) parents' views of English language; and (c) parental attitudes towards E-learning. These themes are discussed below.

8.4.1 Access at home and parental control

The views expressed on this theme are analysed based on the gender of their children – that is, families with only boys, families with only girls and families with both genders. For example, five of the six families with only boys said they have a computer and Internet connection at home. According to FR-5, “*We have a computer and access to the Internet at home. In our family we use the computer everyday at home.*” A similar proportion of families with only girls also said they have access to a computer and Internet connection at home. Here, however, parents gave further insides on how the computer is used at home. FR-7, with two high school daughters, mentioned that:

To be honest, I just used the computer and Internet after I retired. There was no need to use a computer and Internet for my teaching. Now I use the computer and Internet because I have more free time. I try to spend my time doing some reading, looking after news or other stuff. My daughters do not have access to the computer or Internet....

FR-8, another father with two daughters, gave a different perspective when he noted that:

I allow my daughters to use the computer and Internet at home. I also allow them access to the Internet via their mobile phones. ... But, I am looking for a parental control software that could control or limit their access, especially via their mobile phones... At the moment I just control them by taking their mobile phones from them for some days and giving it back to them. It is a fear of the dangers on the Internet. I am sure many parents have the same fears. I think schools should do something about it by educating us and assurance that the use of E-learning is going to be safe.

All six families with both girls and boys said that they have access to only a computer at home, with one having more than one computer at home. For example, FR-17 said he has both a desk-top and laptop at home. Five out of the six families suggested that they allow their children access to computer at home. The other family said it does not allow the children to use the computer but only because they do not know how to use it.

All six parents of girls expressed support for gender separation in education. The group provided two reasons for the stands: their preference for the traditional way of teaching and the fear of their children getting corrupted by external influence. The view put forward by FR-10 encapsulate the position of this group. In his words:

As a father, I prefer the traditional means of teaching and learning in the classroom. I know the world is changing but that is what we are used to in this society. The problem is that if we allow our children to use this technology, they will be exposed to things

that are not accepted in our culture and religion... this is why I do not allow my children to use the computer at home

In all six cases fathers said that they oppose the use of home computers for E-learning because they cannot control what their children are learning online outside the school via the Internet. For example, FR-13 said that he does not allow his children to use the computer and Internet at home. He however allows them access to the Internet via their mobile phones. According to FR-14 too:

... I allow my children limited access to the Internet via their mobile phones but not by the home computer. In fact, they are only allowed to use the Internet while they are in the living room. I think allowing them access to the Internet without monitoring is dangerous. I always tell them about the dangers of the Internet in terms of sexual issues and other things that can affect their religion.

Parents with boys appeared less strict in their approach and in allowing their children access to the Internet at home. According to FR-4, his approach is that:

I allow my children access to Internet most of the time but talk to them regularly about the dangers of it.... For example, I tell them that there are good and bad sides to the use of the Internet and that they should not trust people they meet online easily...

FR-5 suggests a parallel between computers at home and satellite television, which was frowned upon twenty years ago, but is now ubiquitous. He believes the same will happen with computing and Internet, though for now he insists that society rejects Internet at home, since most parents do not have the IT knowledge to monitor their children's online behaviour. Changes in social acceptability also feature for FR-2 who bought his mother a smartphone, which she now uses frequently for social media.

In summary, the majority of families who participated in this research appeared to be opposed to home access to computer and Internet usage at different degrees – that is, families with only girls appeared stricter on their children than families with only boys.

8.4.2 Parent views of English language

From the data, all families appeared to have a positive view about the teaching and learning of English language in schools. Families also expressed some level of interest in the education of their children, both male and female children. They seem to have greater aspirations for their children in terms of their education. For instance, FR-12 made a comment that appeared typical of the group. In his words:

You know, nowadays most of the universities teach in English which makes English very important for all students. In fact, all students now need English in order to be successful in their education ... I wish our children knew this and are motivated more to learn English. But some of them do not seem to be motivated ...

In agreement, FR-9 also expressed:

... Of course, I feel that my daughters must learn English, it is so important for their future access to knowledge. I also think that when they learn English, it will help them to continue their education to the highest level. They can be more successful with a good background in English language.

Another view expressed by FR-1 sought to link the learning of EFL to employability in a global sense. According to FR-1:

Well, you see nowadays in Saudi Arabia we live a revolution, there is a new vision in Saudi Arabia, 2030, and all things in Saudi Arabia depends on two basic things, English and computers. Okay. Especially the good jobs here. If you want your child to have a good position in the society, you have to make them learn, two things basically, English and computers. With these two things, with these two skills, there is a big opportunity for them, a big chance for them to be highly ranked in the society. In my opinion, that's why it's important.

FR-3 agreed with the concerns of FR-1. Expressing his frustration about the use of the traditional rote method of teaching and learning EFL he noted that:

I think that learning English is a good thing but our methods ill- prepare students for the international job market. ... There are many people here in Saudi Arabia who have not learned enough English that will allow them to communicate meaningfully with others. They have only learnt the basics and so, it is very difficult for such people to seek employment outside Saudi Arabia or even with international companies in Saudi Arabia...

FR-15 also suggested that the learning EFL is significant because it has become, “*the language of the sciences in the modern era.*” FR-16 agrees but argues further that in order to meet international standards Saudi schools need to improve their quality of teaching. In his words:

My children are actually not doing great in English and that is because they study English for one hour, four times a week. I think many reasons are in play here, for example, poor teaching method and teachers, and the time for studying English is not enough. They should increase the time for learning English to two or three hours a day. This will allow students more opportunities to learn and practice EFL. Improvement of teaching in the intermediate and high schools and increasing their quotas is equally important. I also believe that the learning and teaching environments in their schools are inappropriate and very deficient, both in terms of the large number of students in

the classroom, the weakness of the curriculum and the means of learning, and even the weak qualifications of many English teachers. Something need to be done about this in order to help improve our English in this country.

In summary, parents in general appeared to support the education of their children, both male and female children. They advanced various reasons why they think it is important for their children to learn EFL. Some however expressed frustrations about the way English is being taught in Saudi Arabia which they think is responsible for their children's lack of proficiency in using EFL.

8.4.3 Parental attitudes towards E-learning

Saudi Arabia is strongly credentialist; qualifications matter and parents strongly encourage success in education. How prepared then overall are they to encourage their children's readiness for E-learning? All parents have concerns about the use of E-learning in Saudi schools for a number of reasons. However, some parents expressed their support for the project, especially families with only boys. For instance, FR-1 suggested that, *"Yeah, if this E-learning is controlled well and serves the human priority or the people's priority, I think there is no fear to have this kind of thing."* In agreement, FR-3 suggested that, *"the key thing for me is using E-learning within the strict traditional customs of Saudi society. As long as that is met, I'm happy with the use of E-learning."* He goes on to insist that, *"chatting should be monitored by teachers and not done in private."*

The views expressed by parents with only girls presented a quite different picture. Only one of the six parents with only girls accepted the idea of using E-learning in schools. FR-11, for instance, said that:

We are happy with our traditional system of education and there is no need to make it modern. I think the notion that our education system needs improvement is wrong. I am worried because I just do not know anything about E-learning.... But if E-learning will be used in line with our Saudi culture – that is, gender segregated, fully approved and completely control by the school, I would accept that...

Other parents who seemed to oppose the implementation of E-learning was FR-7. According to him:

My girls have absolutely no need to use computer and Internet for learning English, if they need more support to learning English, I can provide them with private female teachers. Why would there be any need to use E-learning? I think everything is working

fine in the schools, what is needed are more training for teachers and the supply of more trained teachers in our schools.

FR-8 believes traditional teaching is superior.

For me my restriction [of E-learning] has nothing to do with cultural implications or religious beliefs. I simply think that face-to-face teaching is a better alternative. For instance it helps with direct contact between students and teachers which I believe is more necessary for my girls to learn English than the use of E-learning.

Advancing different reason for his lack of support for E-learning, FR-10 cited the potential of gender-mixing online or off-line as a reason suggesting that it is simply unacceptable. Quoting him:

... I am unable to accept the prospect of my daughters to be taught by male teachers or even communicating with other male students who are not close relatives to them. As a result I am worried about gender-mixing even in the virtual world. It is a cultural issue in Saudi society and my strict family beliefs will not permit me to do such a thing ... I might be able to accept recorded lessons if necessary and under my control.

Finally, for FR-12 E-learning is only appropriate for university-aged students. In his words:

I think it is not a question of whether one prefers the traditional teaching method over E-learning, or not. It is much about the fact that my daughters and other girls of their age are not matured psychological to use E-learning ... that is, they are not maturity enough or have the self-discipline to use E-learning without parents worrying about what they are doing, who they are meeting etc. Allowing them to use the computer and the Internet at this age will not be used for learning but for games which will affect their level of education. I can see them spending more time on their mobiles for games. I think E-learning can be useful at the university level.

FR-12 further suggested that it is frustrating that schools have not seen the need to adequately explain what is involved to parents ahead of the introduction of E-learning in Saudi schools. According to him:

... Schools have not informed me about the introduction of E-learning yet. I have read about this project on the MoE website but the understanding I get is not great because the information provided is very brief. I wish schools had explained this more to us...

Only one of the parents of both girls and boys supports E-learning saying, FR-15, "I'm okay with the E-learning". However, he believes that Saudi society will not support E-learning and advised that, "take it gradual, it's very difficult just to push them [Saudi society] to E-learning at once". The other five parents of boys and girls oppose E-learning for a

variety of reasons. FR-13, for example, cited mixed gender education as a worry because his IT skills are poor and he will not be able to guide his children's education. He added that he supports school-based learning but thinks E-learning is a dangerous experimentation. In his words:

I do not want my kids to be victims for this way of learning [E-learning] as it's unusual in Saudi Arabia. I will strive as long as I can to avoid it ... At least we should be given the opportunity to opt out if we think it is not in the best interest of our children ...

In FR-18's contribution, he seemed to endorse the views expressed above. FR-18 suggested that:

... our culture must be respected at all times and places but the introduction of E-learning in our schools will compromise this in many ways. For example, our children will have access to the opposite gender...

FR-14 also seemed unhappy with E-learning and stated that:

I think this type of teaching and learning will be against our culture and religion and it not the right method for learning. ... I do not want my son and daughter to be in a gender-mixed education, online or even in the classrooms. Segregation between male and female in schools is one of our Islamic values and a culture that we are proud of. ... I am keen about the education of my sons and daughters, but I do not think educating them with the help E-learning is a good idea. ... I am more anxious about my daughters than the boys and really do not want the girls to mix with boys at all.

He goes on to suggest that schools are failing to keep parents informed about the dangers of E-learning especially the exposure of these children with the opposite gender and other online related hazards. Quoting him:

There are actually no programmes educating parents about E-learning and the dangers associated with it. In fact, there is none that I'm aware of here in Saudi Arabia. As parents we need to be familiar with E-learning in order to be able to be of help in area...

The concerns of FR-16 still bordered on the issue of gender-mixing and preference to face-to-face teaching and learning. He noted that:

I'm really keen about both my son and daughters, but more about my daughters. Honestly, I do not like the idea of a mixed gender education. I actually prefer teaching English using the everyday school teaching, face-to-face, that I can keep track of what my children are doing.

FR-17 also highlighted the cost that will be involved to provide computing and Internet access at home, particularly for larger families. He mentioned that he has seven children and will find it difficult to provide for all these children. In his words:

I prefer the face-to-face method to E-learning because I think E-learning will be too expensive for parents who have a lot of children. In my case, I have seven children and each of them will like to have a computer. That is going to be too much for me to manage. In that sense I prefer face-to-face teaching and learning which also guarantees that teachers have more control over the students

Following from the above narrative, it therefore appeared that although parental attitude towards their children's education was positive, fathers were not so positive about the introduction and use of E-learning in Saudi schools, especially that of the girl-child.

8.4.4 Section summary

In summary, this section presents the data on the views of families (fathers) about the implementation of E-learning for EFL in Saudi Arabia. It is worth acknowledging here that the views expressed by these fathers might not be representative of all fathers in Saudi Arabia. These expressed views might also vary from the views of mothers in Saudi Arabia. However, fathers were contacted because it was considered culturally appropriate. In Saudi Arabia, like many other cultures that are patriarchal in nature, the voice of the father is often assumed to represent the voice of the family. The significance of the section is that it identifies and highlights the tendency of parental attitudes hindering the readiness of their children for E-learning in general, but especially that of the girl-child.

8.5 Chapter summary

Chapter Five reported an initial set of group interviews capturing attitudes of teachers and students towards readiness for E-learning in Saudi Arabia, which was followed by the extensive quantitative survey in Chapter Seven. The current chapter (eight) reports three sets of individual interviews with national education officials, regional education officials and heads of families (fathers). The aim is to develop a deeper understanding of the findings of the first and second stages of the research. Table 8.3 below takes stock of the findings in this chapter. The next Chapter (nine) analyses all three datasets triangulating with previous empirical and theoretical research.

Table 8.1: Summary of findings from three sets of interviews on readiness for E-learning in Saudi Arabia

National officials	1. Mixture of reasons for introducing E-learning: cost reductions, pedagogy quality, active learning pedagogy and rural reach.
	2. E-learning is intended to diffuse best practice teaching, ameliorate teacher shortages and teacher skill gaps, and improve standards
	3. EFL chosen because packages available and teacher support
	4. Weak links between Vision 2030 economic development strategy and education strategy
	5. Significant infrastructure deficits: ICT, school buildings, teacher skills
	6. Gendered education costly, dissipates investment and issue for E-learning design and home support
	7. Unclear framework for evaluation of E-learning project and key success metrics
Regional officials	8. Regional commitment to E-learning directed by central MoE
	9. EFL chosen by schools for E-learning because content packages available
	10. Infrastructure deficits impacts negatively on readiness: buildings (especially girl's schools), ICT reach and reliability (especially rural area) and teacher/student skills
	11. Teacher training a major constraint (especially for women teachers – shortage of supervisors)
	12. Families obstruct E-learning at home
	13. Need government/school information campaign for parent understanding of E-learning
	14. Almost no involvement in E-learning project evaluation
Family heads	15. Parents of boys show more readiness than those of girls
	16. Home computer access major constraint on readiness for E-learning
	17. Low level of parent IT skills and understanding of E-learning processes

Chapter Nine: Discussion chapter

9.1 Introduction

The main purpose of the present research was to explore the readiness of students and English teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia. Fundamentally, it was recognised that the readiness of students and teachers in the research context requires more than just their individual readiness and includes readiness of the collective – that is, family, organisation or even the entire society. This means that it takes the readiness of the family, organisations or even the entire society for an individual to be ready within the Saudi context. This chapter discusses how the specific research questions were answered. The specific research questions this research sought to answer are as follows:

1. What are the underlying factors affecting students' and English teachers' readiness to use E-learning for EFL in Saudi Arabia?
2. What is the current level of readiness of students and English teachers to use E-learning for EFL in Saudi Arabia?
3. What are the differences in the readiness of students and English teachers to use E-learning based on selected demographic characteristics (gender, and age) for EFL in Saudi Arabia?

Prior to the collection of primary data in this research, an extensive review of the relevant literature was conducted. The reviewed literature revealed that different studies have proposed various survey instruments to explore the readiness of students and teachers to use E-learning. Much as these various survey instruments have their merits, it was also evident throughout the literature that all are limited in nature especially regarding their application to this present research context. For example, it was identified that the existing literature mainly focuses on some of what are referred to as personal factors in this research (i.e. motivation, attitudes and self-efficacy) but often ignore the role played by what are called external factors (e.g. social and school factors). Other limitations of the existing literature include: its inability to address the interrelationships between various factors and the significant role these play in the readiness of students and teachers to use E-learning, as well as the fact that these studies are based mainly on secondary data. Further, it has also been identified that although the

readiness of students and teachers for E-learning, generally, may be widely explored and evaluated in different contexts, this is still under-researched in reference to the Saudi context.

In order to answer the research questions and address the identified limitations above in the existing literature, a mixed-method approach (the use of qualitative and quantitative methods) was considered most suitable for the present research. It was hoped that using a mixed method would help to mitigate the weaknesses in either approach and offer an opportunity for the research to benefit from their strengths (Bryman 2004). In practice, the research method involved three stages: group interviews (qualitative method) for the first stage, the use of questionnaires (quantitative method) for the second stage and individual interviews (qualitative method) for the final stage. Aware that the methodology chapter always has substantial implications for the research including how it is conducted and its outcome, it was intended that the first stage would help in answering research question one and the second and third stage, in answering research questions two and three (detailed in Chapter Four). Finally, the findings of this present study have been presented in Chapters Five, Six, Seven and Eight. In all these chapters the complex details of the research outcomes have been presented in a form that is easy to follow and for easy understanding.

The extensive discussions engaged in throughout in this chapter seek to highlight the significance of the research outcomes and consider their implications for theory, policy and practice. Ahead of the substantive discussions based on the specific research questions, some background knowledge or awareness of the Saudi E-learning project was explored with the research participants. Specifically, participants were asked about their perceptions of the Saudi E-learning project and their opinion on the drivers of the project. Their views are presented in the next section in order to help put the main discussion into perspective.

9.2 Drivers of the E-learning programme in Saudi Arabia

The data suggested that different participants perceived the Saudi E-learning project differently, indicating a divergence in views. These ranged from optimism (officials) to concern (i.e. parents) with indifference (students and teachers) assuming the middle ground. The data gathered from participants at the national and regional levels officials about the drivers of the Saudi E-learning project was particularly revealing. They suggested that government commitment to E-learning can be perceived to be driven by three main factors: the government's quest to internationalise Saudi education, their bid to cut down costs, as

well as building a knowledge-based economy. Although teachers, parents and students also indicated awareness of the E-learning project, they appeared less informed about the specific drivers of the project. The three main drivers identified by the national and regional officials are further explored below.

9.2.1 Internationalising Saudi education

This was suggested as one of the main drivers of the Saudi government's E-learning project. The research participants noted that the whole idea was nursed during the reign of King Abdullah who embraced the use of E-learning in schools in order to allow Saudi schools to benefit from international experiences. The King made it his priority and set up a committee of experts to evaluate the Saudi educational system and to develop new ways to improve it. The committee was also tasked like making recommendations based on international standards but that would not conflict with national standards.

The Saudi E-learning project therefore seems well thought through with short-term, and medium to long-term goals, to be implemented gradually to meet global and local standards. The Saudi E-learning project involved developing comprehensive priorities and implementing plans that encourage best practices, a robust set of performance indicators, as well as measuring quality and knowledge transfer (Saudi Vision 2018).

It was against this backdrop that the majority of national and regional officials suggested that the implementation of the E-learning programme will help to raise standards in Saudi schools. For instance, it was argued that with a centralised education system already in place, it will be relatively easy to transfer, monitor and evaluate teaching and learning practices across Saudi schools in order to encourage best practices. They also suggested that it is possible to import E-learning practices and content from abroad to help raise standards in Saudi education.

There were however dissenting views with some participants suggesting that, even if the project meets its ambitious target of internationalising Saudi education and meeting global standards, there might be conflicts between these international standards and standards or expectations within Saudi Arabia. It is argued that what is considered successful education in Africa/Europe/Asia/America might not be the same in Saudi Arabia. They therefore advised that implementing the E-learning project in Saudi schools must be done with caution

in order not to be seen to be copying blindly. Further, views expressed by the officials seemed to suggest that teachers and parents should have been consulted, given the magnitude and future implications of this E-learning project (see Section 8.2.1).

9.2.2 Cost reduction

This was perceived as another driver of the E-learning project in Saudi schools. According to the research participants, the strategy is to increase productivity and raise the efficiency of teaching thereby reducing the cost of government spending (Saudi Vision 2018, p.69). In practice, the aim is to use the few competent and experienced teachers in the cities and urban areas through E-learning as a medium to teach a wider population particular those in the rural areas who lack the expertise of such competent and experienced teachers in the classroom. This is considered cost effective relative to the cost of recruiting such teachers (usually from abroad). So, in essence part of the reason for the adoption of E-learning is to cut down costs in teacher recruitment. Another dimension to the cost effectiveness of adopting and using E-learning is that it caters for subjects with regular skill shortages. In addition to the money that will be saved from recruiting competent and experienced teachers from abroad, it is assumed that E-learning is going to help cut down the government expenditure in relation to printing of textbooks. However, statistics about relative costs on training a teacher in Saudi Arabia and the installation of E-learning facilities has not been established, so the reality might be different.

9.2.3 Building a knowledge-based economy

It was further suggested that the Saudi government's desire to build a knowledge-based economy as part of its Vision 2030 strategy is another driver of its E-learning project in schools. The Saudi government aims to have a diversified economy by year 2030 instead of its current over reliance on oil and gas. While some see this as an ambitious project and question its feasibility, many others think it is feasible and perhaps an alternative to Saudi Arabia weaning itself from the oil dependency. It is hoped that the intended outcome would contribute immensely to turning the Saudi Arabian society at large into a knowledge-based one.

This was linked directly with the educational purpose of the E-learning programme. For instance, participants at the national level identified the precarious nature of teacher

recruitment particularly for schools in the rural areas. E-learning is hence seen as a tool for educational purposes here in the sense that through the use of such technology students who are in deprived areas and lack qualified, experienced and competent teachers could benefit from teachers with such skills who are in the cities. They suggested that such shared services across schools would also aim to increase quality.

In spite of the above identified drivers of the Saudi E-learning programme which might sound ambitious in many ways, there seem to be questions about the readiness of the particular groups that will be using the E-learning programme directly – that is, students and teachers. The next two sections explore and discuss the underlying factors of E-learning readiness and the readiness of students and teachers to use E-learning in Saudi Arabia respectively. The third section also explore if there are any gender and age differences in the readiness of students and teachers, respectively. Throughout the discussion data are triangulated with the existing literature in order to highlight the points of convergence, divergence and complementarity. The discussion is also done within the larger context of institutional and family readiness, considering its implication for theory, policy and practice.

9.3 Underlying factors of E-learning readiness

The fundamental thing that needed to be done in order to be able to explore the readiness of students and teachers to use E-learning was the identification of the underlying factors of readiness within a broader context. This was particularly necessary because previous studies have identified these factors within contexts that are considered substantially different from the Saudi one and might not readily be applicable. As a result, this section is devoted to discussing the underlying factors identified in this study that highlight and symbolise the different nature of the research context but also its uniqueness in terms of culture and way of life. The underlying factors of readiness in this present study were identified as personal and external factors based on set criteria (detailed in Chapter Five). The following sub-sections will discuss the findings under each factor and consider their implications.

9.3.1 Personal factors

Research on personal factors in the past suggest as many and varied outcomes as the number of studies, with some overlaps (e.g. McVay 2000; Smith et al. 2003; Smith 2005;

Hung et al. 2010; Hung 2016). In this present research, personal factors were identified as self-efficacy, personal drivers (attitudes, motivation and time commitment) and personal access to tools (computer and Internet). It was observed that all three personal factors were collectively perceived by the students and teachers to indicate their readiness to use E-learning for EFL in Saudi Arabia (detailed in Chapter Five). This seemed to have presented a more complex and nuanced conceptualisation of readiness with significant dimensions that takes care of the needs and peculiarity of the research contexts compared to the existing literature which are predominantly from Western and Asian countries. For instance, Hung et al. (2010) and Hung (2016) have limited their identified factors to self-efficacy, and self-efficacy and motivation, respectively. Others such as Warner et al. (1998) have also narrowed down their identified personal factors to attitudes/preferences and self-efficacy. The ensuing discussion focuses only on the new factors that have been identified in this present research. The aim is to highlight its significance contribution to the existing literature, particularly in relation to the research.

In terms of personal access to tools, the outcome of the present research stresses its significance to E-learning readiness primarily because personal access to tools seems to be a barrier for both students and teachers in general, but especially for females in Saudi Arabia. In Saudi Arabia, there are still families that are relatively poor although the country is largely perceived as a rich country (Alriyadh 2013). These differences depend on individuals' family background, and employment status – that is, rich versus poor; conservative versus liberal. Whereas those within the higher and middle class can acquire Internet and computer services easily; those within the lower class might struggle to acquire these facilities (Al-Harbi 2010). This means that the social status of teachers and students differ remarkably within the Saudi context which necessarily affects their access to computers and Internet facilities, thereby, their readiness. The data suggested that similar differences in status exist between females and males; within females as well as within males as groups. In general, those who appeared to have access to tools, perceive themselves to be ready to use E-learning. For example, the majority of participants argued that with personal access to the computer and Internet connectivity they could practice the use of E-learning more, either at home and/or anywhere at any time (detailed in Chapter Five, Section 5.2.2). In agreement with the research outcome by Al-Harbi (2010), it can be argued that the lack of access to computer and Internet technology is a major barrier for teachers and students to use E-learning in Saudi Arabia. Although not enough attention has been paid to users' personal access to tools in the

individual E-learning readiness literature globally, this research outcome suggested that within the context of Saudi Arabia attention should be paid to personal access to tools since it impacts on users' readiness to use E-learning.

In terms of time commitment, this has also been often overlooked in the individual E-learning readiness literature but was identified in the present study by teachers as a factor that could influence individual readiness (detailed in Chapter Five, Section 5.2.3.3). The research outcome suggests that, on average, English teachers in Saudi Arabia spend between 20-25 hours per week in face-to-face teaching outside their lesson preparation hours. This point was made against the backdrop that using E-learning as a supplementary tool for EFL in Saudi Arabia means that there will sometimes be an overlap with the current traditional means of teaching. This would require them to commit more time for their lesson preparation and teaching, hence, the identification of time commitment as a personal factor was perceived to influence readiness. This means that careful planning needs to be put in place ahead of the integration of E-learning as a supplementary tool with the traditional face-to-face methods in Saudi Arabia. The possible prescription is a reduction in the amount of time teachers are required for traditional teaching in schools, which they can commit for the integrated lesson preparation and training. The findings of this study is similar to that of Koo (2008) who shows that teachers did not express their full commitment to use E-learning strongly because of time constraints. Shin and Son (2007), have also demonstrated that many teachers simply find it impossible to use E-learning alongside traditional methods of teaching as a result of time constraints.

Further, the findings suggested that the three underlying personal factors were all important to indicate the readiness of the respondents to use E-learning for EFL in Saudi Arabia. The analysis under personal factors further established and highlighted the possible interplay amongst the three underlying personal factors that was suggested to indicate the readiness of students and teachers to use E-learning. The findings from the second stage of this present research (quantitative data) also demonstrate a relationship between the identified personal factors (see Chapter Seven, Section 7.4). The contribution of this finding is that it could help with a deeper understanding of how these personal factors combine to indicate readiness at the practical level. In addition to the identified personal factors, the findings in the present study also suggested that other factors (i.e. external factors) need to be taken into

account for a deeper understanding of readiness of students and teachers to use E-learning in Saudi Arabia. These external factors are discussed in the next section.

9.3.2 External factors

Unlike the reviewed literature on readiness which was predominantly either Western or Asian, the identification and inclusion of external factors in this research attempts to locate the readiness of students and teachers within the broader context of how institutional, family and social settings influence individual readiness. As a result, reference is made to the culture, context and other external circumstances that is likely to influence the readiness of students and teaches to use E-learning. Milani (2008) has noted that the local society and culture needs to be taken into consideration in order to ensure a successful implementation of E-learning. This view is supported by Al-Alhareth (2014) who also suggest that the culture and traditions of society should be considered to ensure the success of designing new E-learning programmes. The external factors considered bring to the conceptualisation of readiness an account of the socio-cultural aspects of students and teachers and how these influence their readiness. The outcome of the present research therefore shows a broader conceptualisation of readiness stressing the combination of both the personal and external factors (see Section 3.4.2 for more details about the conceptualisation of readiness).

Across the board, all the groups interviewed identified external factors such as family and peer support (social factors), perceived E-learning usefulness, perceived ease of use, E-learning flexibility and E-learning interactivity (E-learning characteristic factors) and provision of equipment and school support (in-school factors) (detailed in Chapter Five, Section 5.3). The identification of these external factors makes a particularly significant contribution to the current body of knowledge because the influence of these factors is often overlooked in the existing literature on readiness of students and teachers (e.g. Hung 2010; Hung et al. 2016). Such an identification, nonetheless, acknowledges the influence these external factors can have on the readiness of students and teachers, directly and/or indirectly, to use E-learning in Saudi Arabia and similar contexts. For instance, it has been demonstrated in the findings of the group interviews, students' perception of family support (external factor) or the lack of it can directly influence their readiness to use E-learning, or indirectly, by influencing their attitudes and motivations (personal factor) to use such technology (see Section 5.3.1). This research outcome provides an alternative perspective to understanding

the readiness of students and teachers to use E-learning, particularly within contexts that are considered relatively highly “collectivist” (Cassell and Blake 2012; Alamri et al. 2014). The implication of this is that to a greater extent than in contexts that are more individualistic, the readiness of students and teachers in “collectivist” contexts such as Saudi Arabia is likely to be influenced by factors outside the personal factors bracket. It was therefore found that the readiness of students and teachers to use E-learning in Saudi Arabia is influenced by the successful balancing of the identified personal factors and how these factors are influenced by the external factors. Overall, the findings make a significant contribution to theory. The discussion of these contributions is conducted at each individual factor level as detailed below.

In relation to theory, this research makes three significant contributions. Firstly, the research findings suggested that the identified E-learning characteristic factors – i.e. perceived E-learning usefulness, perceived ease of use, E-learning flexibility and E-learning interactivity were individually and collectively thought to have significant influence on the attitude and motivation of students and teachers to use E-learning in Saudi Arabia. For example, it was found that students and teachers who had high perceptions of ease of use of E-learning systems, its perceived usefulness, flexibility and interactivity, were those who were more driven to adopt such technology. In other words, if the students and teachers genuinely believe in the usefulness of E-learning systems and that it is interactive, flexible and easy to use, they are more likely to use such technology for EFL in Saudi Arabia (see Section 5.3.3). In a theoretical sense, this research finding demonstrates the influence of E-learning characteristics on the attitude and motivation of students and teachers to use E-learning thereby highlighting the significance of considering external factors in conceptualising E-learning readiness.

It will be particularly significant to consider this dynamic in the design and implementation of E-learning programmes in Saudi Arabia because it could help to shape the attitude and motivation of students and teachers to use such technology. Similar positive association between the attitude of students and teachers to use E-learning and E-learning characteristics have been demonstrated in the existing literature in various ways, though not directly in relation to E-learning readiness. For example, it has been highlighted that E-learning systems should be easy to use or user friendly (Davis 1989); offer flexibility (Pituch and Lee 2006) and be interactive to allow for collaboration either among students and/or

between students and teachers (Palloff and Pratt 2007). This research finding implies that an interface to the identified E-learning characteristics is likely to enhance its adoption.

Secondly, the study has shown through the voices of the majority of the respondents that in-school support is significant in influencing their readiness. In-school support was identified to include: school management support, technical support and the provision of equipment. For example, in relation to the provision of equipment, respondents believed that its availability in schools is one of the essential elements that has the potential to influence their motivation and attitudes to use E-learning. It was also identified that the lack of technical and management support can be a barrier to the effective use of E-learning and could influence the motivation and attitudes of students and teachers to use such technology (see Section 5.3.2). The importance of this finding theoretically is that it emphasises the need to take into account in-school support and its influence on personal factors in order to deeply understand the readiness of students and teachers to use E-learning. This means that exploring the readiness of students and teachers should not only be based on personal factors, but how these personal factors are influenced by such external factors should be considered. Thus, providing in-school support strategy would facilitate and increase the readiness of students and teachers to use E-learning. In similar literature, Ngai et al. (2007) have also argued that the provision of effective user support and encouragement to use E-learning systems has been viewed as significant predictor of the adoption of technology at all levels in education. Technical support is linked to user satisfaction in other research outcomes (e.g. Mirani and King 1994; Miller et al. 2006).

Finally, the findings of the present study suggested that social support influences the readiness of students and teachers to use E-learning in Saudi Arabia. This means that the use of social influence strategies such as information sharing sessions by peers and awareness campaigns might be helpful in creating an appropriate social environment that encourages students and teachers to use E-learning. Although evidence from the research findings demonstrate that students and teachers appeared generally clear about the importance of having social support, its influence could be enhanced through educating members of the larger society about the advantages of using E-learning for EFL in Saudi Arabia (see Section 5.3.1). The present research finding is similar to that of Al-Harbi (2010) who identified social support as a vital promoter of adopting E-learning, though this study is not directly in relation to E-learning readiness.

9.3.3 Answer to research question 1: what are the underlying factors affecting students' and English teachers' readiness to use E-learning for EFL in Saudi Arabia?

Figure 9-1 illustrates how research question 1 is answered hoping to build a complete picture of the underlying factors of readiness of students and teachers to use E-learning in Saudi Arabia. The figure includes both personal and external factors (see Sections 5.2 and 5.3 respectively) highlighting how these factors influence E-learning readiness in Saudi Arabia. In line with the Vygotskian (1934) socio-cultural perspective (see Section 3.3.4), this research also emphasises the necessity of referencing the influence of culture and context in the readiness of students and teachers to use E-learning in Saudi Arabia (see Section 5.3.1). The figure also summarises the interrelation both within and between the identified factors that indicate E-learning readiness in the Saudi context. It is demonstrated throughout this section that readiness lies in the successful combination of the identified underlying factors – both personal and external and how these are influenced by socio-cultural factors. Unlike Abas et al. (2004) and other authors suggesting prescriptive criteria for E-learning readiness, the approach here instead insists that equal attention is paid to all active constituencies in the identified underlying factors of E-learning readiness in the Saudi context. Far from accepting E-learning readiness as purely and primarily technical (Ndubisi 2004; Abas et al. 2004; Hung et al. 2010), the findings of this research demonstrate that readiness is influenced by other socio-cultural factors typical of culturally and religiously conservative countries such as Saudi Arabia.

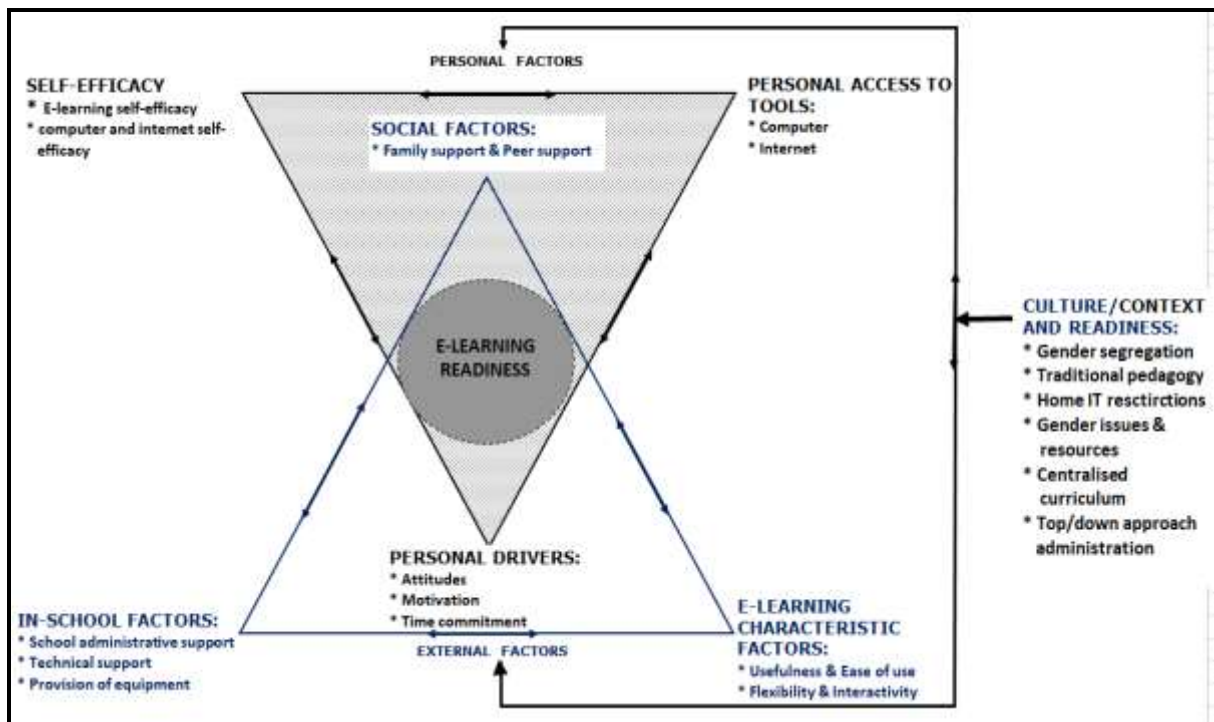


Figure 9-1: E-learning readiness framework

9.4 Student and teacher readiness

This section considers the finding of this research relating to research question 2: what is the current level of readiness of students and English teachers to use E-learning for EFL in Saudi Arabia? At each stage, findings from this research are triangulated with previous research and meanings deduced as a result linking it with the wider socio-cultural context of the research.

9.4.1 Students' readiness

Given the importance of all three identified personal factors in the qualitative data to indicate their readiness to use E-learning in Saudi Arabia, exploring their readiness based on the same identified personal factors proved to be a complex endeavour. This was mainly because not many student respondents can be considered to be ready based on all three identified personal factors. For instance, irrespective of gender or age difference, the data suggested that the majority of the student respondents can be considered to be ready on two out of the three identified personal factors – i.e. personal drivers and personal access to tools, but not the third identified personal factor – i.e. self-efficacy (see Section 7.2). This is

supported by views expressed by participants at the regional level who also believed that the majority of Saudi students lack the requisite skills to use E-learning (see Section 8.3.3). This suggests that the lack of self-efficacy is a central barrier to the readiness of students to use E-learning in the current study.

The importance of this finding is that it brings to the fore a weakness in the current status quo and could provide the basis for the development and implementation of a coherent E-learning strategy that takes into account all the different aspects of students' needs and to help prepare them to use E-learning. A well-planned strategy could therefore help to tackle these concerns, and make use of the available political will (that is, government commitment to E-learning) and governmental support to make the E-learning implementation more successful (see Section 8.2.1). The above findings also reflect the lack of an upfront strategy by the Saudi MoE to explore and develop the students' self-efficacy to use E-learning. Although the Saudi government has invested huge sums in order to promote the implementation of E-learning in the country, it appears the impact has not trickled down to all students.

The importance of students' self-efficacy is also emphasised in the existing literature. For instance, Sang (2010), Gosselin (2009) and Maninger and Anderson (2007) have argued that higher levels of self-efficacy may contribute to the effective integration of E-learning into education. It therefore stands to reason that not only does self-efficacy influence the effective integration of E-learning, it does also influence the learning and academic performance of students (Jungert and Rosander 2010; Lancaster and Bain 2007). As such, putting in place a direct strategy to monitor and improve the self-efficacy of students will seem a wise thing to do in the Saudi context instead of assuming that students have a good level of self-efficacy to use E-learning effectively without such a strategy in place (Aboalhaj 2015; Robertson 2007; Valentine 2002). But as things stand, it will seem the assumption by the Saudi MoE is that the current students are of a digital generation and should have a good level of self-efficacy (Ministry of Education 2018).

9.4.2 Teachers' readiness

The findings suggest that the majority of teacher respondents can be considered to be ready to use E-learning in two out of the three identified personal factors in this research – i.e. personal drivers and personal access to tools, but a relatively smaller number of teacher

participants exhibited self-efficacy to use E-learning (see Section 7.2). Particularly, the finding on the self-efficacy of teachers was echoed by the views expressed by national and regional officials in the interview data. The interview data noted that the majority of Saudi teachers lack the requisite skills to use E-learning (see Sections 8.2.2 and 8.3.3). This particular outcome is considered an interesting finding demonstrating that lack of self-efficacy of teachers can be a main barrier that influences their readiness to use E-learning in the current study context. This finding was deemed to have significant implications particular to the Saudi context in a number of ways not least because of the inadequacy of indigenous qualified teachers.

As indicated in the research context chapter, the Saudi MoE employs both qualified English teachers and unqualified ones (graduates from linguistics and English literature) in order to overcome the shortage in this sector. The difference between the qualified and unqualified English teachers is however blurred in practice, particularly in relation to the use of technology for teaching. Whilst the qualified teachers might have been provided with the appropriate training in teaching methods (often described as chalk and talk teaching approach), such training might not necessarily include the use of technology since this is a recent introduction to the Saudi educational system (Al-Harbi 2014). In the case of unqualified teachers, the situation is more precarious because they clearly lack the requisite knowledge in teaching methods including combining the two pedagogies (that is, traditional and E-learning) in their teaching (Oyaid 2009). This was reiterated by views expressed by national and regional officials who reported that the majority of teachers in Saudi Arabia at the moment were trained to teach using face-to-face teaching methods, and that teachers have not been trained on how to integrate any ICT and related methods in their teaching (see Sections 8.2.2 and 8.3.3). This is in agreement with Oyaid (2009), who identifies a gap between the outputs of universities and the requirements of education in Saudi schools.

The research finding has important implications for pre-service and in-service teacher education programmes. In line with the existing literature on pre-service teacher training programmes, the incorporation of E-learning into teacher training pedagogy at university level should be made mandatory (Qenaey 2014; Al-Harbi 2014). This will play an essential role in building the skill of teachers to use E-learning in their teaching once they gain their qualifications. In terms of in-service teacher programmes, providing teachers with systematic continual professional development opportunities would help to inform their knowledge,

beliefs and practices, including the use of E-learning in their teaching within the Saudi context (Qenaey 2014; Al-Harbi 2014). Consistent in-service continued professional development opportunities would also help teachers to improve on their self-efficacy. This also tallies with the prescription by Hampel and Stickler (2005) when they suggested that teachers should be encouraged to acquire new skills through training in order to be more effective in their teaching using E-learning – thus their self-efficacy.

The importance of teachers' self-efficacy is also emphasised in the existing literature. One important implication of this, for example, is that it enhances teachers' mastery of various teaching skills, knowledge and E-learning related experiences (Qenaey 2014; Anderson et al. 2001). As a result, a significant step that needs to be taken into consideration in preparing teachers for teaching E-learning is that, as a part of an academic programme for pre-service teachers, some units on online and interactive teaching be integrated – that is, units that focus on designing online learning instruction and activities. This could assist teachers in becoming familiar with the online teaching approach. Moreover, the provision of consistent professional development training programmes for teachers' in-service is seen to enhance their self-efficacy (Qenaey 2014). These development programmes could include training workshops that focus on developing teachers' online teaching skills and keeping them updated with recent changes in the field.

Consistently, it has been argued throughout this research that for a deeper understanding of the readiness of students and teachers for E-learning in Saudi Arabia, there is also a need to reference other external factors including in-school and family support. Similarly, Yamani (2013) and Aboalhaj (2015) have also noted that it is important to understand the external factors that influence self-efficacy. This is unlike the majority of the existing literature, but such understanding arguably helps in the formulation of effective strategies that enhance and promote the readiness for using E-learning. Specific external factors that were identified to influence the self-efficacy of students and teachers in Saudi Arabia are in-school and family support. The ensuing discussion pays attention to these two identified external factors and tries to link them to the wider socio-cultural context of the research.

9.4.3 In-school support

The findings of this research study revealed a positive correlation between in-school support and level of students and teachers self-efficacy (see Section 7.4). This result is in agreement with much other prior research that also found a positive correlation between in-school support and levels of student and teacher self-efficacy in different other contexts (Cheung and Huang 2005; Selim 2007; Ngai et al. 2007). The finding suggests that providing in-school support may lead to greater or enhanced student and teacher self-efficacy, and ultimately their readiness to use E-learning. In many other contexts, in-school support is often implicit, but this needed to be made explicit and given greater attention in this research context because Saudi Arabia presents a complex scenario in relation to in-school support. In-school support in Saudi Arabia cannot be separated from government policy and actions, partly because it is the government that initiated the policy in the first place and partly because it is government's responsibility to resource schools adequately.

The current level of in-school support provided by Saudi schools in order to help student and teacher self-efficacy, unfortunately, is very limited – which raises questions about the readiness of Saudi schools to implement E-learning. For example, the perception of more than half of the student and teacher respondents was that schools in Saudi Arabia currently lack the capacity to provide the necessary support for E-learning usage that is, computer and Internet connectivity as well as poor technical and school management support (see Section 7.2.6). This perception of students and teachers was echoed in the views of both national and regional officials who participated in the research (see Sections 8.2.3 and 8.3.4). This research outcome concurs with earlier research such as Al-Harbi (2014) and Al-Furaydi (2013); but differs with earlier research such as Aldbasi (2006) and Alshumaim and Alhassan (2010). The current research outcome suggests a context much less supportive of E-learning readiness, though this may be confined to some regions.

The implication of this, as previous research findings highlight, is that E-learning programmes are at risk of failing because of the lack of in-school or institutional support (Selim 2007; Al-Harbi 2014), that is adequate in-school support in the form of the provision of access to computers, Internet and technical support to use E-learning as well as school management support are critical to a successful E-learning implementation. The finding thus suggests that providing in-school support may lead to greater student and teacher self-

efficacy, and ultimately their readiness to use E-learning. Another implication of the above is that Saudi students and teachers are unlikely to benefit significantly from E-learning when implemented because of the perceived current lack of in-school support. This is especially so, given the traditional pedagogy of rote learning and memorisation and the fact that formal education in Saudi Arabia is teacher-centred – a traditional milieu used in Saudi education for a long time now (Al-Harbi 2010; Alkhatnai 2013; Aboalhaj 2015). This means that, for example, traditional Saudi education does not prepare students to bear full responsibility for their own learning nor equip them well enough for self-directed learning – a reason that might help to explain this particular research finding that students lack self-efficacy. The evidence provided at the regional level was that the teaching and learning of IT in Saudi Arabia is still done theoretically. This feeds into the traditional teacher-centred approach and the responsibility sometimes laid at the doorstep of the lack of in-school support. As such, it seems that adopting E-learning in this teacher-centred context without a clear strategy in place will not benefit the students, ultimately.

Based on the above finding, it is recommended that in order to enhance the self-efficacy of the majority of Saudi students and teachers there is the need for proactive capacity building programmes by the Saudi MoE. This means that students and teachers will require special guidance, training and monitoring if they are to be able to use E-learning for EFL effectively, especially prior to the actual implementation of E-learning system. Guidance and training will help them to be able to identify resources for learning, as well as be able to select and implement new learning strategies. Monitoring on the other hand will help in successfully evaluating their personal performances and knowing if they are effectively applying the acquired skills and knowledge to meet set objectives. Specific to students, it is also a recommendation that opportunities that will enhance their self-efficacy to use E-learning should be created for them from an early stage in school – this could mean starting with the introduction of E-learning at the primary school level in Saudi Arabia. Such an exposure to IT literacy in schools at an early age (primary school) can also help in building their self-efficacy, and ultimately their readiness to use such technology for learning in later years.

At the policy and practical level, the outcome of the present study suggests that although the Saudi government has invested huge amounts of resources in order to promote the implementation of E-learning in the country, participants felt that the impact of such

investment is inadequate in practice. Some of the major projects embarked on by the Saudi government at the school level include the construction of about 6,700 computer laboratories containing 139,338 computers for high schools between 2011 and 2013. It has also been estimated that, cumulatively, the government effort has brought the country to the level of the global average of one computer for every ten students as at the end of 2014 (KACST and Ministry of Economy and Planning 2014). Yet, there seems to be a fundamental gap between policy and practice which might impact negatively on the readiness of students and teachers to use E-learning as a supplementary tool for EFL. This gap between policy and practice also seems to be pervasive across other countries in the Middle East, such as Kuwait (Aldhafeeri and Khan 2016) and the earlier attention is drawn to this, the better.

9.4.4 Family support

The findings of this research study suggest that there is a moderate positive correlation between family support and level of student self-efficacy (see Section 7.4). This means that, student respondents who showed lack of self-efficacy to use E-learning, also appeared to perceive less family support. On the other hand, student respondents who appeared to have greater self-efficacy to use E-learning, appeared to perceive greater family support. Given the significance of the family as a social institution in Saudi Arabia, this finding provides empirical evidence of its influence in determining the self-efficacy of students, and ultimately their readiness to adopt and use E-learning. Indeed, Saudi students of various ages and levels are expected to respect and obey the wishes and commands of their parents and other members of the extended family. There is therefore little or no autonomy of the individual student separate from the family either within or outside home. This is a respected socio-cultural norm that is cherished and encouraged from one generation to the other (Al-Alhareth 2014; Al-Harbi 2010; Al-Metz 1992). This finding was considered significant because it acknowledges that in the face of modernisation and globalisation trends with strong influence on the family, the support of the family is still considered necessary in the Saudi context for individuals to adopt and use E-learning, thereby highlighting the need to situate any research finding within the wider socio-cultural context.

In general, the findings from this research suggest that the majority of students' families are currently not positive in their perception of E-learning in Saudi Arabia. Further, the findings suggest that parents who have female children were more vociferous in their

negative views about E-learning (see Section 9.5.1.3 for further discussion about family support based on gender). It is important to explain here that all families appeared uninformed about the E-learning programme and parents are justifiably concerned about the safety and security of their children. For example, data from the interviews indicated that the majority of families perceive the Internet as a harmful place for children. It is this perception of harm that is behind the perceived lack of family support for students to use E-learning in Saudi schools if seen in this light.

The implication of this research finding is that the readiness of students to use E-learning in Saudi Arabia revolves within the readiness of a bigger context – that is, family readiness and more. This is an attribute that is not peculiar to the research context and those of its kind; it may not be given the same prominence in other contexts that are individualistic, but it is certainly something they can relate to easily, given the vulnerability of children. The finding indicates that readiness in the Saudi context cannot simply be explained by exceptionalism of Saudi students, but requires the readiness of the family as well as the wider context and culture. This can be seen as a profound challenge to students' readiness because of its potential impact in their lives in reference to the wider social culture of the Saudi people. Culture is not a static black box, it is instead a dynamic social construction, reproduced by practice, negotiating new practices and sense-making over practice (Giddens 1984). But a major driver of change in culture, sometimes, is clashes between inconsistent cultural beliefs (Bourdieu 2013). Clashes between contradictory cultural norms, Bourdieu (2013) argues, often involve reconciling or learning to alter one or other habit. Therefore, the concerns parents have over the adoption of E-learning may eventually be harmonised with time and education.

9.4.5 Answer to research question 2: what is the current level of readiness of students and English teachers to use E-learning for EFL in Saudi Arabia?

The conclusion reached based on the evidence presented in these research findings is that students and teachers appeared not ready to use E-learning – the lack of self-efficacy was perceived as a main barrier. Further, when a wider perspective is considered in relation to E-learning readiness, such as in-school and family support, students' and teachers' readiness is perceived to even be lower. The readiness of students and teachers appeared to depend on in-school and family support as well as the wider socio-cultural factors. In terms of in-school

support, the findings suggest that Saudi schools lack the requisite resources that will enhance the readiness of students and teachers to use E-learning. This means that readiness for E-learning in Saudi Arabia cannot be divorced from government policy and actions in relation to adequate resourcing of schools to support E-learning.

Additionally, the findings suggest that majority of students' families are sceptical about the Saudi E-learning programme. Families therefore appeared not ready for their children to use E-learning both at home and in schools. This might be emanating from an ignorant position; but it also highlights the important fact that government policy does not take into consideration the views of all stakeholders in the Saudi context – particularly those of parents. In terms of the wider socio-cultural factors, aspects of Saudi culture (gendering, and traditional pedagogy) also impact on E-learning readiness with profound consequences. It was also identified that contextual factors severely constrain teacher and student readiness. Finally, often the case in any innovative service, participants appeared wary of change. But the belief is that with time and education as well as putting the appropriate infrastructure in place, all groups will find E-learning EFL useful and their readiness enhanced. The next section discusses the readiness of students and teachers in relation to age and gender.

9.5 Readiness based on gender and age

This section considers the finding of this research relating to research question 3: What are the differences in the readiness of students and English teachers to use E-learning based on selected demographic characteristics (gender, and age) for EFL in Saudi Arabia? At each stage, findings from this research are triangulated with previous research and meanings deduced as a result.

9.5.1 Readiness based on gender

The conceptualisation of gender varies from one context to another since this is shaped by a number of variables including the wider socio-cultural values of the people (Al-Alhareth 2014). Gender and gender related issues such as segregation weigh heavily on students and teachers in Saudi Arabia. For instance, in the general socio-cultural environment that characterises the Saudi society and many of its kind, the perception and belief is that learning online may offer both male and female students the rare opportunity to socialise outside the family and with the opposite gender – currently a taboo in Saudi Arabia. Little of

the previous research into E-learning readiness references gender and links that to the wider socio-culture context in which E-learning is introduced. Gender was nonetheless identified by the research participants as a factor that might stand as a significant barrier to their E-learning readiness. Indeed, the fear of gender-mixing might be a specific concern that relates to the online/Internet aspect of E-learning in Saudi schools. This section therefore discusses the E-learning readiness of both students and teachers based on gender. It is hoped that such a discussion will help identify specific barriers that might affect the readiness of males, females and/or both. Again, the discussion carried out here is done based on the identified personal and external factors as well as linking discussion to the wider socio-cultural context of the research. This section therefore discusses the findings on students' and teachers' E-learning readiness based on gender.

9.5.1.1 Students' readiness based on gender

In terms of personal factors, the research outcomes showed that male students appeared more ready in terms of personal drivers to use E-learning than female students. There were however no differences in readiness between male and female respondents in terms of their personal access to tools and self-efficacy (see Section 7.3.1). This finding is contrary to the widely held perception that families are likely to allow their male children more access to computers and Internet access compared to females (Aldebasi and Ahmed 2013; Al-Alhareth 2014; Alzahrani 2017). Nonetheless, parents who participated in the study appeared more anxious about their daughters' use of E-learning compared to their sons (see Section 8.4). Such anxiety on the part of parents may go a long way to influence the readiness of female students and may provide an explanation to why there was a difference between male and female students in relation to personal drivers (see Section 9.5.1.3 for a detailed discussion on family support for E-learning based on gender).

The above is considered an interesting finding because gender differences, an important and notable attribute in the Saudi context, appear negligible and inconsequential in various other contexts in terms of students' readiness based on personal drivers (Hung et al. 2010; Pillay et al. 2007). These differences between the literature and the outcome of the current study emphasise the importance of the context (Vygotsky 1978). Engeström (2011) has also argued that context is everything – that is, even the individuals' attitudes and motivations to use E-learning are shaped by the context in which they live. The implication of

this particular finding is that it highlights the need for Saudi Arabia to consider designing specific strategies that meet the needs of a gender segregated society in order to prepare the minds of the wider society to accept the use of E-learning in Saudi schools. This broadens the scope demonstrating that, in addition to paying attention to the specific difference in readiness between male and female students to use E-learning, other concerns with the wider social-cultural context in Saudi Arabia need to be met.

9.5.1.2 Teachers' readiness based on gender

The research outcomes showed that there was no difference between male and female teacher respondents' readiness in terms of personal drivers and access to tools. This might be as a result of the fact that both male and female teachers are mature, might be independent minded, better placed financially to acquire or have access to the technology and see its advantage to their teaching. However, it is to be acknowledged that although both male and female teachers have an equal opportunity for training during their teacher training programmes at policy level (Oyaid 2009), the study results revealed a statistically significant difference between male and female teachers' readiness in relation to self-efficacy – that is, male teachers exhibited greater self-efficacy. This means that self-efficacy can influence the readiness of both male and female teachers but the degree/level varies (see Section 7.3.1). However, in practice, neither male nor female teachers have been formally trained and it is possible that the actual difference between male and female teachers might be negligible in reality.

Yet, there is a lingering likelihood that the future is brighter for male teachers than female teachers regarding E-learning readiness. Findings from the qualitative data at the regional level showed that male teachers have qualified supervisors who can provide training for them to enhance their self-efficacy at their disposal but not female teachers. This facility is not available to female teachers for a number of reasons. Firstly, although all public sector including all aspects of the educational system in Saudi Arabia is gendered, at the apex of the MoE, there are no senior female supervisors who can provide such training when needed. This might not necessarily be because female teachers lack the qualification and/or experience to provide such training for female teachers, the reason could be as a result of structural factors such as power within the Saudi context (Al-Alhareth 2014). For instance, nothing prevents the MoE from creating a parallel managerial/supervisory office for both

male and female teachers so that concerns of female teachers will be attended to by these supervisors. The power hierarchy within the Saudi system also works against the agency of females including female supervisors (Al-Alhareth 2014). This practice is likely to have implications for both policy and practice regarding the readiness of teachers to use E-learning. In terms of policy, the research outcome highlights the inherently discriminatory nature of the Saudi system in favour of males. In terms of practices, the research illustrates the reality at the workplace in Saudi Arabia where there is an overwhelming power imbalance in favour of males. This calls for a shift in attitudes towards the development of a culture of respect for women and accepting them as equal partners for development.

Differences in readiness based on gender are manifested in other research outcomes in other contexts. For instance, Hung (2016) found that male teachers have significantly greater readiness based on self-efficacy than did female teachers. So (2008) has also shown in the findings of his research on the perceived readiness between male and female teachers in Hong Kong that male teachers appeared more confident to use E-learning in the classroom compared to female teachers. But unlike the majority of the existing literature, it has been argued throughout this research that for a deeper understanding of the differences in readiness of students and teachers based on gender, there is also a need to reference the external factors, that is in-school and family support and linking that to the wider social culture into which the E-learning is introduced. The following sub-sections provide discussions based on in-school and family support.

9.5.1.3 Family support based on gender – students

The study results revealed a significant difference between male and female perceptions regarding family support – female students perceived less family support to use E-learning (see Section 7.3.1). Data from parents provided likely reasons why female students are likely to perceive less family support. Notable among these reasons is the fact that female students are constantly being monitored by their parents whenever they are on the Internet – an environment perceived by some parents as toxic. As a result, some parents disapprove the use of any Internet-related applications in general, but especially for females (see Section 8.4). This shows that families might not be ready to accept the use of E-learning by their children, especially female students. The implication of this is therefore that the government will face great challenges to achieve its goal of E-learning implementation.

Following from the above, it is to be acknowledged that the family is an important social institution in Saudi Arabia and its role in the readiness of students cannot be overemphasised. It stands to reason that the readiness of female students to use E-learning is influenced negatively if they tend to perceive less family support as a result of family control and monitoring. The provision of family support therefore influences the readiness of students to use E-learning in Saudi Arabia. In a broader sense, the perception of female students to have less family support brings to the fore issues of gender discrimination and limiting of opportunities for female students. It also raises questions about female students' freedom to access and use E-learning as well as their right to privacy to do so (Sen 2009). The manner of parental control can also be considered an intrusion on the privacy of these female children which affects their readiness to use E-learning (Al-Alhareth 2014). The implication of this particular research finding is that parental attitude/control in Saudi Arabia stands as a major barrier to the readiness of children to use E-learning, especially for females.

As mentioned earlier in the research context chapter, such practices that can be considered discriminatory have historical roots. For instance, it is observed that the official education for females in Saudi Arabia began 30 years later than that of males because of the reluctance of the parents (Hamadan 2005). Yet, these practices are still acceptable to Saudi families based on their culture and interpreted to be in the best interest of female students. The influence of Saudi families on their female children has also been stressed strongly in other literature. For instance, Saudi students in general tend to need the support and blessing of their families in order to pursue their studies effectively (Al-Harbi 2010). Further, Al-Harbi (2010), notes that Saudi families exert a strong influence in shaping the future of their female children particularly regarding interactions via the Internet. This therefore shows the significant role of the family in influencing the readiness of these students to use E-learning – e.g. by accepting the use of technology at home, prioritising the use of technology for learning EFL, and providing access to the technology. The implication of this finding is that the culture and traditions of the Saudi society as well as the role of the family should be considered in the design and adoption of new E-learning programmes in order to enhance its successful implementation. This means that any plan to implement E-learning in schools should consider the role of families and how to navigate round possible issues of concern to these families. The readiness of families to accept E-learning coupled with other factors identified in this study will go a long way to facilitate the successful implementation of the E-learning programme in Saudi Arabia.

It is therefore necessary to increase the awareness of parents in this regard since the findings from father interviews showed there is a lack of awareness among Saudi families about the benefits of E-learning for children. This can be done by introducing courses for them and linking them to the schools. By doing so, families might become more liberal with their female students which will help improve their opportunities to use E-learning.

9.5.1.4 In-school support based on gender

As demonstrated in previous sections, the overall perception amongst students and teachers who participated in the research study is that Saudi schools lack the needed in-school support. This includes training capacity, school buildings and IT equipment necessary to make them ready to implement E-learning. Although this is considered a significant outcome, further discussions need to be explored based on gender since education in Saudi Arabia is gendered. For example, contrary to suggestions by national level officials that the Saudi MoE offer male and female students equal opportunities and the same amount of in-school support, the findings suggest that female students perceived themselves to have less in-school support to use E-learning (see Section 7.3.1). These perceptions were concurred with by regional officials who revealed that, generally, male schools are much better than female schools in terms of physical infrastructure, quality of buildings, provision of computers, Internet, as well as other learning resource centres. Female schools are also perceived to be overcrowded and some of them lack permanent structures (see Section 8.3.4). On the part of teachers, the findings suggest that for a number of reasons male teachers have more opportunities to attend professional development training, usually provided in places outside the school, like the educational training centres, than female teachers; although female teachers can be considered more likely or motivated to use E-learning with good in-school support (see Section 8.3.4).

This research finding might be explained in relation to the socio-culture of the Saudi people because modesty in all aspects of life is encouraged in Saudi Arabia particularly for married females. This makes them appear subservient in all their endeavours including at work, especially relative to the male counterparts. This finding can also be explained in terms of the culture and limited opportunities available to female teachers, post-qualification. For instance, male teachers are more likely to be given additional training and support, especially from trained educational supervisors in order to enhance their self-efficacy. But, as

demonstrated from the interviews, so far there are only few female supervisors in Saudi Arabia. Further, the research findings revealed that female head teachers are unable to easily access the MoE and/or Department of Education because all the workers there are male. These female head teachers usually send their request by post which can either get lost or sometimes be ignored (see Section 8.3.4).

The implication of this particular finding is that there seems to be a gap between policy and practice. It appears that what exists at the policy level as mentioned by the national officials does not seem to translate to the reality on the ground. This high percentage of insufficient in-school factors clearly demonstrates a lack of commitment on the part of the Saudi MoE to afford female students equal opportunity in education. This undoubtedly contributes to the perception by female students that they lack in-school support which in turn can influence their E-learning readiness.

This finding is in agreement with the literature that suggests that a higher proportion (58%) of the female school buildings in Saudi Arabia are rented and inadequately equipped with computers and Internet facilities (Abdullah et al. 2013). This was interpreted to mean that male education is given priority over female education in Saudi Arabia, generally. It can therefore be argued that in-school support can influence the E-learning readiness of students in Saudi Arabia in general, but especially girls.

9.5.2 Readiness based on age

Readiness based on age was also explored in order to find out if there was any significant difference between younger and older students and teachers. This was done in cognisance of the divergence of views in the existing literature regarding age and the use of E-learning. For instance, some researchers argue that the younger generation who embrace the use of new technology have the ability to learn more collaboratively than the older generation (Yamani 2013). On the other hand, other researchers argue that the differences between the younger and older generations in accepting and using technology are not that significant (Pillay et al. 2007). The ensuing discussion on the readiness of students and teachers based on age is based on the findings of the present research.

9.5.2.1 Students' and teachers' readiness based on age

In terms of age, the results of this study demonstrated three significant outcomes: a significantly greater readiness in older students in terms of personal access to tools; a significantly greater readiness in younger students in terms of personal drivers; and no significant difference between younger and older students in terms of self-efficacy. This research outcome was considered significant because it established a case that although older students might have more personal access and younger students' greater personal drivers, there is no significant difference in their self-efficacy (see Section 7.3.2). The lack of self-efficacy among students is considered a central barrier of student readiness regardless of their age in this research (see Section 9.4.1). Younger teacher respondents also appeared more ready in terms of personal drivers and access to tools to use E-learning than older teachers. In spite of this, there were no differences in readiness between younger and older teacher respondents in terms of self-efficacy (see Section 7.3.2). This means that lack of self-efficacy among teachers is considered a central barrier to teachers' readiness in the Saudi context regardless of their age.

Overall, the research findings may be interpreted as indicating older students' preference for traditional learning – a characteristic associated with limiting their engagement in E-learning (Al-Ismaiel 2013), and making them resistive to E-learning adoption and usage (Alebaikan 2010; AlJeraisy et al. 2015; Hamdan 2014). This is despite the possibility that they might be independent and can afford the requisite technology necessary for E-learning. Yet, young students appeared more inclined (have greater personal drivers) to use E-learning because technology is generational, and they might see it necessary to learn to use technology because everyone in their generation is doing so (Frاند 2000). In terms of external factors, there were no significant differences between older and younger students (see Section 7.3.2) nor between older and younger teachers (see Section 7.3.2).

The implication of the present research outcome is that the Saudi government needs an understanding of these differences in age because it will be helpful in terms of policy formulation and implementation since appropriate policies can be tailored to help the age categories who considered themselves to be less inclined to use such technology, especially older female students. For instance, the study outcomes show that the older group of students were predominantly female. This means that female students are usually delayed in their

education as a result of socio-cultural barriers that affect them (Al Alhareth, 2013). For example, females enter into early marriages and are unable to go to school. The females however are given the opportunity to go back to school when they are older and more independent. But males in Saudi Arabia do not suffer any interruption to their career as a result of continuous education (AlMunajjed, 2009). The present research outcome might also help in policy formulation and implementation such that their formulation and implementation will be guided by the differences these factors make to the readiness of younger and older students and teachers to use E-learning.

In terms of students, this particular research outcome seems to differ from the research findings by Pillay et al. (2007) who suggested that there is no difference in the readiness between younger students and older students in Turkey based on the preferences/attitudes and self-efficacy of users. Yet, the present research outcome is similar to that of Colley and Comber (2003) who did their studies in the UK and reached similar conclusions to the current findings. They found in their respective research outcomes that younger students have more positive attitudes towards computers than older ones. In terms of teachers, the outcome of this present research echoes the results shown by So (2008) that younger teachers tend to be more prepared in E-learning compared to older teachers in Hong Kong. It therefore appears that, across contexts where (and widely different times) age has been explored in relation to E-learning readiness, it has proven to be an important consideration in relation to the adoption and use of E-learning (detailed in Chapter Three, Section 3.4.2.3.2).

9.5.3 Answer to research question 3: What are the differences, based on selected demographic characteristics (gender and age), in the readiness of students and English teachers to use E-learning for EFL in Saudi Arabia?

The conclusion reached based on the evidence presented in these research findings is that female students and teachers appeared less ready to use E-learning compared with their male counterparts – that is, readiness to use E-learning in Saudi Arabia is impacted by the gender of students and teachers. It was also identified that female students and teachers perceived less in-school and family support demonstrating, in a sense, the general attitude to female education and/or their place in the wider society. The findings further highlight the fact that readiness of students and teachers also depends on wider socio-cultural factors. In

terms of in-school support, the findings suggest that female schools in Saudi Arabia perceive less requisite resources that will enhance the readiness of students and teachers to use E-learning compared to male schools. Furthermore, female students tend to perceive less family support compared to their male counterparts. This has a bearing on how the wider society perceive female education and more needs to be done to convince families about the benefit of female education and the need for females to be afforded equal opportunities to have an education. Finally, it is to be acknowledged that readiness for E-learning in Saudi Arabia cannot be separated from government policy and actions as well as the wider socio-culture of the people.

The conclusion reached based on age was not less significant although less elaborate as shown above. The research findings show that while younger teachers appeared more ready in terms of personal drivers and access to tools to use E-learning than older teachers, there was a significant greater readiness in older student in terms of personal access to tools and a significant greater readiness in younger students in terms of personal drivers. In spite of this, there were no differences between younger and older students and teacher respondents in terms of self-efficacy and in terms of the identified external factors. Overall, lack of self-efficacy among students and teachers was considered a central barrier in the Saudi context regardless of their age but manifest in gender.

In conclusion, it is worth emphasising that the identified differences in terms of age and gender arise partly as a result of government policy and partly as a result of the wider socio-cultural context. The former can be ameliorated over time given the current political will and government commitment to the course of implementing E-learning in the country. More difficult are those differentials rooted in culture, some of which can be addressed by long-term training initiatives over longer time periods during which Saudi society reconciles competing and conflicting goals.

9.6 Chapter summary

The chapter provides a discussion of the research findings presented under Chapters Five, Seven and Eight. Acknowledging the main drivers of E-learning in Saudi Arabia in the first section, the second and third sections discuss the underlying factors of E-learning readiness, and the readiness of students and teaches to use E-learning in Saudi Arabia respectively. The fourth and fifth sections also discuss any gender and age differences in the

readiness of students and teachers, respectively. Throughout the discussion data are triangulated with the existing literature in order to highlight the points of convergence, divergence and complementarity. The discussion is also done within the larger context of institutional and family readiness considering its implication for theory, policy and practice.

In general terms, the evidence presented in these research findings is that students and teachers appeared not ready to use E-learning – lack of self-efficacy being a main barrier. The readiness of students and teachers is perceived to even be lower in respect to the identified external factors – notably, in-school and family support. This means that readiness for E-learning in Saudi Arabia cannot be divorced from government policy and actions in relation to adequate resourcing of schools to support E-learning as well as the contribution of the family and wider society at large.

In terms of gender, the evidence suggests that female students and teachers appeared less ready to use E-learning compared with their male counterparts. Female students and teachers perceived less in-school and family support demonstrating, in a sense, the general attitude towards female education and/or their place in the wider society. In terms of age, younger teachers appeared more ready in terms of personal drivers and access to tools to use E-learning than older teachers; there was a significantly greater readiness in older students in terms of personal access to tools and a significantly greater readiness in younger students in terms of personal drivers.

In conclusion, the findings suggested that the readiness of students and teachers in the Saudi context requires an interplay of the identified personal and external factors. As a result of the research findings, Figure 9-1 has been developed to illustrate the interplay of the individual and external factors hoping to build a complete picture and a broader understanding of the underlying factors of readiness of students and teachers to use E-learning. It is in line with the Vygotskian (1934) socio-cultural theory that emphasises the necessity of referencing the influence of culture and context. Further, the chapter has highlighted the lack of readiness and identified differences in terms of age and gender that arise partly as a result of government policy and partly as a result of the wider socio-cultural context.

Chapter Ten: Research conclusions and recommendations

10.1 Introduction

The research sought to explore the readiness of students and English teachers to use E-learning as a supplementary tool for EFL in Saudi Arabia. Specifics of the research outcomes are as follows. In Chapter Five, the underlying factors of the readiness of students and English teachers to use E-learning for EFL in Saudi Arabia were explored. Chapter Six focused on how the questionnaire was validated using both content and construct validity. In Chapter Seven, the current level of readiness of students and English teachers to use E-learning for EFL in Saudi Arabia and the differences in the readiness of students and English teachers to use E-learning based on gender and age were explored. Chapter Eight was based on individual interviews of national and regional officials as well as heads of families. This sought to interrogate further and seek deeper understanding of the issues involved around the readiness of students and teachers in Saudi Arabia. In Chapter Nine, an extensive discussion of these research outcomes highlighting their implications for theory, policy and practice was presented. This chapter focuses on the contributions made by the present research and its significance to the overall academic research community in this area. Based on the findings of the present study, the chapter also offers on a number of recommendations primarily for the Saudi MoE. These recommendations might also be useful for the wider community in this field if applied appropriately, to inform policy-makers of what needs to be taken into consideration for a better E-learning implementation. Further, the limitations of the research are identified, and suggestions are made for future research. Finally, reflection on the entire research process is provided as a final thought.

10.2 Contribution to knowledge

The findings emanating from the research make a significant contribution to the E-learning readiness field in diverse ways: conceptually, institutionally, gender and gender related issues, contextually and methodologically. This section explores and discusses the contributions of the present study.

- Conceptually, the outcome of the present research shows a broader conceptualisation of E-learning readiness within the Saudi context. It does so by emphasising the need to consider both what are described as personal and external factors in the study. This brings

to the conceptualisation of E-learning readiness how both personal and external factors contribute to a better understanding of students' and teachers' readiness to use E-learning. This ultimately informs a better implementation process of E-learning that takes into consideration various aspects instead of limiting it to personal factors (McVay 2000; Smith et al. 2003; Smith 2005; Hung et al. 2010) and/or “environmental” factors such as school organisation (Hung 2016). The framework of the present study identifies and includes more dimensions of personal and external factors. The research findings also reflect how the readiness of students and teachers can be influenced by the wider socio-cultural context to which they belong. Considering that Saudi Arabia operates a segregated system, the inclusion of both gender perspectives in this single research strengthens the findings of this study. The study was therefore able to provide a more holistic view of readiness of students and teachers that emerged from the interaction of self and context. Studies in the existing literature are considered insufficient in this direction because they are done independently of, or with minimum influence from, the culture and context of the research participants. In the case of Saudi Arabia, culture and context are important because E-learning is a technology, indeed a pragmatic technology characterised by the complexity of an ecosystem with in which it operates (Al-Alhareth 2015), and whose success depends, like that of any technology, upon its socio-technical usefulness (Baxter and Sommerville 2011).

- Amin (1999) notes that a significant difference between developing and developed societies is institutional thickness – that is, the degree to which knowledge, ways-of-working, and trust are characterised by non-state bodies. On this basis, Saudi Arabia is perceived as a developing society where the state still retains a much more central role in all issues including education and by extension the introduction of E-learning. In a sense Saudi Arabia is caught in the middle: economically rich but institutionally poor. This has a major impact on readiness for E-learning and raises doubt on the perception that having financial resources is enough a factor in the successful implementation of E-learning. The findings make the point that although the present research context is endowed with financial resource and there seems to be sufficient political will, these do not guarantee the success of the E-learning programme. It is further argued that Saudi Arabia may be economically rich, but poor in terms of institutions. The recommendation of the present study is that there is the need for careful planning, as well as the development of proper and robust channels of communication amongst all stakeholders, which are open and

honest, in order to succeed in their E-learning implementation effort. As demonstrated in the framework, readiness in the Saudi context goes beyond the individual student or teacher but includes the family, school and wider socio-cultural environments and context.

- Gender differences using ICT, generally, seem to favour males (Mitra et al. 2000; Young 2000; Ong and Lai 2006; Hung 2016). Specific to Saudi Arabia, little is known in the existing research literature on E-learning and E-learning readiness based on gender and gender related issues/subject. This is considered a grey area and researchers tend to shy away from such discussions (Al-Harbi 2010). A notable exception is the work by Tarhini et al. (2016) who specifically explored gender and E-learning in Saudi Arabia. The contribution of this current research therefore is that it has highlighted gender as a factor that influences the readiness of students and teachers to use E-learning in Saudi Arabia. Gender and gender related issues such as family attitudes towards segregation and home use of computers by girls has taken centre-stage in this present study. The evidence provided in this research demonstrates that female students and female teachers appear to perceive less family support in relation to their use of E-learning. Other findings indicate how the lack of resources and other infrastructure in their school influence the readiness of female students and teachers to use E-learning in Saudi Arabia.
- Although students' and teachers' readiness for E-learning, generally, may be widely explored and evaluated in different contexts and levels (e.g. Hung et al. 2010 and Hung 2016), it has been noted that this is still under-researched in reference to Saudi Arabia and similar contexts. It is hoped that the outcome of the research will contribute to filling the existing gap and enrich the existing literature with a perspective from Saudi Arabia. It provides up-to-date information about the current level of their readiness as well as the current and future considerations, especially in relation to the E-learning implementation in the schools' context, with the hope to inform policy makers in MoE when implementing E-learning in the future.
- The originality of this study also lies in its methodological predisposition. The majority of the existing literature in E-learning readiness is mainly based on quantitative methods (e.g. Smith et al. 2003; Smith 2005; Blankenship and Atkinson 2010). The present study however draws on both quantitative (use of questionnaire) as well as qualitative (use of

interviews) data collections methods. The use of a mixed methods approach has provided an in-depth insight into the subject matter that could not be derived using a single method. The outcome of this research therefore represents the voices of respondents directly, including an adequate sample size of both genders of students and teachers, parents and educational officials which until this research has often been overlooked prior to policy formulation and implementation.

10.3 Recommendations

Based on the findings of the present study, there are a number of recommendations that can be drawn, primarily for the Saudi MoE. These recommendations can also be useful for the wider community in this field if applied appropriately. The value of providing these recommendations is to inform the policy-makers of what needs to be taken into consideration for better E-learning implementation.

1. The study showed a clear fundamental gap between policy and practice in Saudi Arabia, a state of affairs which seems to be pervasive across other countries especially in the Middle East (Aldhafeeri and Khan 2016). It is therefore recommended that concerted efforts should be made to create and maintain goodwill between the Saudi MoE, schools as well as parents and the wider society. This would help to promote a good working relationship amongst all these stakeholders as well as provide an avenue to manage expectations in terms of E-learning implementation outcomes. At the moment the Saudi government or MoE is sending mixed messages to teachers and parents over why it has introduced E-learning and the importance of readiness. The government should consider clarifying its messages justifying E-learning, including clarifying how wide the application of E-learning is intended to be. Indeed, there is evidence elsewhere showcasing how successful the use of E-learning has been, either as the main technique or as a supplementary tool in Maths, Physics, Chemistry, Biology, language study as well as the social sciences (Kearney 2011). But these examples have not always altogether been convincing. It is therefore recommended that the government should bridge the gap between policy and practice by clarifying what the E-learning programme is going to cover.
2. The study also showed a contrary perspective to estimates by the Saudi government which suggest that Saudi schools have been equipped with computers and Internet

connectivity, bringing the country to the level of the global average of one computer for every ten students as at the end of 2014 (KACST and Ministry of Economy and Planning 2014). The research outcome suggests that the reality is different based on the perception of the research respondents. For instance, some regional officials, teachers and students who participated in this study believe that female schools are disadvantaged in terms of in-school support such as ICT infrastructure (see Sections 7.3.1 and 8.3.4). It is therefore recommended that the Saudi MoE should appoint an agency, for instance, the National Centre for E-learning and Distance Learning (ELC), to take stock of the facilities in all schools. This exercise will help to present a clearer picture of what needs to be done in these schools in order to reach the set policy target of achieving the global average. Such an audit of these facilities by the government can also help to change perceptions and replace opinions with facts.

3. The study showed that society in general will have a significant influence on students' and teachers' E-learning usage, especially in the case of students. It is therefore recommended that the MoE should educate and sensitise the heads of schools, families as well as the general public about the advantages of using E-learning. Further, raising the awareness of all stakeholders on the advantages of adopting and using E-learning in schools will contribute meaningfully to the implementation process.
4. The culture and religion of the Saudi people are equally important considerations to be considered in the adoption and effective implementation of E-learning in Saudi schools, because there are certain criteria and standards that should be taken into consideration, such as gender segregation. This might be peculiar to Saudi Arabia and similar Arabic countries, but it should be considered seriously, especially, if the implementation of E-learning in these contexts is to see the light of day.
5. The study also highlighted the need for the creation of equal opportunities between genders, and between students and teachers in order to bridge the existing gap in the current level of readiness within these groups. Gender, as this research demonstrates remains a major issue in Saudi Arabia. For some time now the government has made reforms that seek to bridge this gender gap. The government's resolve to implement an E-learning programme that will allow a mixed gender education platform online can help legitimise it in the eyes of parents and the larger Saudi society. Even if this was to be

another reform towards the modernisation of the Saudi society, the chances of it getting the backing of other stakeholders will be enhanced. Overall, the research outcome also suggests that the student respondents and teacher respondents were lacking readiness, with specific reference to female students and teachers. This calls for more training and support for all students and teachers, especially females. The formulation and implementation of specific strategies that consider the relative strengths and weaknesses of each gender should be designed to increase their readiness when E-learning is adopted. In addition, female students and teachers should be provided with more school and social support regarding their E-learning usage, as these factors were identified as barriers peculiar to them in this research.

6. The findings demonstrated that there were differences in readiness of students and teachers depending on their age. It is therefore recommended that policy formulation and implementation in Saudi Arabia should consider the various age ranges in Saudi schools since this is often uneven and the dominant age groups can be misleading.
7. Schools should be well equipped with the requisite facilities and human resources including computers, Internet connectivity and IT technicians. These facilities should be made available for both students and teachers at all times.

10.4 Limitations and future work

It is worth noting that in spite of the fact that the present research has achieved its set objectives, it has some limitations. This section enumerates the several limitations of the study and identifies areas for future research.

Principally, the research is limited in its scope which might have implications for its implementation. Time availability and the difficulty of gaining access to particular research participants compelled the researcher to narrow the research site to only schools in Jazan province in Saudi Arabia. Although Jazan province has a diverse society, the study might still be susceptible to being described as limited in terms of its geographical coverage. This particular limitation is mitigated by the fact that the Saudis have a shared religion and same culture (Al-Harbi 2010; Al-Alhareth 2014; Al-Harbi 2014). There is also a unified education system in Saudi Arabia which means that students and teachers in different educational districts are likely to experience similar challenges in their use of E-learning as a

supplementary tool for EFL (Al-Harbi 2010; Al-Alhareth 2014; Al-Harbi 2014). The outcome of this research can therefore be used as a basis for future research including:

- Comparative studies with other educational districts within the country;
- Comparative studies with other countries.

Another limitation of this study is that it focused only on public schools, not private ones. This particular limitation is mitigated by the fact that both public and private schools have a unified education system under supervision of the MoE and by the fact that there is no established pattern in either public or private schools in terms of resource availability and the demography of students or teachers (Al-Harbi 2010; Al-Harbi 2014). The outcome of this research can be used as a basis for future research including:

- Comparative research between public and private schools in Saudi Arabia;
- Research about private schools in Saudi Arabia.

Further, although the research outcomes provide a broader and more encompassing framework in understanding the readiness of students and teachers for E-learning compared with existing models, it is possible some factors might not have been captured. Hence, it could be worthwhile to use the dimensions identified in this study as a departure point for a new investigation to discover more dimensions regarding the readiness of students and teachers for E-learning. This means that there is still room for future research in this area including:

- Exploring the underlying factors of students' and teachers' readiness to use E-learning within the same research context – that is, other provinces in Saudi Arabia besides Jazan province;
- Exploring the underlying factors of students' and teachers' readiness to use E-learning within the Gulf countries and worldwide.

Another methodological issue was the interviewing of female participants through the use of a proxy researcher because of cultural barriers. In Saudi Arabia, the culture does not allow the mixing of males and females, especially in public, regardless of intent. This made it impossible for the researcher to have direct access to female research participants both

students and teachers. A proxy female researcher was therefore used to recruit female participants from both students and teachers and to carry out the group interview sessions following the primary researcher's specific procedures. Although using a proxy female researcher to conduct the interviews on behalf of the researcher appeared a solution to accessing female research participants, it had the potential of missing some important information due to the proxy researcher not being able to identify relevant details, especially non-verbal ones, during the interviews. On this basis, it is recommended for future work that a single researcher should engage in a piece of research right from its conception to finish. This will help to avoid the tendency of a gap in interpretation or misinterpretation of relevant key facts or pieces of information. This is something that may be difficult to achieve in Saudi Arabia at the moment.

Finally, the views of fathers are used to represent the views of families in the present study because of the fact that fathers are normally the heads of the family and thus speak for them. This identifies and highlights the patriarchal nature of the Saudi society but risks missing the voice of mothers in such an important issue as their children's use of E-learning. The outcome of this research might therefore be extended through future research that will seek the views of mothers.

10.5 Final thought

This research is a case study that explored the readiness of students and teachers to use E-learning for EFL in Jazan province, Saudi Arabia. At the personal level, the entire journey of doing this research has been humbling, fulfilling and quite revealing. I started my PhD programme with the preconception that the wealth of a nation, coupled with government commitment would be sufficient for the successful implementation of E-learning. However, I have come to the realisation at the end of this research that these two factors are only part of a bigger picture. Readiness, the research outcome has revealed, is a continuum shaped by the perceptions of individuals and influenced by the society in which they live. I now think that for a successful implementation, there is the need for consultations to be made amongst all stakeholders prior to the implementation process and a periodic review of such a policy during its implementation. My observation is that readiness of students and teachers goes beyond themselves to include families and other stakeholders. Finally, I suppose the current top-down approach of doing things in Saudi Arabia needs a rethink and revision. We also

need, going forward, the initiation of a channel of communication amongst all stakeholders that is open and honest.

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Appendices

Appendix A: Overview of group interview questions – Arabic and English versions

1. Personal data questions:

- Names
- Experience with E-learning
- Where you live
- The academic discipline (only student participants)
- Proficiency in English (only student participants)
- Experience in teaching EFL (only teacher participants)
- The name of school (only teacher participants)

2. Introductory and transition questions

- In the last few years, we have heard quite often about E-learning systems. When you hear this term, what comes to mind?
- What is your first impression of the idea of using E-learning in learning/teaching English?
- What is your attitude towards using an E-learning system for learning and teaching English?
- Could you tell me some benefits or positive aspects about E-learning, no matter how small that positive thing is?
- Could you tell me some disadvantages or negative aspects about E-learning, no matter how small that negative thing is?

3. Key/main questions

- Once we have gotten the idea of E-learning, personally, what factors would indicate your readiness to use it?
 - *If many factors listed, the followed up question: which of these factors is the most important?*
- Personally, what factors would influence your readiness to use it?
 - *If many factors listed, the followed up question: which of these factors is the most important?*
- Generally, in the future, what do you think will help in the integration of E-learning into the teaching and learning of English language?
 - *This question followed up by: what should be done about it?*
- Let's talk about the needs of students to develop their English, and the possibility of using E-learning to help improve and to meet those needs. What needs to be addressed in order to make the use of E-learning possible?

4. Closing questions

- Thinking about all that we have been discussing today, what do you think is the most important factor in indicate and/or influence you to use E-learning in teaching/learning English?
- What advice would you have for the ministry of education regarding the actual use of E-learning for teaching/learning English?
- Do you have any questions you will wish to ask?

Thank you for your time and for talking to me. I look forward to seeing you again sometime.

1. أسئلة البيانات الشخصية:
- أسماء
 - خبرة في التعلم الإلكتروني
 - أين تعيش
 - التخصص الأكاديمي (فقط الطلاب المشاركين)
 - إجادة اللغة الإنجليزية (فقط الطلاب المشاركين)
 - خبرة في تدريس اللغة الإنجليزية كلغة أجنبية (فقط للمشاركين المشاركين)
 - اسم المدرسة (المشاركين في الدراسة فقط)
2. أسئلة تمهيدية وانتقالية
- في السنوات القليلة الماضية ، سمعنا في كثير من الأحيان عن أنظمة التعلم الإلكتروني. عندما تسمع هذا المصطلح ، ما الذي يتبادر إلى ذهنك؟
 - ما هو انطباعك الأول عن فكرة استخدام التعلم الإلكتروني في تعلم / تدريس اللغة الإنجليزية؟
 - ما هو موقفك من استخدام نظام التعلم الإلكتروني لتعلم اللغة الإنجليزية وتدريسها؟
 - هل يمكن أن تخبرني عن بعض المزايا أو الجوانب الإيجابية حول التعلم الإلكتروني ، بغض النظر عن صغر هذا الشيء الإيجابي؟
 - هل يمكن أن تخبرني عن بعض العيوب أو الجوانب السلبية حول التعلم الإلكتروني ، بغض النظر عن صغر هذا الشيء السلبي؟
3. الأسئلة الرئيسية
- بمجرد حصولنا على فكرة التعلم الإلكتروني ، شخصياً ، ما هي العوامل التي تشير إلى استعدادك لاستخدامها؟
 - > إذا كان هناك العديد من العوامل المذكورة ، فإن السؤال التالي هو: أي من هذه العوامل هو الأكثر أهمية؟
 - شخصياً ، ما هي العوامل التي تؤثر على استعدادك لاستخدامها؟
 - > إذا كان هناك العديد من العوامل المذكورة ، فإن السؤال التالي هو: أي من هذه العوامل هو الأكثر أهمية؟
 - بشكل عام ، في المستقبل ، ما الذي سوف يساعدك في دمج التعلم الإلكتروني في تدريس وتعلم اللغة الإنجليزية؟
 - > تتبع هذا السؤال عن طريق: ما الذي ينبغي عمله حيال ذلك؟
 - دعونا نتحدث عن احتياجات الطلاب لتطوير لغتهم الإنجليزية ، وإمكانية استخدام التعلم الإلكتروني للمساعدة في تحسين وتلبية تلك الاحتياجات. ما الذي يجب معالجته لجعل استخدام التعلم الإلكتروني ممكناً؟
4. إغلاق الأسئلة
- بالتفكير في كل ما كنا نناقشه اليوم ، ما هو العامل الأكثر أهمية في الإشارة إلى و / أو التأثير عليك في استخدام التعلم الإلكتروني في تدريس / تعلم اللغة الإنجليزية؟
 - ما هي النصيحة التي ستقدمها لوزارة التعليم فيما يتعلق بالاستخدام الفعلي للتعلم الإلكتروني لتدريس / تعلم اللغة الإنجليزية؟
 - هل لديك أي أسئلة تود طرحها؟

شكراً على وقتك. أتطلع لرؤيتك مرة أخرى في وقت ما.

Appendix B: Full questionnaire – English and Arabic versions

Preliminary data (This type of information will help the researcher to explore any individual differences in readiness for E-learning between gender and age).

- **Responder**
 1. **Student**
 2. **Teacher**
- **Gender**
 1. **Male**
 2. **Female**
- **Age**
- **School name**.....

Main statements (Below you will find statements used to explore the readiness of the student/teacher to use E-learning for teaching and learning of English, and you are kindly requested to read each statement carefully and then to express your opinion by choosing what is consistent with your point of view).						
#	Statements (Previous experience - the following statements in this section determine your previous experience in computer, internet and E-learning).	Yes		No		
1	I have prior experience using computers.					
2	I have prior experience using the internet.					
3	I have prior experience using E-learning.					
#	Statements (Personal skills - the following statements in this section determine the extent of your personal skills in computer, internet and E-learning).	No Skill	Low Skill	Average Skill	High Skill	Very High Skill
4	I have enough skills to use the computer.					
5	I have enough skills to use the internet.					
6	I am skilled enough to use E- learning in my learning/teaching of English without help.					
7	I am skilled enough to use E- learning in my learning/teaching of English even if there is no one around to show me how to use it.					
8	I am skilled enough to use E- learning in my learning/teaching of English even if I have not used such a system before.					
#	Statement (Training - the following statement in this section determines if you trained or not to use E-learning).	Yes		No		
9	I have trained to use E-learning for learning.					
#	Statements (Personal access to tools - the following statements in this section determine your access to computer and internet for E-learning).	No	Sometimes		All the time	

10	In my home I have a computer to use for E-learning whenever I need it.					
11	In my home I have internet connection to use for E-learning whenever I need it.					
#	Statements (Opinion in the use of E-learning - the following statements in this section determine your attitude, motivation and time commitment towards the use of E-learning).	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
12	Using E-learning in learning/teaching English is a good idea.					
13	Overall, I like using E-learning.					
14	I would devote some time to use E-learning for my learning/teaching of English.					
15	In general, I would have available time to use E-learning for my learning/teaching of English.					
16	I would use E-learning in my learning/teaching of English even if I were not rewarded for it.					
#	Statements (E-learning characteristics - the following statements in this section are concerned with E-learning usability (Ease of use and Usefulness) and E-learning functionality (Flexibility and Interactivity) that you believe have an impact on your readiness to use E-learning for English).	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
17	Interacting with E-learning systems is (or would be) clear and understandable.					
18	Interacting with E-learning does not (or would not) require a lot of my mental effort.					
19	Using E-learning in my learning/teaching of English is (or would be) easy for me.					
20	Overall, I believe that E-learning is (or would be) easy to use.					
21	Using an E-learning system improves (or would improve) my learning/teaching performance of English.					
22	In general, I think an E-learning system is (or would be) useful in my learning/teaching of English.					
23	E-learning offers (or would offer) me flexibility in learning/teaching with respect to time and place.					
24	E-learning offers (or would offer) me control over learning/teaching activity.					
25	E-learning offers multimedia (audio, video, and text) types to use for learning/teaching of English.					
26	E-learning allows (or would allow) interactive communication between me and students/teachers.					
27	E-learning enables interactive communication among students to develop					

	their English.					
28	The communicative tools that E-learning provides are effective (email, message board, chat room, etc.).					
#	Statements (Social factors - the following statements in this section are about social factors such as family, friends/colleagues and how they might affect your readiness to use E-learning).	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
29	My family believes that using E-learning for learning English is a good idea. (Only students)					
30	My family encourages (or would encourage) me to use E-learning for learning English. (Only students)					
31	My family perceives that using E-learning is (or would) be safe for me to use (protection of personal information, images etc). (Only students)					
32	Overall, I think my family would like me to continue (or start) using E-learning. (Only students)					
33	My family sees E-learning as something that improves (or could improve) my performance in learning English. (Only students)					
34	In general, my family sees E-learning systems as something that is (or could be) useful for learning English. (Only students)					
35	My friends/colleagues encourage (or would encourage) me to use E-learning in my learning/teaching of English.					
36	My friends/colleagues help (or would help) me with E-learning when I need it.					
#	Statements (School Factors - the following statements in this section concern school factors such as providing equipment and school support that can or may have an impact on your readiness to use E-learning).	Strongly Disagree	Disagree	I do not Know	Agree	Strongly Agree
37	The school where I'm studying/teaching provides the necessary computer equipment for E-learning.					
38	The school where I'm studying/teaching provides the necessary internet connectivity for E-learning.					
39	In the school where I'm studying/teaching, the school management would allow me to use the school's facilities for E-learning.					
40	In the school where I'm studying/teaching, the school management would support my use of E-learning.					
41	In the school where I'm studying/teaching, an IT technician is available to provide					

	assistance when I need help.					
42	I think that the technical support in the school where I'm studying/teaching is good.					

بيانات أولية (هذا النوع من المعلومات سوف يساعد الباحث على دراسة الاختلافات الفردية بين الجنسين والفروق العمرية في التأثير على الجاهزية للتعليم الالكتروني).

- نوع المستجيب/ة
 1. معلم/ة
 2. طالب/ة
- الجنس
 1. ذكر
 2. انثي
- العمر.....
- اسم المدرسة.....

الاسئلة الاساسية (فيما يلي تجد عبارات تستخدم في قياس مدى جاهزية الطالب/المعلم لاستخدام التعليم الالكتروني لتعلم اللغة الانجليزية ، والمرجو منكم قراءة كل عبارة بدقة، ثم ابداء رأيكم وذلك باختيار ما يتفق مع وجهة نظركم).						
#	العبارات (الخبرات السابقة - العبارات التالية في هذا القسم معنية بالعوامل الشخصية بتحديد مدى خبراتك السابقة في استخدام التعليم الالكتروني وادواته)	لا	نعم			
1	يوجد لديه خبرة سابقة في استخدام الكمبيوتر					
2	يوجد لديه خبرة سابقة في استخدام الانترنت					
3	يوجد لديه خبرة سابقة في استخدام التعليم الالكتروني					
#	العبارات (المهارات الشخصية - العبارات التالية في هذا القسم معنية بالعوامل الشخصية بتحديد مدى مهاراتك الشخصية في استخدام التعليم الالكتروني وادواته)	لا توجد	منخفضة	متوسطة	عالية	عالية جدا
4	استخدام الكمبيوتر					
5	استخدام الانترنت					
6	استخدام التعليم الالكتروني لتعلم اللغة الانجليزية دون مساعدة الاخرين					
7	استخدام التعليم الالكتروني لتعلم اللغة الإنجليزية حتى إذا لم يكن هناك شخص اخر يريني كيفية استخدامه					
8	استخدام التعليم الالكتروني لتعلم اللغة الإنجليزية حتى إذا لم استخدم مثل هذا النظام مسبقا					
#	العبارة (التدريب - العبارة التالية في هذا القسم تحدد إذا كنت قد تدربت أو لا لاستخدم التعليم الإلكتروني)	لا	نعم			
9	أنا مدرب(ة) على استخدام التعلم الإلكتروني للتعلم					
#	العبارات (ملكية الادوات المستخدمة للتعليم الالكتروني - العبارات التالية في هذا القسم معنية بالعوامل الشخصية بتحديد مدى ملكيتك للحاسب و الانترنت).	لا املك	بعض الاحيان		كل الوقت	
10	املك جهاز كمبيوتر لاستخدامه لاغراض التعليم الإلكتروني عندما احتاج اليه					
11	املك اتصال بالانترنت لاستخدامه لاغراض التعليم الإلكتروني عندما احتاج اليه					
#	البيانات (الرأي في استخدام التعلم الإلكتروني - البيانات التالية في هذا القسم تحديد موقفك، والدافع والتزام الوقت نحو استخدام التعلم الإلكتروني).	موافق بشدة	غير موافق بشدة	محايد	موافق	موافق بشدة

					استخدام التعليم الإلكتروني في تعلم اللغة الإنجليزية هي فكرة جيدة	12
					بشكل عام، احب استخدام التعليم الإلكتروني	13
					سوف اخصص بعض الوقت لاستخدام التعليم الإلكتروني لتعلم اللغة الإنجليزية	14
					بشكل عام، سوف يكون هناك الوقت الكافي بنسبة لي لاستخدام التعليم الإلكتروني من أجل تعلم اللغة الإنجليزية	15
					سوف استخدام التعليم الإلكتروني في تعلم اللغة الإنجليزية حتى إذا لم اكافأ لذلك	16
					البيانات (خصائص التعلم الإلكتروني - تعنى العبارات التالية في هذا القسم باستعمال التعلم الإلكتروني(سهولة الاستخدام وفائدته) ووظيفة التعلم الإلكتروني (المرونة والتفاعل) التي تعتقد أن لها تأثير على استعدادك لاستخدام التعليم الإلكتروني للغة الإنجليزية.)	#
موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة	التعامل مع التعليم الإلكتروني (أو قد يكون) واضحة ومفهومة بنسبة لي	17
					التعامل مع التعليم الإلكتروني لا (أو قد لا) يتطلب الكثير من الجهد العقلي بنسبة لي	18
					استخدام التعليم الإلكتروني في تعلم اللغة الإنجليزية (أو قد يكون) سهل بالنسبة لي	19
					بشكل عام، أعتقد أن التعليم الإلكتروني (أو سيكون) سهلة الاستخدام.	20
					استخدام التعليم الإلكتروني حسن (أو سوف يحسن) أداء تعلمي للغة الإنجليزية	21
					بشكل عام، أعتقد أن التعليم الإلكتروني (أو سيكون) مفيدة لتعلم اللغة الإنجليزية	22
					التعليم الإلكتروني يوفر (أو سيقدم) لي المرونة في تعلم اللغة الإنجليزية، فيما يتعلق بالزمان والمكان	23
					التعليم الإلكتروني يعطيني (أو سيعطيني) القدرة/السيطرة على أنشطة التعلم للغة الإنجليزية	24
					التعليم الإلكتروني يوفر الوسائط المتعددة (الصوت والفيديو والنص) لاستخدامها في تعلم اللغة الإنجليزية	25
					التعليم الإلكتروني يسمح (أو سيسمح) بالتفاعل بيني وبين الطلاب / المعلمين	26
					التعليم الإلكتروني يتيح التفاعل بين الطلاب لتطوير مهاراتهم في اللغة الإنجليزية	27
					الأدوات التواصل التي يوفرها التعليم الإلكتروني فعالة لتعلم اللغة الإنجليزية، مثل (البريد الإلكتروني، غرف الدردشة، وغيرها)	28
موافق بشدة	موافق	محايد	غير موافق	غير موافق بشدة	البيانات (العوامل الاجتماعية - البيانات التالية في هذا القسم تتعلق بالعوامل الاجتماعية مثل الأسرة والأصدقاء / الزملاء وكيف يمكن أن تؤثر على استعدادك لاستخدام التعلم الإلكتروني.)	#
					والدي/والدتي يعتقدون أن استخدام التعليم الإلكتروني لتعلم اللغة الإنجليزية فكرة جيدة	29
					والدي/والدتي يشجعونني (أو سوف يشجعونني) لاستخدام التعليم الإلكتروني لتعلم اللغة الإنجليزية	30
					والدي/والدتي يعتبرون ان استخدام التعليم الإلكتروني (أو قد يكون) أمن بالنسبة لي كي استخدامه (حماية المعلومات الشخصية والصور وغيرها)	31
					عموما، أعتقد أن والدي/والدتي لا يمانعون في المواصله (أو بداية) في استخدام التعليم الإلكتروني	32
					والدي/والدتي يرون ان التعليم الإلكتروني حسن (أو يمكن	33

					أن يحسن) أداني في تعلم اللغة الإنجليزية	
					بشكل عام، يرى والدي/والدي أن التعليم الإلكتروني (أو يمكن أن يكون) مفيدة لتعلم اللغة الإنجليزية	34
					أصدقائي/زملائي يشجعوني (أو سيشجعوني) لاستخدام التعليم الإلكتروني في تعلم اللغة الإنجليزية	35
					أصدقائي/زملائي يساعدوني (أو سوف يساعدوني) في استخدام التعليم الإلكتروني عندما احتاج ذلك	36
					البيانات (العوامل المدرسية - البيانات التالية في هذا القسم تتعلق بالعوامل المدرسية مثل توفير المعدات والدعم المدرسي الذي يمكن أن يكون أو قد يكون له تأثير على استعدادك لاستخدام التعلم الإلكتروني).	#
موافق بشدة	موافق	لا اعلم	غير موافق	غير موافق بشدة	المدرسة التي أدرس فيها توفر أجهزة الحاسوب اللازمة لاستخدامها في التعليم الإلكتروني	37
					المدرسة التي أدرس فيها توفر الاتصال بشبكة الإنترنت الضروري لاستخدامها في التعليم الإلكتروني	38
					المدرسة التي ادرس فيها، إدارة المدرسة تسمح لي باستخدام معمل الحاسب الآلي لاستخدام التعليم الإلكتروني	39
					المدرسة التي ادرس فيها، إدارة المدرسة سوف تدعمني لاستخدام التعليم الإلكتروني	40
					المدرسة التي أدرس فيها، فني تكنولوجيا المعلومات متاح لتقديم المساعدة عندما احتاج إلى مساعدة	41
					أعتقد أن الدعم التقني/الفني في المدرسة التي أدرس فيها جيد	42

Appendix C: Information sheet and consent form - English and Arabic versions

Information Sheet and Consent Form – Group interview (English)

Ibrahim Mutambik
Edinburgh University – UK
s1269207@inf.ed.ac.uk

Dear Teacher/Student

I am **Ibrahim Mutambik**, a PhD student in Informatics under the supervision of Prof. John Lee and Dr Yvonne Foley at the University of Edinburgh.

I would like to invite you to participate in a group interview which takes between 45 min to an hour. The interview is for the purposes of a doctoral research which aims to explore the readiness of students and English teachers to use of E-learning in Saudi schools, and in particular in the learning and teaching of English. This study will evaluate the extent of high school students' and English teachers' readiness to use E-learning. To this end, this study will explore the internal and external factors which are related to the readiness of teachers and students who will involve in the use of information and communications technology to teach and learn English. The results of the research study will offer insights into how to proceed with the integration of E-learning into Saudi schools.

All the information provided by you will be recorded by a digital device and later transcribed. All information provided will be kept confidentially, and the data will be anonymized. The data will also only be used for the purposes of this research and all the information will be destroyed when the PhD study is finished. Also you are free to withdraw your consent to participate at any time before the data is analysed without penalty.

I would be grateful to you if you could consent to participate in this research by signing and returning this form.

Thank you.

Name of participant:
Phone number:
Signature:

المعلومات عن البحث ونموذج الموافقة – المقابلات الجماعية (عربي)

ابراهيم متتمبك
جامعة ادنبره – بريطانيا
s1269207@inf.ed.ac.uk

حضرة المعلم(ة)/الطالب(ة)

هذا ابراهيم متتمبك، طالب دكتوراه في كلية المعلوماتية في جامعة ادنبره تحت إشراف البروفيسور جون لي، الدكتورة ايفون فولي. وأود أن أدعوك للمشاركة في مقابلات جماعية والتي ستكون لمدة 45 دقيقة الى الساعة. هذه المقابلات لغرض بحث الدكتوراه الذي يهدف إلى استكشاف مدى استعداد طلاب/طالبات ومدرسي/مدرسات اللغة الإنجليزية إلى استخدام التعلم الإلكتروني في المدارس السعودية، وعلى وجه الخصوص في التعلم والتعليم في اللغة الإنجليزية. هذه الدراسة سوف تقييم مدى استعداد طلاب/طالبات المدارس الثانوية والمعلمي/معلمات اللغة الإنجليزية لاستخدام الكمبيوتر للتعلم الإلكتروني. ولهذه الغاية، سوف تقوم هذه الدراسة اكتشاف العوامل الشخصية والخارجية مثل العوامل المدرسية، وعوامل التعلم الإلكتروني والعوامل الاجتماعية. نتائج دراسة بحثية سوف تقدم رؤى في كيفية المضي قدما في دمج التعلم الإلكتروني في المدارس السعودية. جميع المعلومات المقدمة منكم ستبقى سرية، ولن تستخدم إلا لأغراض البحث. وسيتم تدمير كافة المعلومات عند الانتهاء من دراسة الدكتوراه. أيضا لكم حر في سحب الموافقة في أي وقت. وسأكون ممتنا لك إذا كنت يمكن أن توافق بمشاركة في هذا البحث من خلال وبداء الاستبيان. شكرا.

اسم المشارك:
رقم الجوال:
التوقيع:

Information Sheet and Consent Form – Questionnaire (English)

Ibrahim Mutambik
Edinburgh University – UK
s1269207@inf.ed.ac.uk

Dear Parent

I am **Ibrahim Mutambik**, a PhD student in Informatics under the supervision of Prof John Lee, and Dr Yvonne Foley at the University of Edinburgh.

I would like to invite your child to participate in a questionnaire for a purpose of doctoral research which aims to explore the readiness of students to use of E-learning in Saudi schools, and in particular in the learning of English. This study will evaluate the extent of high school students' readiness to use E-learning. To this end, this study will evaluate the internal (personal) and external (in-school, E-learning characteristics and social) factors which are related to the readiness of students who will involve in the use of information and communications technology to learn English. The results of the research study will offer insights into how to proceed with the integration of E-learning into Saudi schools.

All the information provided by your child will be anonymized and kept in confidence. Data will also be used solely for purposes of the research and all the information will be destroyed when the PhD study is finished. Also your child is free to withdraw consent to participate at any time before the data is analysed without penalty.

I would be grateful to you if you could consent that your child can participate in this research by signing and returning this form.

Thank you.

Name of participant:

Signature:

المعلومات عن البحث ونموذج الموافقة - الاستبيان (عربي)

ابراهيم متتمبك
جامعة ادنبره – بريطانيا
s1269207@inf.ed.ac.uk

ولي امر الطالب(ة)

هذا ابراهيم متتمبك، طالب دكتوراه في كلية المعلوماتية في جامعة ادنبره تحت إشراف البروفيسور جون لي، الدكتورة ايفون فولي. وأود أن أدعو ابنكم للمشاركة في استبيان لغرض بحث الدكتوراه الذي يهدف إلى استكشاف مدى استعداد طلاب إلى استخدام التعلم الإلكتروني في المدارس السعودية، وعلى وجه الخصوص في التعلم اللغة الإنجليزية. هذه الدراسة سوف تقييم مدى استعداد طلاب المدارس الثانوية لاستخدام الكمبيوتر للتعلم الإلكتروني. ولهذه الغاية، سوف تقوم هذه الدراسة بتقييم العوامل الشخصية والخارجية مثل العوامل المدرسية، وعوامل التعلم الإلكتروني والعوامل الاجتماعية. نتائج دراسة بحثية سوف تقدم رؤى في كيفية المضي قدما في دمج التعلم الإلكتروني في المدارس السعودية. جميع المعلومات المقدمة من ابنكم سنبقى سرية، ولن تستخدم إلا لأغراض البحث. وسيتم تدمير كافة المعلومات عند الانتهاء من دراسة الدكتوراه. أيضا ابنكم حر في سحب الموافقة في أي وقت دون عقوبة. وسأكون ممتنا لك إذا كنت يمكن أن توافق أن ابنكم في المشاركة في هذا البحث من خلال التوقيع واعادة هذا النموذج الى المدرسة. شكرا.

اسم المشارك.....
التوقيع.....

Information Sheet and Consent Form – Questionnaire (English version)

Ibrahim Mutambik
Edinburgh University – UK
s1269207@inf.ed.ac.uk

Dear Teacher

I am **Ibrahim Mutambik**, a PhD student in Informatics under the supervision of Prof John Lee, and Dr Yvonne Foley at the University of Edinburgh.

I would like to invite you to participate in a questionnaire for a purpose of doctoral research which aims to explore the readiness of English teachers to use of E-learning in Saudi schools, and in particular in the learning and teaching of English. This study will evaluate the extent of English teachers' readiness to use E-learning. To this end, this study will evaluate the internal (personal) and external (in-school, E-learning characteristics and social) factors which are related to the readiness of teachers who will in the use of information and communications technology to teach English. The results of the research study will offer insights into how to proceed with the integration of E-learning into Saudi schools.

All the information provided by you will be kept confidential, data will be anonymised and it will only be used for research purposes. All the information will be destroyed when the PhD study is finished. Also you are free to withdraw your consent to participate at any time before the data is analysed without penalty.

I would be grateful to you if you could consent to participate in this research by signing and returning this form.

Thank you.

Name of participant:

Signature:

المعلومات عن البحث ونموذج الموافقة – الاستبيان (عربي)

ابراهيم متتمبك
جامعة ادنبره – بريطانيا
s1269207@inf.ed.ac.uk

حضرة المعلم/المعلمة

هذا ابراهيم متتمبك، طالب دكتوراه في كلية المعلوماتية في جامعة ادنبره تحت إشراف البروفيسور جون لي، الدكتورة ابفون فولي. وأود أن أدعوكم للمشاركة في استبيان لغرض بحث الدكتوراه الذي يهدف إلى استكشاف مدى استعداد مدرسي/مدرسات اللغة الإنجليزية إلى استخدام التعلم الإلكتروني في المدارس السعودية، وعلى وجه الخصوص في التعلم والتعليم في اللغة الإنجليزية. هذه الدراسة سوف تقيم مدى استعداد المعلمي/معلمات اللغة الإنجليزية لاستخدام الكمبيوتر للتعلم الإلكتروني. ولهذه الغاية، سوف تقوم هذه الدراسة بتقييم العوامل الشخصية والخارجية مثل العوامل المدرسية، وعوامل التعلم الإلكتروني والعوامل الاجتماعية. نتائج دراسة بحثية سوف تقدم رؤى في كيفية المضي قدما في دمج التعلم الإلكتروني في المدارس السعودية. جميع المعلومات المقدمة منكم ستبقى سرية، ولن تستخدم إلا لأغراض البحث. وسيتم تدمير كافة المعلومات عند الانتهاء من دراسة الدكتوراه. أيضا لكم حر في سحب الموافقة في أي وقت. وسأكون ممتنا لك إذا كنت يمكن أن توافق بمشاركة في هذا البحث من خلال وبدء الاستبيان. شكرا.

اسم المشارك:

التوقيع:

Information Sheet and Consent Form – Individual interview (English)

Ibrahim Mutambik
Edinburgh University – UK
s1269207@inf.ed.ac.uk

Dear Participant

I am Ibrahim Mutambik, a PhD student in Informatics school at the University of Edinburgh; my supervisors are Prof John Lee and Dr Yvonne Foley.

I would like to invite you to participate in an interview for a purpose of doctoral research, which aims to explore the readiness of students and English teachers to use of E-learning in Saudi schools, in particular in the learning and teaching of English. This study will evaluate the extent of high school students' and English teachers' readiness to use E-learning. The results of the research study will offer insights into how to proceed with using E-learning in Saudi schools.

All the information provided by you will be confidential; all data will be anonymised and only be used for research purposes after which it will be destroyed. You are free to withdraw your consent at any time without giving reasons.

I would be grateful to you if you could consent to participate in this research by signing and returning this form.

Thank you.

Name of participant:

Signature:

المعلومات عن البحث ونموذج الموافقة – المقابلة فردية (عربي)

ابراهيم متتميك
جامعة ادنبره – بريطانيا
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عزيزي المشارك

أنا إبراهيم متتميك، طالب دكتوراه في مدرسة المعلوماتية في جامعة أدنبره؛ المشرفون هم البروفسور جون لي والدكتورة إيفون فولي. أود أن أدعوك للمشاركة في مقابلة لغرض أبحاث الدكتوراه، والتي تهدف إلى استكشاف استعداد الطلاب ومدرسي اللغة الإنجليزية لاستخدام التعلم الإلكتروني في المدارس السعودية، وخاصة في تعلم وتدريب اللغة الإنجليزية. ستقوم هذه الدراسة بتقييم مدى استعداد طلاب المدارس الثانوية ومعلمي اللغة الإنجليزية لاستخدام الكمبيوتر في التعلم الإلكتروني. ستقدم نتائج الدراسة البحثية نظرة ثاقبة حول كيفية الاستمرار في استخدام التعلم الإلكتروني في المدارس السعودية. جميع المعلومات التي قدمتها ستكون سرية. ستكون جميع البيانات مجهولة المصدر وتستخدم فقط لأغراض البحث وبعد ذلك سيتم تدميرها. أنت حر في سحب موافقتك في أي وقت دون إبداء الأسباب. سأكون ممتناً لك إذا أمكنك الموافقة على المشاركة في هذا البحث من خلال التوقيع على هذا النموذج وإعادته.

شكراً لكم.

اسم المشترك:

التوقيع:

Appendix D: Comparative analysis between online and hardcopy respondents

I have enough skills to use the computer				
Groups	No/low skill	Average to very high skill	Total	χ^2 (df), <i>p</i>
Hardcopy	97 (21.8%)	347 (78.2%)	444 (100.0%)	2.0 (df1), n.s.
Online	40 (27.6%)	105 (72.4%)	145 (100.0%)	
I have enough skills to use the internet				
Groups	No/low skill	Average to very high skill	Total	χ^2 (df), <i>p</i>
Hardcopy	80 (18.0%)	364 (82.0%)	444 (100.0%)	0.8 (df1), n.s.
Online	31 (21.4%)	114 (78.6%)	145 (100.0%)	
I am skilled enough to use E-learning in my learning/teaching of English without help				
Groups	No/low skill	Average to very high skill	Total	χ^2 (df), <i>p</i>
Hardcopy	230 (51.8%)	214 (48.2%)	444 (100.0%)	0.7 (df1), n.s.
Online	81 (55.9%)	64 (44.1%)	145 (100.0%)	
I am skilled enough to use E-learning in my learning/teaching of English even if there is no one around to show me how to use it				
Groups	No/low skill	Average to very high skill	Total	χ^2 (df), <i>p</i>
Hardcopy	239 (53.8%)	205 (46.2%)	444 (100.0%)	0.0 (df1), n.s.
Online	78 (53.8%)	67 (46.2%)	145 (100.0%)	
I am skilled enough to use E-learning in my learning/teaching of English even if I have not used such a system before				
Groups	No/low skill	Average to very high skill	Total	χ^2 (df), <i>p</i>
Hardcopy	252 (56.8%)	192 (43.2%)	444 (100.0%)	0.3 (df1), n.s.
Online	86 (59.3%)	59 (40.7%)	145 (100.0%)	
In my home I have a computer to use for E-learning whenever I need it				
Groups	Without access	With access	Total	χ^2 (df), <i>p</i>
Hardcopy	107 (24.1%)	337 (75.9%)	444 (100.0%)	0.1 (df1), n.s.
Online	37 (25.5%)	108 (74.5%)	145 (100.0%)	
In my home I have internet connection to use for E-learning whenever I need it				
Groups	Without access	With access	Total	χ^2 (df), <i>p</i>
Hardcopy	74 (16.7%)	370 (83.3%)	444 (100.0%)	0.2 (df1), n.s.
Online	22 (15.2%)	123 (84.8%)	145 (100.0%)	

Using E-learning in learning/teaching English is a good idea				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	125 (28.2%)	319 (71.8%)	444 (100.0%)	0.2 (df1), n.s.
Online	38 (26.2%)	107 (73.8%)	145 (100.0%)	
Overall, I like using E-learning				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	154 (34.7%)	290 (65.3%)	444 (100.0%)	0.4 (df1), n.s.
Online	46 (31.7%)	99 (68.3%)	145 (100.0%)	
I would devote some time to use E-learning for my learning/teaching of English				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	112 (25.2%)	332 (74.8%)	444 (100.0%)	1.1 (df1), n.s.
Online	43 (29.7%)	102 (70.3%)	145 (100.0%)	
In general, I would have available time to use E-learning for my learning/teaching of English				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	127 (28.6%)	317 (71.4%)	444 (100.0%)	0.0 (df1), n.s.
Online	42 (29.0%)	103 (71.0%)	145 (100.0%)	
I would use E-learning in my learning/teaching of English even if I were not rewarded for it				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	156 (35.1%)	288 (64.9%)	444 (100.0%)	0.0 (df1), n.s.
Online	50 (34.5%)	95 (65.5%)	145 (100.0%)	
Interacting with E-learning systems is (or would be) clear and understandable				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	171 (38.5%)	273 (61.5%)	444 (100.0%)	0.0 (df1), n.s.
Online	55 (37.9%)	90 (62.1%)	145 (100.0%)	
Interacting with E-learning does not (or would not) require a lot of my mental effort				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	211 (47.5%)	233 (52.5%)	444 (100.0%)	0.5 (df1), n.s.
Online	64 (44.1%)	81 (55.9%)	145 (100.0%)	
Using E-learning in my learning/teaching of English is (or would be) easy for me				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	163 (36.7%)	281 (63.3%)	444 (100.0%)	0.1 (df1), n.s.
Online	56 (38.6%)	89 (61.4%)	145 (100.0%)	

Overall, I believe that E-learning is (or would be) easy to use				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	135 (30.4%)	309 (69.6%)	444 (100.0%)	0.0 (df1), n.s.
Online	44 (30.3%)	101 (69.7%)	145 (100.0%)	
Using an E-learning system improves (or would improve) my learning/teaching performance of English				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	116 (26.1%)	328 (73.9%)	444 (100.0%)	0.0 (df1), n.s.
Online	39 (26.9%)	106 (73.1%)	145 (100.0%)	
In general, I think an E-learning system is (or would be) useful in my learning/teaching of English				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	108 (24.3%)	336 (75.7%)	444 (100.0%)	0.0 (df1), n.s.
Online	36 (24.8%)	109 (75.2%)	145 (100.0%)	
E-learning offers (or would offer) me flexibility in learning/teaching with respect to time and place				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	117 (26.4%)	327 (73.6%)	444 (100.0%)	0.0 (df1), n.s.
Online	40 (27.6%)	105 (72.4%)	145 (100.0%)	
E-learning offers (or would offer) me control over learning/teaching activity				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	164 (36.9%)	280 (63.1%)	444 (100.0%)	0.3 (df1), n.s.
Online	57 (39.3%)	88 (60.7%)	145 (100.0%)	
E-learning offers multimedia (audio, video, and text) types to use for learning/teaching of English				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	94 (21.2%)	350 (78.8%)	444 (100.0%)	0.2 (df1), n.s.
Online	28 (19.3%)	117 (80.7%)	145 (100.0%)	
E-learning allows (or would allow) interactive communication between me and students/teachers				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	108 (24.3%)	336 (75.7%)	444 (100.0%)	0.3 (df1), n.s.
Online	32 (22.1%)	113 (77.9%)	145 (100.0%)	
E-learning enables interactive communication among students to develop their English				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	125 (28.2%)	319 (71.8%)	444 (100.0%)	0.8 (df1), n.s.
Online	35	110	145	

	(24.1%)	(75.9%)	(100.0%)	
The communicative tools that E-learning provides are effective (email, message board, chat room, etc.)				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	123 (27.7%)	321 (72.3%)	444 (100.0%)	2.3 (df1), n.s.
Online	31 (21.4%)	114 (78.6%)	145 (100.0%)	
My family believes that using E-learning for learning English is a good idea				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	118 (43.7%)	152 (56.3%)	270 (100.0%)	0.6 (df1), n.s.
Online	42 (39.3%)	65 (60.7%)	107 (100.0%)	
My family encourages (or would encourage) me to use E-learning for learning English				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	107 (39.6%)	163 (60.4%)	270 (100.0%)	0.5 (df1), n.s.
Online	38 (35.5%)	69 (64.5%)	107 (100.0%)	
My family perceives that using E-learning is (or would) be safe for me to use (protection of personal information, images etc)				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	152 (56.3%)	118 (43.7%)	270 (100.0%)	1.1 (df1), n.s.
Online	54 (50.5%)	53 (49.5%)	107 (100.0%)	
Overall, I think my family would like me to continue (or start) using E-learning				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	106 (39.3%)	164 (60.7%)	270 (100.0%)	1.0 (df1), n.s.
Online	48 (44.9%)	59 (55.1%)	107 (100.0%)	
My family sees E-learning as something that improves (or could improve) my performance in learning English				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	109 (40.4%)	161 (59.6%)	270 (100.0%)	0.1 (df1), n.s.
Online	41 (38.3%)	66 (61.7%)	107 (100.0%)	
In general, my family sees E-learning systems as something that is (or could be) useful for learning English				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	115 (42.6%)	155 (57.4%)	270 (100.0%)	0.9 (df1), n.s.
Online	40 (37.4%)	67 (62.6%)	107 (100.0%)	
My friends/colleagues encourage (or would encourage) me to use E-learning in my learning/teaching of English				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	139 (31.3%)	305 (68.7%)	444 (100.0%)	3.3 (df1), n.s.

Online	34 (23.4%)	111 (76.6%)	145 (100.0%)	
My friends/colleagues help (or would help) me with E-learning when I need it				
Groups	Disagreement/ Neutral	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	157 (35.4%)	287 (64.6%)	444 (100.0%)	3.0 (df1), n.s.
Online	40 (27.6%)	105 (72.4%)	145 (100.0%)	
The school where I'm studying/teaching provides the necessary computer equipment for E-learning				
Groups	Disagreement/ I Do not Know	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	240 (54.1%)	204 (45.9%)	444 (100.0%)	0.0 (df1), n.s.
Online	78 (53.8%)	67 (46.2%)	145 (100.0%)	
The school where I'm studying/teaching provides the necessary internet connectivity for E-learning				
Groups	Disagreement/ I Do not Know	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	269 (60.6%)	175 (39.4%)	444 (100.0%)	0.2 (df1), n.s.
Online	91 (62.8%)	54 (37.2%)	145 (100.0%)	
In the school where I'm studying/teaching, the school management would allow me to use the school's facilities for E-learning				
Groups	Disagreement/ I Do not Know	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	196 (44.1%)	248 (55.9%)	444 (100.0%)	0.5 (df1), n.s.
Online	69 (47.6%)	76 (52.4%)	145 (100.0%)	
In the school where I'm studying/teaching, the school management would support my use of E-learning				
Groups	Disagreement/ I Do not Know	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	228 (51.4%)	216 (48.6%)	444 (100.0%)	0.3 (df1), n.s.
Online	78 (53.8%)	67 (46.2%)	145 (100.0%)	
In the school where I'm studying/teaching, an IT technician is available to provide assistance when I need help				
Groups	Disagreement/ I Do not Know	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	282 (63.5%)	162 (36.5%)	444 (100.0%)	0.3 (df1), n.s.
Online	96 (66.2%)	49 (33.8%)	145 (100.0%)	
I think that the technical support in the school where I'm studying/teaching is good				
Groups	Disagreement/ I Do not Know	Agreement	Total	χ^2 (df), <i>p</i>
Hardcopy	284 (64.0%)	160 (36.0%)	444 (100.0%)	0.5 (df1), n.s.
Online	88 (60.7%)	57 (39.3%)	145 (100.0%)	

Appendix E: Statistical analysis

Chi-square

Chi-square is the most widely used non-parametric test to compare patterns of frequencies or responses testing the statistical significance of results in bivariate tables (Alosaimi 2013). It compares frequency distributions to see whether the patterns of respondents differ statistically. Being non-parametric, it does not rely on assumptions such as having a normal distribution (Field 2013). In addition, it is important that none of the frequencies of each category falls too low. In the present study, a minimum value 5%, whichever is more critical, were used to limit on all categories (Field 2013). When a value was below the minimum, data grouping was employed in order to avoid any chance that the calculation of chi-square may occasionally produce inflated results which may lead to wrong interpretations. The degrees of freedom therefore drop accordingly. The strict definition of degrees of freedom is the number of items of data that have to be known to know everything, assuming sample totals are known. In the case of chi-square where there is a five by two table, four frequency totals have to be known, for all ten categories to be known. This method is statistically illustrated in Table E1 below.

Table E1: Example of chi-square calculation

Group	degree of freedom (df)	Frequency distribution					Total	Expected Frequencies and Calculations				
		SD	D	N	A	SA		SD	D	N	A	SA
Male	df4	11	7	20	81	61	180	13	11	33	83	40
Female		16	15	50	93	23	197	14	11	37	91	44
		27	22	70	174	84	377	17.77	16.24			
Chi-square result = 34.0												
Male	df3		18	20	81	61	180		23	33	83	40
Female			31	50	93	23	197		26	37	91	44
			49	70	174	84	377	17.57	16.05			
Chi-square result = 33.6												

The **degree of freedom** (df) must be stated for any calculated chi-square value. The value of the degree of freedom for any analysis is obtained from the following calculations:

$$df = (r-1) \times (c-1)$$

Where r is the number of rows, and c is the number of columns in the contingency table.

The **expected frequencies** (ef) is calculated as follows: e.g. $(180/377) * 27 = 13$. This calculation applies to the other each categories.

The **chi-square value** is calculated as follows: e.g. $[(11-13)^2/13 + (7-11)^2/11 + (20-33)^2/33 + (81-83)^2/83 + (61-40)^2/40] + [(16-14)^2/14 + (15-11)^2/11 + (50-37)^2/37 + (93-91)^2/91 + (23-44)^2/44] = 34.0$

Both chi-square value and degree of freedom are used to determine *p* value, in which case when the chi-square value is 34.0 and the df is 4, the *p* is less than 0.001. Table E2 below illustrates the critical values for chi-square:

Table E2: critical values for chi-square

df	Probability Values		
	p = 0.05	p = 0.01	p = 0.001
	Chi-square value		
1	3.84	6.64	10.83
2	5.99	9.21	13.82
3	7.82	11.35	16.27
4	9.49	13.28	18.47
5	11.07	15.09	20.52
6	12.59	16.81	22.46
7	14.07	18.48	24.32
8	15.51	20.09	26.13
9	16.92	21.67	27.88
10	18.31	23.21	29.59
11	19.68	24.73	31.26
12	21.03	26.22	32.91
13	22.36	27.69	34.53
14	23.69	29.14	36.12
15	25.00	30.58	37.70

It is worth to note here that, in saying that a chi-square value is significant indicates the probability that the differences between the two frequencies arose by chance is extremely low: i.e. less than 5%, 1%, or 0.1 %.

Pearson's correlation coefficient

Correlation, as a statistical technique, is a means of exploring the relationship between two variables. It indicates whether the variables are associated. It does not indicate cause-and-effect, nor does it indicate whether one variable depends in some way on the other. It merely reveals the extent to which high values in one variable tend to be associated with high values in another (Field 2013).

Statistics has developed three main ways to compute a correlation coefficient – a single number that indicates extent of association. The three ways are designed to handle three different kinds of variables:

- Pearson's correlation coefficient: integer data approximately normally distributed
- Spearman correlation: integer data (usually), with no specified distribution
- Kendall's Tau-b correlation: ordinal data, with no specified distribution

All three methods have been designed to give a correlation coefficient (r) which is a number that indicates the extent of association:

- $r > 0$ positive association (high in one variable associates with high in the other);
- $r = 0$ no association;
- $r < 0$ negative association (high in one variable associates with low in the other) (Field 2013).

The maximum value is +1 and the minimum is -1. The computer software indicates the likelihood of the value of the correlation coefficient arising by chance. With a large sample, quite a small value for the correlation coefficient can arise not simply by chance. The probability is always express in terms of $p < 0.05$, $p < 0.01$ and $p < 0.001$. These are derived from an analysis of the normal distribution and relate to standard deviations (Field 2013). As a rule of thumb, Cohen (1988, 1992) has also made some widely used suggestions about what constitutes a large or small correlation: $r = 0.10$ (small), $r = 0.30$ (medium), and $r = 0.50$ (large).

In the case of the present research, all the correlations between the underlying factors of readiness were assessed based on the factors scores produced by EFA as explained in Section 6.3.1.3. Due to the continuous nature of the factor scores, and the scores were approximately normally distributed and there were no extreme outliers, Pearson's correlation coefficient was therefore deemed to be the most appropriate method of assessing the correlations.

***t*-Test**

Basically, the use of *t*-test allows for a comparison of the means of two sets of data in order to determine whether they are significantly different (Alenezi, 2008). The fundamental assumption underlying the use of *t*-test is that data (interval or ratio) has an approximately normal distribution (Cohen et al., 2010). The main types of *t*-test are: the independent sample *t*-test and the paired sample *t*-test. The independent sample *t*-test is very widely used to compare the mean scores of two different groups, while the latter is used to make a comparison of the mean scores of the same group at two different times (Alenezi, 2008). The independent *t*-test also assumes that one variable is categorical – that is, male and female in the case of this study; while the other variable is continuous – that is, the factor scores for each underlying factor of E-learning readiness. The above provides justification for the use of the independent samples *t*-test in this study.

Assumption of normality

As parametric tests, independent sample *t*-test and Pearson's correlation coefficient rely on the assumption that variables are approximately normal distribution (Field 2013). A normality test is utilised to define whether sample data has been extracted from a normally distributed population. Osborne and Waters (2002) have noted that, non-normally distributed variables are either highly skewed or kurtotic, and can distort relationships, significance tests as well as render the outcomes of the tests untrustworthy. In order to assess normality, researchers can use either graphical test (e.g. frequency histograms and P-P plots) or statistical test

(e.g. skewness and kurtosis scores) (see Hair et al. 2006). Skewness is “a measure of the symmetry of a frequency distribution” (Field 2013, p. 794). Kurtosis is a measure of “the flatness of the distribution” (Al-Harbi 2010, p. 113). In practical terms, for a distribution to be considered normal, its skewness and kurtosis values should close to zero, that is, within the range of ± 2 (West, Finch and Curran 1995; Brown 1997; West et al. 1995).

In order to assess the assumption of normality for all variables (that is, underlying factors of readiness in the present research) the skewness and kurtosis scores within the range of ± 2 was used in this research. The outcome as shown in the table E3 below, demonstrates both skewness and kurtosis values for all underlying factors of readiness were below the ± 2 cut off value recommended in the literature (West et al., 1995). This indicates that the data is normally distributed and suitable for conducting Independent sample *t*-test and Pearson’s correlation coefficient.

Table E3: Skewness and kurtosis values of the aggregated scores by genders and age for students and teachers

Skewness and kurtosis values by genders for students		
Factors	Kurtosis Statistic (male – female)	Skewness Statistic (male – female)
Personal drivers	(-0.045 – -0.250)	(-0.664 – -0.722)
Self-efficacy	(-0.404 – -0.107)	(0.531 – 0.435)
Personal access to tools	(-0.228 – -0.056)	(-0.419 – -0.913)
E-learning functionality	(1.802 – 0.146)	(-1.026 – -0.624)
E-learning usability	(1.080 – -1.058)	(-1.177 – -0.371)
Family support	(-0.351 – -0.554)	(-0.578 – -0.547)
Peer support	(-0.040 – -0.502)	(-0.802 – -0.466)
In-schools support	(-0.571 – -0.233)	(-0.253 – 0.552)
Skewness and kurtosis values by age group for students		
Factors	Kurtosis Statistic (younger – older)	Skewness Statistic (younger – older)
Personal drivers	(0.232 – 0.446)	(-0.824 – -1.069)
Self-efficacy	(-0.297 – -0.811)	(0.525 – 0.088)
Personal access to tools	(-0.332 – 0.451)	(-0.591 – -0.868)
E-learning functionality	(0.093 – -0.212)	(-0.599 – -0.773)
E-learning usability	(-0.575 – -0.559)	(-0.630 – -0.781)
Family support	(-0.755 – 0.727)	(-0.481 – -0.860)
Peer support	(0.325 – -1.034)	(-0.910 – 0.089)
In-schools support	(-0.970 – -0.810)	(0.110 – -0.141)
Skewness and kurtosis values by genders for teachers		
Factors	Kurtosis Statistic (male – female)	Skewness Statistic (male – female)
Personal drivers	(1.358 – 1.244)	(-1.053 – -1.502)
Self-efficacy	(-0.485 – -1.025)	(-0.351 – 0.104)
Personal access to tools	(-0.766 – -0.431)	(-0.253 – -0.403)
E-learning functionality	(0.679 – 0.927)	(-0.949 – -1.753)
E-learning usability	(1.326 – -0.212)	(-1.577 – -0.994)
Peer support	(-0.042 – -0.148)	(-1.067 – -0.953)
In-schools support	(-0.978 – -1.122)	(-0.094 – 0.592)
Skewness and kurtosis values by age group for students		
Factors	Kurtosis Statistic (younger – older)	Skewness Statistic (younger – older)
Personal drivers	(0.576 – 1.499)	(-1.031 – -1.385)
Self-efficacy	(-0.376 – -1.170)	(-.288 – -0.006)
Personal access to tools	(0.189 – -0.879)	(-.691 – 0.015)
E-learning functionality	(0.792 – 0.447)	(-1.241 – -0.155)
E-learning usability	(1.594 – 0.373)	(-1.389 – -1.201)

Peer support	(0.271 – -0.057)	(-1.122 – -0.953)
In-schools support	(-1.027 – -1.194)	(0.231 – 0.159)

Outlier

As parametric tests, independent sample *t*-test and Pearson’s correlation coefficient, outliers should be checked (Field 2013). Al-Harbi (2006, p.114) defined outlier as “case with an unusual extreme value”. There can be several causes of outliers, namely:

- flaws in the data input, which can be checked against the minimum and maximum values of the variable;
- Outlier cases may also not belong to the intended population, in which case, deleting them is the best solution;
- Outliers may have been correctly sampled, yet their presence indicates the real distribution of the variable under study. In this case, retaining the outliers is necessary unless they actually distort the statistics (Tabachnick and Fidell 2007).

The outliers for all underlying factors of readiness in this research were assessed using boxplots as graphical techniques. The outcome revealed 20 student cases and 18 teacher cases as outliers (Table E4 shows the outlier case numbers for each factors). A further assessment of these outliers showed that they are either strongly agree or disagree to statements on the questionnaire. Since this research is exploring students’ and teachers’ perceptions regarding their readiness to use E-learning, it is therefore normal to find some students and teachers with such extreme perceptions. However, Pallant (2007) cautions that in examining perceptions such outliers may reflect the real distribution of the variable. It was therefore considered prudent not to delete such outlier since their deletion may minimise the findings generalisability (Hair et al., 2006; Tabachnick and Fidell, 2007).

Table E4: Outlier case numbers for each factors

Factors	Groups	Cases
Students (male vs. female)		
Personal drivers	Male	None
	Female	None
Self-efficacy	Male	None
	Female	None
Personal access to tools	Male	None
	Female	None
E-learning Functionality	Male	None
	Female	None
E-learning usability	Male	302, 307, 309 and 311
	Female	None
In-school support	Male	None
	Female	196, 222, 268 and 293
Peer support	Male	None
	Female	None
Family support	Male	None

	Female	None
Students (younger vs. older)		
Personal drivers	Younger	None
	Older	317, 329 and 356
Self-efficacy	Younger	None
	Older	None
Personal access to tools	Younger	None
	Older	329
E-learning Functionality	Younger	11, 14, 56, 67 and 129
	Older	None
E-learning usability	Younger	None
	Older	None
In-school support	Younger	None
	Older	None
Peer support	Younger	173, 208, 230 and 259
	Older	None
Family support	Younger	None
	Older	None
Teachers (male vs. female)		
Personal drivers	Male	None
	Female	None
Self-efficacy	Male	None
	Female	None
Personal access to tools	Male	None
	Female	None
E-learning Functionality	Male	393, 438, 460 and 486
	Female	592 and 543
E-learning usability	Male	None
	Female	None
In-school support	Male	None
	Female	None
Peer support	Male	394, 439, 461 and 507
	Female	None
Teachers (younger vs. older)		
Personal drivers	Younger	None
	Older	None
Self-efficacy	Younger	None
	Older	None
Personal access to tools	Younger	None
	Older	None
E-learning Functionality	Younger	None
	Older	None
E-learning usability	Younger	None
	Older	None
In-school support	Younger	None
	Older	None
Peer support	Younger	393, 429, 438, 450, 460, 476, 486 and 507
	Older	None

Effect size

An effect size is particularly valuable for quantifying the effectiveness of a particular intervention, relative to some comparison (Coe 2002). It is simply defined as an objective and (usually) standardised measure of the magnitude of observed effect – quantifying the size of the difference between two groups (Feild 2013).

Cohen's d and Pearson's correlation coefficient are the most common proposed measures of effect size (Feild 2013). However, Cohen's d is usually favoured over Pearson's correlation coefficient when group sizes are very discrepant (Feild 2013). As a result, the Cohen's d was used in this research. As a rule of thumb about what constitutes a large or small effect size, Cohen (1988) has made some widely used suggestions that: $d = .20$ (small effect); $d = .50$ (medium effect); and $d = .80$ (large effect).

Appendix F: Overview of individual interview questions

Introduction

My name is Ibrahim Mutambik. I am a PhD student in Informatics School at the University of Edinburgh, United Kingdom. My research aims at getting your views on the readiness of students and teachers to use E-learning. The results of the research study will offer insights into how to proceed with using E-learning in Saudi schools. It is sponsored by Saudi MoE. The research involves interviews and each interview session will take between 1-2 hours maximum. You have stated in your consent form that it is ok to audio record. Can you confirm this again to me before we start the interview, please?

Questions for educational officials at the regional levels:

1. To use E-learning, for example, teachers and students need to be inclined to use such technology. Could you tell me about their attitudes toward E-learning, if they are motivated to use E-learning and if they are actually willing to commit time for E-learning usage.
2. My research shows that male students appear more inclined to use E-learning technologies than female students.
 - a. Are you aware of this as an issue of gender difference between male and female students?
 - b. In your opinion, why this difference?
 - c. Is there any plan to bridge this gap?
3. My research suggests variation in the skill to use E-learning of teachers to use E-learning – with a significant proportion of teachers lack E-learning skill.
 - a. Do you see this as a problem for implementing E-learning successfully?
 - b. Do you have strategies to change teacher skill for example in recruitment practices and/or teacher training?
4. My research suggests variation in the skill of students also to use E-learning – with a significant proportion of students lack E-learning skill/capability.
 - a. Do you see this as a problem for implementing E-learning successfully?
 - b. Do you have strategies to change student skill, for example, training or other strategies?
5. My research shows that male teachers appear more competent in the use of E-learning technologies than female teachers.
 - a. Are you aware of this as an issue of gender difference between male and female teachers?
 - b. Do you have plans to improve the skills of female teachers?
6. To use E-learning, for example, teachers and students need to have access to computer and internet at home since their some duties need to be carried out schools hours.
 - a. Do you think there any problem regarding the access at home for both male and female students and teachers?
 - b. My research shows that male students have more access than female students, are you aware of this as an issue of gender difference between male and female students in relation to computer and internet access at home?
 - c. Do you have plans to bridge this gap?
7. Can you tell me about the quality of school buildings in this region (Jazan). In particular are the girl's schools of the same quality as those for boys; and if there are differences, why is this the case.
8. Can you tell me about the quality of information and communications technologies in schools in this region (Jazan)? Is the quality of technology, technology support and pupil-computer ratio the same for boy's schools and girl's schools?

9. Why has this region (Jazan) adopted a policy of E-learning for teaching English as a foreign language?
 - (a) Did the MoE consult you or take your opinion about E-learning implementation, since you (as an educational supervisors) work directly with the teachers and students and have more idea about them and what they need?
10. Do you intend to adopt E-learning for other subjects such as math, chemistry and design?
11. It seems that some families constrain the home use of E-learning by girls – in relation of being on internet.
 - a. Are you aware of this?
 - b. Why do you think this might occur?
12. In your opinion, do you think Saudi society is ready to use to knowledge-based economy?

Questions for educational officials at the national levels:

1. To use E-learning, for example, teachers and students need to be inclined to uses such technology. Could you tell me about their attitudes toward E-learning, if there are motivated to use E-learning and if they are actually willing to commit time for E-learning usage.
2. My research shows that male students appear more inclined to use E-learning technologies than female students.
 - a. Are you aware of this as an issue of gender difference between male and female students?
 - b. In your opinion, why this difference?
 - c. Is there any plans to bridge this gap?
3. My research suggests variation in the skill to use E-learning) of teachers to use E-learning – with a significant proportion of teachers lack skill.
 - a. Do you see this as a problem for implementing E-learning successfully?
 - b. Do you have strategies to change teacher skill for example in recruitment practices and/or teacher training?
4. My research suggests variation in the skill of students also to use E-learning – with a significant proportion of students lack E-learning skill/capability.
 - a. Do you see this as a problem for implementing E-learning successfully?
 - b. Do you have strategies to change student skill, for example, training or other strategies?
5. My research shows that male teachers appear more competent in the use of E-learning technologies than female teachers.
 - a. Are you aware of this as an issue of gender difference between male and female teachers?
 - b. Do you have plans to improve the skills of female teachers?
6. To use E-learning, for example, teachers and students need to have access to computer and internet at home since their some duties need to be carried out schools hours.
 - a. Do you think there any problem regarding the access at home for both male and female students and teachers?
 - b. My research shows that male students have more access than female students, are you aware of this as an issue of gender difference between male and female students in relation to computer and internet access at home?
 - c. Do you have plans to bridge this gap?

7. Can you tell me how budgets are allocated between schools for girls and schools for boys? Are they equally resourced for example in the quality of buildings and information and communications technologies?
 - a. Do you have any plan to develop the schools that are under-resourced (especially girls' schools)?
8. Why has E-learning been adopted for teaching English language?
 - a. Did the MoE consult or take opinion of the educational supervisors about E-learning implementation, since they (educational supervisors) work directly with the teachers and students and have more idea about them and what they need?
9. Does the government intend to extend the use of E-learning to other subjects?
10. How would you describe the prevailing pedagogy used in Saudi Arabia's schools? For example, is there too much rote learning?
11. My research shows that some parents constrain their daughter's use of E-learning at home – in relation of being on internet.
 - a. Why do you think this might occur?
 - b. Does the government have a role in reassuring such parents that E-learning is a recommended teaching technique?
12. Can you tell me how the national curriculum is agreed in Saudi Arabia and what plans the government has to further modernise the curriculum.
13. Our country has a vision of creating a knowledge-based economy, diversifying from oil dependency. Does the Government believe that the current school curriculum and pedagogy supports this vision?

Questions for families:

1. Can you (parent) tell me about your own use of information and communications technologies; do you use computers at work, do you have a desktop or tablet computer at home?
2. Can you (parent) tell me about your children's own use of information and communications technologies – do they have a desktop or tablet computer at home?
3. Have you been informed by the school that they are going to implement an E-learning system (online) for teaching and learning EFL?
4. Can you tell me what is this family's attitude to your son/daughter learning English language using E-learning: what are your hopes and fears from using this method of learning?
5. How confident are you in your son/daughter's school's teaching of English language? Do you think they do a good job?
6. How confident are you in your son/daughter's school to provide the necessary computers and internet to use E-learning for EFL?
7. In some education systems E-learning is used in many subjects such as math, chemistry, design: would you be happy that the School extended the use of E-learning to subject other than English language? Can you give me your reasoning?

8. For this family what are the main issues associated with the school using E-learning? [Prompt: technical; religious; prefer face-to-face pedagogy].
9. Some people view dangers in using E-learning, especially the online aspect of it. Are these dangers more apparent for girls than boys?
10. Do you know of measures such as parental controls, log-scanning, public presence of computer that help protect young people from the dangers of being online?
11. Are the dangers facing young people from being online greater on a desktop computer than on a mobile phone or tablet?

Appendix G: Exploratory factor analysis results

Communalities for personal factors (personal drivers, self-efficacy and personal access to tools)

Communalities		
	Initial	Extraction
I have enough skills to use the computer	1.000	.626
I have enough skills to use the internet	1.000	.662
I am skilled enough to use E- learning in my learning/teaching of English without help	1.000	.790
I am skilled enough to use E- learning in my learning/teaching of English even if there is no one around to show me how to use it	1.000	.869
I am skilled enough to use E- learning in my learning/teaching of English even if I have not used such a system before	1.000	.805
In my home I have a computer to use for E-learning whenever I need it	1.000	.540
In my home I have internet connection to use for E-learning whenever I need it	1.000	.687
Using E-learning in learning/teaching English is a good idea	1.000	.656
Overall, I like using E-learning	1.000	.527
I would devote some time to use E-learning for my learning/teaching of English	1.000	.700
In general, I would have available time to use E-learning for my learning/teaching of English	1.000	.696
I would use E-learning in my learning/teaching of English even if I were not rewarded for it.	1.000	.705
Average of communalities		0.69
Extraction Method: Principal Component Analysis.		

Communalities for external factors (In-school factors, peer support factor, E-learning functionality and E-learning usability)

Communalities		
	Initial	Extraction
17. Interacting with E-learning systems is (or would be) clear and understandable.	1.000	.646
19. Using E-learning in my learning/teaching of English is (or would be) easy for me	1.000	.740
20. Overall, I believe that E-learning is (or would be) easy to use	1.000	.673
21. Using an E-learning system improves (or would improve) my learning/teaching performance of English	1.000	.672
22. In general, I think an E-learning system is (or would be) useful in my learning/teaching of English.	1.000	.625
23. E-learning offers (or would offer) me flexibility in learning/teaching with respect to time and place.	1.000	.665
24. E-learning offers (or would offer) me control over learning/teaching activity.	1.000	.696
25. E-learning offers multimedia (audio, video, and text) types to use for learning/teaching of English.	1.000	.674
26. E-learning allows (or would allow) interactive communication between me and students/teachers	1.000	.734
27. E-learning enables interactive communication among students to develop their English.	1.000	.687
28. The communicative tools that E-learning provides are effective (email, message board, chat room, etc.)	1.000	.678
35. My friends/colleagues encourage (or would encourage) me to use E-learning in my learning/teaching of English	1.000	.782
36. My friends/colleagues help (or would help) me with E-learning when I need it	1.000	.880
37. The school where I'm studying/teaching provides the necessary computer equipment for E-learning	1.000	.629
38. The school where I'm studying/teaching provides the necessary internet connectivity for E-learning	1.000	.720
39. In the school where I'm studying/teaching, the school management would allow me to use the school's facilities for E-learning	1.000	.670
40. In the school where I'm studying/teaching, the school management would support my use of E-learning	1.000	.679
41. In the school where I'm studying/teaching, an IT technician is available to provide assistance when I need help	1.000	.682
42. I think that the technical support in the school where I'm studying/teaching is good	1.000	.774
Average of communalities		.700
Extraction Method: Principal Component Analysis.		

Communalities for external factors (family support)

Communalities		
	Initial	Extraction
29. My family believes that using E-learning for learning English is a good idea	1.000	.850
30. My family encourages (or would encourage) me to use E-learning for learning English	1.000	.737
31. My family perceives that using E-learning is (or would) be safe for me to use (protection of personal information, images etc)	1.000	.499
32. Overall, I think my family would like me to continue (or start) using E-learning	1.000	.541
33. My family sees E-learning as something that improves (or could improve) my performance in learning English	1.000	.791
34. In general, my family sees E-learning systems as something that is (or could be) useful for learning English	1.000	.848
Average of communalities		.711
Extraction Method: Principal Component Analysis.		

Total variance explained for external factors (family support)

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.065	67.757	67.757	4.065	67.757	67.757
2	.731	12.191	79.948			
3	.573	9.545	89.493			
4	.335	5.588	95.082			
5	.151	2.513	97.594			
6	.144	2.406	100.000			
Extraction Method: Principal Component Analysis.						

Total variance explained for external factors (In-school factors, peer support factor, E-learning functionality and E-learning usability)

Total Variance Explained							
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6.669	35.101	35.101	6.669	35.101	35.101	5.271
2	3.194	16.809	51.910	3.194	16.809	51.910	4.032
3	1.392	7.325	59.235	1.392	7.325	59.235	5.218
4	1.252	6.589	65.824	1.252	6.589	65.824	2.558
5	.949	4.994	70.818				
6	.772	4.065	74.883				
7	.721	3.797	78.680				
8	.548	2.882	81.562				
9	.495	2.603	84.165				
10	.481	2.531	86.696				
11	.421	2.217	88.914				
12	.367	1.933	90.847				
13	.340	1.790	92.637				
14	.310	1.631	94.267				
15	.279	1.466	95.733				
16	.237	1.248	96.981				
17	.212	1.117	98.098				
18	.185	.976	99.074				
19	.176	.926	100.000				
Extraction Method: Principal Component Analysis.							
a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.							

Total variance explained for personal factors (personal drivers, self-efficacy and personal access to tools)

Total Variance Explained							
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	5.098	42.485	42.485	5.098	42.485	42.485	3.706
2	1.948	16.234	58.719	1.948	16.234	58.719	3.811
3	1.215	10.126	68.845	1.215	10.126	68.845	3.662
4	.839	6.989	75.834				
5	.669	5.579	81.413				
6	.506	4.219	85.632				
7	.394	3.285	88.917				
8	.373	3.109	92.026				
9	.329	2.742	94.768				
10	.283	2.358	97.126				
11	.220	1.834	98.960				
12	.125	1.040	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Appendix H: Exploratory factor analysis results – First result of external factors

Result of external Factors- Structure Matrix

Structure Matrix					
	Component				
	1	2	3	4	5
27. E-learning enables interactive communication among students to develop their English.	.821				
25. E-learning offers multimedia (audio, video, and text) types to use for learning/teaching of English.	.818				
26. E-learning allows (or would allow) interactive communication between me and students/teachers	.815				
28. The communicative tools that E-learning provides are effective (email, message board, chat room, etc.)	.756				
22. In general, I think an E-learning system is (or would be) useful in my learning/teaching of English.	.693		.690		
23. E-learning offers (or would offer) me flexibility in learning/teaching with respect to time and place.	.692				
42. I think that the technical support in the school where I'm studying/teaching is good		.884			
38. The school where I'm studying/teaching provides the necessary internet connectivity for E-learning		.821			
41. In the school where I'm studying/teaching, an IT technician is available to provide assistance when I need help		.781			
37. The school where I'm studying/teaching provides the necessary computer equipment for E-learning		.761			
40. In the school where I'm studying/teaching, the school management would support my use of E-learning		.729			
39. In the school where I'm studying/teaching, the school management would allow me to use the school's facilities for E-learning		.614			
19. Using E-learning in my learning/teaching of English is (or would be) easy for me			.852		
20. Overall, I believe that E-learning is (or would be) easy to use			.809		
17. Interacting with E-learning systems is (or would be) clear and understandable.			.792		
21. Using an E-learning system improves (or would improve) my learning/teaching performance of English			.737		
24. E-learning offers (or would offer) me control over learning/teaching activity.	.618		.695		
36. My friends/colleagues help (or would help) me with E-learning when I need it				.938	

35. My friends/colleagues encourage (or would encourage) me to use E-learning in my learning/teaching of English				.838	
18. Interacting with E-learning does not (or would not) require a lot of my mental effort					.807
Extraction Method: Principal Component Analysis.					
Rotation Method: Promax with Kaiser Normalization.					

Total variance explained for external factors (In-school factors, peer support factor, E-learning functionality and E-learning usability)

Total Variance Explained							
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6.830	34.152	34.152	6.830	34.152	34.152	5.256
2	3.196	15.978	50.130	3.196	15.978	50.130	4.002
3	1.394	6.972	57.103	1.394	6.972	57.103	5.335
4	1.280	6.401	63.503	1.280	6.401	63.503	2.473
5	1.016	5.079	68.582	1.016	5.079	68.582	2.362
6	.924	4.618	73.200				
7	.733	3.665	76.865				
8	.666	3.332	80.197				
9	.504	2.520	82.718				
10	.482	2.410	85.127				
11	.478	2.390	87.517				
12	.407	2.034	89.551				
13	.362	1.809	91.360				
14	.338	1.690	93.050				
15	.309	1.545	94.595				
16	.278	1.391	95.987				
17	.233	1.164	97.151				
18	.210	1.050	98.200				
19	.185	.927	99.127				
20	.175	.873	100.000				
Extraction Method: Principal Component Analysis.							
a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.							

Appendix I: cover letter and questionnaire questions with the response form of the content validity – Arabic version

Cover letter

عزيزي،

هذا هو إبراهيم منتميك. أعمل حالياً على رسالتي بعنوان "استكشاف استعداد الطلاب ومدرسي اللغة الإنجليزية لاستخدام التعلم الإلكتروني للغة الإنجليزية كلغة أجنبية في المملكة العربية السعودية"، والذي يشرف عليه البروفيسور جون لي والدكتورة ابفون فولي في جامعة أدنبره.

لقد تم اختيارك بناءً على خبرتك في مجال تنفيذ التعليم الإلكتروني في المملكة العربية السعودية من أجل تقييم صلاحية محتوى استبيان دراستي. تم تطوير الاستبيان لاستكشاف استعداد الطلاب ومدرسي اللغة الإنجليزية لاستخدام التعلم الإلكتروني في المدارس السعودية، وعلى وجه الخصوص في تعلم وتدرّس اللغة الإنجليزية. ستقوم هذه الدراسة بتقييم مدى استعداد طلاب المدارس الثانوية ومدرسي اللغة الإنجليزية لاستخدام التعلم الإلكتروني. تم استخدام بعض الأسئلة من استبيانات سابقة وأخري تم تطويره ذاتياً خصيصاً للدراسة الحالية. مطلوب خبراتك للتأكد من أن هذه العناصر مناسبة لقياس العوامل التي كتبت من أجلها. سوف توفر لك المعلومات الواردة أدناه تعليمات تصنيف عناصر الاستبيان. يرجى قراءة التعليمات بعناية قبل تصنيف العناصر.

سيتم أخذ اقتراحاتك في الاعتبار والتقدير قبل توزيع الاستبيان. من فضلك ، لا تتردد في مراسلتنا على البريد الإلكتروني لمزيد من الأسئلة (abrahim2005gxr@hotmail.com). يرجى بمجرد إكمال الاستمارة، إعادتها إلي عبر البريد الإلكتروني المذكور أعلاه. شكراً لك على الوقت والخبرات الخاصة بك.

بإخلاص،

إبراهيم منتميك

طالب دكتوراه

Response form

اسم :

التعليمات: تم تصميم هذا الاستبيان لتقييم صلاحية محتوى لاسنبيان تقيس جاهزية للتعلم الإلكتروني. من فضلك ، ضع علامة صح اذا كانت العبارة تمثل العامل الذي وضعت من اجله وعلامة خطأ اذا كانت العبارة لا تمثل العامل الذي وضعت من اجله وعلامة خطأ اذا كانت غير وضوحه. يرجى أي تعليق آخر.

يشير التمثيل: إلى ما إذا كانت الأسئلة تقيس العامل المقصود.

يشير الوضوح: إلى ما إذا كانت الأسئلة واضحة وخالية من الأخطاء

من فضلك، تقييم شمولية الاستبيان بالكامل من خلال الإشارة إلى الأسئلة التي ينبغي حذفها أو إضافتها.

شكرا لكم على وقتك وجهدك.

العبارة	التمثيل	الوضوح	تعليقات اخرى
#			الخبرة السابقة – العبارات التالية في إطار هذا العامل هي تحديد تجربة الطلاب والمعلمين في الكمبيوتر والإنترنت والتعلم الإلكتروني.
1			يوجد لديه خبرة سابقة في استخدام الكمبيوتر
2			يوجد لديه خبرة سابقة في استخدام الإنترنت
3			يوجد لديه خبرة سابقة في استخدام التعليم الإلكتروني
#			المهارات الشخصية – العبارات التالية تحت هذا العامل هي تحديد مهارات الطلاب والمعلمين في الكمبيوتر والإنترنت والتعلم الإلكتروني.
4			استخدام الكمبيوتر
5			استخدام الإنترنت
6			استخدام التعليم الإلكتروني لتعلم اللغة الإنجليزية دون مساعدة الآخرين
7			استخدام التعليم الإلكتروني لتعلم اللغة الإنجليزية حتى إذا لم يكن هناك شخص آخر يريني كيفية استخدامه
8			استخدام التعليم الإلكتروني لتعلم اللغة الإنجليزية حتى إذا لم استخدم مثل هذا النظام مسبقا
#			التدريب – العبارة التالية تحت هذا العامل هو تحديد ما إذا تم تدريب الطلاب والمدرسين أو عدم استخدام التعلم الإلكتروني.
9			أنا مدرب (ة) على استخدام التعلم الإلكتروني للتعلم
#			الوصول إلى الأدوات الشخصية – العبارات التالية تحت هذا العامل هي تحديد الطلاب والمعلمين الوصول إلى الكمبيوتر والإنترنت للتعلم الإلكتروني.
10			املك جهاز كمبيوتر لاستخدامه لأغراض التعليم الإلكتروني عندما احتاج اليه
11			املك اتصال بالإنترنت لاستخدامه لأغراض التعليم الإلكتروني عندما احتاج اليه
#			ادوافع الشخصية – العبارات التالية تحت هذا العامل هي تحديد موقف الطلاب والمعلمين والتزامهم بالوقت والالتزام باستخدام التعلم الإلكتروني
12			استخدام التعليم الإلكتروني في تعلم اللغة الإنجليزية هي فكرة جيدة
13			بشكل عام، احب استخدام التعليم الإلكتروني
14			سوف اخصص بعض الوقت لاستخدام التعليم الإلكتروني للتعلم اللغة الإنجليزية
15			بشكل عام، سوف يكون هناك الوقت الكافي بنسبة لى لاستخدام التعليم الإلكتروني من أجل تعلم اللغة الإنجليزية

16			سوف استخدام التعليم الإلكتروني في تعلم اللغة الإنجليزية حتى إذا لم أكافأ لذلك
#			خصائص التعلم الإلكتروني – تتعلق العبارات التالية في إطار هذا العامل بإمكانية استخدام التعلم الإلكتروني (سهولة الاستخدام والاستخدام) ووظيفة التعلم الإلكتروني (المرونة والتفاعل) ، وكيف تؤثر على استعداد الطلاب والمعلمين لاستخدام التعليم الإلكتروني.
17			التعامل مع التعليم الإلكتروني (أو قد يكون) واضحة ومفهومة بنسبة لي
18			التعامل مع التعليم الإلكتروني لا (أو قد لا) يتطلب الكثير من الجهد العقلي بنسبة لي
19			استخدام التعليم الإلكتروني في تعلم اللغة الإنجليزية (أو قد يكون) سهل بالنسبة لي
20			بشكل عام، أعتقد أن التعليم الإلكتروني (أو سيكون) سهلة الاستخدام.
21			استخدام التعليم الإلكتروني حسن (أو سوف يحسن) أداء تعلمي للغة الإنجليزية
22			بشكل عام، أعتقد أن التعليم الإلكتروني (أو سيكون) مفيدة لتعلم اللغة الإنجليزية
23			التعليم الإلكتروني يوفر (أو سيقدم) لي المرونة في تعلم اللغة الإنجليزية، فيما يتعلق بالزمن والمكان
24			التعليم الإلكتروني يعطيني (أو سيعطيني) القدرة/السيطرة على أنشطة التعلم للغة الإنجليزية
25			التعليم الإلكتروني يوفر الوسائط المتعددة لاستخدامها في تعلم اللغة الإنجليزية
26			التعليم الإلكتروني يسمح (أو سيسمح) بالتفاعل بيني وبين الطلاب / المعلمين
27			التعليم الإلكتروني يتيح التفاعل بين الطلاب لتطوير مهاراتهم في اللغة الإنجليزية
28			الأدوات التواصل التي يوفرها التعليم الإلكتروني فعالة لتعلم اللغة الإنجليزية
#			العوامل الاجتماعية – العبارات التالية تحت هذا العامل تتعلق بالعوامل الاجتماعية مثل العائلة والأصدقاء/الزملاء وكيف تؤثر على استعداد الطلاب والمعلمين لاستخدام التعلم الإلكتروني.
29			والدي/والدتي يعتقدون أن استخدام التعليم الإلكتروني لتعلم اللغة الإنجليزية فكرة جيدة
30			والدي/والدتي يشجعونني (أو سوف يشجعونني) لاستخدام التعليم الإلكتروني لتعلم اللغة الإنجليزية
31			والدي/والدتي يعتبرون ان استخدام التعليم الإلكتروني (أو قد يكون) أمن بالنسبة لي كي استخدامه (حماية المعلومات الشخصية والصور وغيرها)
32			عموما، أعتقد أن والدي/والدتي لا يمانعون في المواصلة (أو بداية) في استخدام التعليم الإلكتروني
33			والدي/والدتي يرون ان التعليم الإلكتروني حسن (أو يمكن أن يحسن) أدائي في تعلم اللغة الإنجليزية
34			بشكل عام، يرى والدي/والدتي أن التعليم الإلكتروني (أو يمكن أن يكون) مفيدة لتعلم اللغة الإنجليزية
35			أصدقائي/زملاني يشجعوني (أو سيشجعونني) لاستخدام التعليم الإلكتروني في تعلم اللغة الإنجليزية
36			أصدقائي/زملاني يساعدوني (أو سوف يساعدوني) في استخدام التعليم الإلكتروني عندما احتاج ذلك
#			العوامل داخل المدرسة – العبارات التالية تحت هذا العامل تتعلق بالعوامل المدرسية مثل توفير المعدات والدعم المدرسي ، وكيف تؤثر على استعداد الطلاب والمعلمين لاستخدام التعلم الإلكتروني.
37			المدرسة التي أدرس فيها توفر أجهزة الحاسوب اللازمة لاستخدامها في التعليم الإلكتروني
38			المدرسة التي أدرس فيها توفر الاتصال بشبكة الإنترنت الضروري لاستخدامها في التعليم الإلكتروني

			39	المدرسة التي ادرس فيها، إدارة المدرسة تسمح لي باستخدام معمل الحاسب الالى لاستخدام التعليم الإلكتروني
			40	المدرسة التي ادرس فيها، إدارة المدرسة سوف تدعمني لاستخدام التعليم الإلكتروني
			41	المدرسة التي أدرس فيها، فني تكنولوجيا المعلومات متاح لتقديم المساعدة عندما احتاج إلى مساعدة
			42	أعتقد أن الدعم التقني/الفني في المدرسة التي أدرس فيها جيد

تقييم شامل:

- يرجى توضيح الأسئلة التي ينبغي حذفها.
- من فضلك، اقترح الأسئلة التي ينبغي إضافتها.

Appendix J: Data from officials (national and regional) and families – Abridge Version

Main-theme	Sub-theme	Quotes (English and Arabic)
National Education Officials Interview Data		
Government Commitment to E-learning	Internationalising Saudi Education	<p><i>During the reign of King Abdullah, education was made a higher priority for Saudi Arabia. The King setup a committee of experts who met on numerous occasions to discuss the Saudi education and to show the way forward. The committee was also tasked to compare the education in Saudi Arabia with education elsewhere. This is what resulted to the current E-learning project... The committee came out with a vision of E-learning which was accepted by the King and we are now trying to implement it... (NL-5)</i></p> <p>في عهد الملك عبد الله، كان التعليم يحظى بأولوية أعلى بالنسبة في السعودية. قام الملك بتشكيل لجنة من الخبراء التقوا في مناسبات عديدة لمناقشة التعليم السعودي وإظهار الطريق إلى الأمام. كما تم تكليف اللجنة بمقارنة التعليم في المملكة العربية السعودية بالتعليم في مكان آخر. هذا ما نتج عن مشروع التعلم الإلكتروني الحالي ... خرجت اللجنة برؤية للتعلم الإلكتروني قبلها الملك ونحن الآن نحاول تنفيذها (NL-5).</p> <p><i>The King called for a collaboration between the experienced people in Saudi Arabia to partner with expert companies outside the Kingdom in order to develop curricula that will meet both international and Saudi standards... As you can imagine there were a lot of disagreements. But one of the strategic goals that was eventually agreed on was to develop and use E-learning systems. So, we introduced E-learning and we are improving it step-by-step – that is, a percentage every year... (NL-3).</i></p> <p>ودعا الملك إلى التعاون بين الأشخاص ذوي الخبرة في المملكة العربية السعودية للمشاركة مع الشركات الخبيرة خارج المملكة من أجل تطوير المناهج التي تلي المعايير الدولية والسعودية ... كما يمكنك أن تتخيل وجود الكثير من الخلافات. لكن أحد الأهداف الاستراتيجية التي تم الاتفاق عليها في النهاية كان تطوير واستخدام أنظمة التعلم الإلكتروني. لذلك، قدمنا التعلم الإلكتروني ونقوم بتحسينه خطوة بخطوة - أي النسبة المئوية كل عام ... (NL-3).</p> <p><i>I understand we are a centralised state and all decisions are taken by the minster and his advisors, but on matters like the implementation of E-learning in our schools we needed to consult broadly to gather stakeholders' views on the matter. ... You know, I appreciate that we are trying to meet global standards but our efforts to achieve that must not be the usual top-down approach. At least the experts from the MoE and Department of Education should be invited to express their opinion on the matter. But this is only my opinion.... (NL-2).</i></p> <p>أفهم أننا دولة مركزية وأن جميع القرارات يتخذها الوزير ومستشاروه، ولكن في أمور مثل تنفيذ التعلم الإلكتروني في مدارسنا، نحتاج إلى التشاور على نطاق واسع لجمع آراء أصحاب المصلحة حول هذه المسألة. ... أنت تعرف، أنا أقدر أننا نحاول تلبية المعايير العالمية ولكن جهودنا لتحقيق ذلك يجب ألا تكون النهج المعتاد من أعلى للأسفل. يجب دعوة خبراء من وزارة ادارة التعليم للتعبير عن رأيهم في هذا الشأن. ولكن هذا هو رأيي فقط (NL-2).</p> <p><i>... this seems to be a genuine commitment on the part of the government to improve the current educational standards. But there are also suggestions from external organisations such as UNESCO and UNICEF for Saudi Arabia to meet agreed global standards and</i></p>

		<p><i>to make our education more competitive and attractive.... E-learning is seen as a way forward...(NL-3).</i></p> <p>... يبدو أن هذا التزام حقيقي من جانب الحكومة لتحسين المعايير التعليمية الحالية. ولكن هناك أيضًا اقتراحات من منظمات خارجية مثل اليونسكو واليونسيف للمملكة العربية السعودية للوفاء بالمعايير العالمية المتفق عليها وجعل تعليمنا أكثر تنافسية وجاذبية ... يُنظر إلى التعلم الإلكتروني كطريقة للتقدم ... (NL-3).</p>
	<p>Cutting Down Cost</p>	<p><i>... in order to cut down cost, the mission is to use the few experienced teachers in the system only as monitors for students via an online system (E-learning) instead of having teachers for each subject... This is thought to be cost-saving. (NL-2).</i></p> <p>... من أجل خفض التكلفة ، تتمثل المهمة في استخدام عدد قليل من المعلمين ذوي الخبرة في النظام فقط كمراقبين للطلاب عبر نظام إلكتروني (التعلم الإلكتروني) بدلاً من وجود معلمين لكل موضوع ... ويعتقد أن هذا هو توفير التكلفة (NL-2).</p> <p><i>By using the E-learning, yeah. We have a lot of problems actually in education. Some of the rural areas, okay, you spend a lot of money hiring teachers who are not well educated and have limited knowledge in the subject area. Okay. This situation is worse in the rural areas compared to cities for a number of reasons. For example, while the majority of teachers in Riyadh are qualified with degrees, only teachers with diploma and with less experience are hired to teach in most villages. Okay. So, when you have an E-learning in place, our thinking is that it would help to solve this problem by providing students in the rural areas the opportunity to learn from the most qualified and experienced teachers. We are doing this to ensure that all the students have a good education with a professional teacher using a virtual classroom. This plan is also cost effective.... (NL-4)</i></p> <p>باستخدام التعلم الإلكتروني ، نعم. لدينا الكثير من المشاكل في الواقع في مجال التعليم. بعض المناطق الريفية ، حسناً ، أنت تنفق الكثير من المال لتوظيف المعلمين الذين ليسوا متعلمين جيداً وذات معرفة محدودة في مجال الموضوع. حسناً. هذا الوضع أسوأ في المناطق الريفية مقارنة بالمدن لعدد من الأسباب. على سبيل المثال ، في حين أن غالبية المعلمين في الرياض مؤهلين بدرجة علمية ، فإن المدرسين الحاصلين على دبلوم وذو خبرة أقل يتم تعيينهم للتدريس في معظم القرى. حسناً. لذلك ، عندما يكون لديك التعلم الإلكتروني في مكانه الصحيح ، فإن تفكيرنا هو أنه سيساعد في حل هذه المشكلة من خلال تزويد الطلاب في المناطق الريفية بفرصة التعلم من أكثر المعلمين المؤهلين وذوي الخبرة. نحن نقوم بذلك لضمان حصول جميع الطلاب على تعليم جيد مع معلم محترف يستخدم الفصل الدراسي الافتراضي. هذه الخطة هي أيضاً فعالة من حيث التكلفة ... (NL-4)</p> <p>4)</p> <p><i>We think the use of E-learning will be cost effective. As you know, Saudi Arabia is a big country and there is always the shortage of qualified teachers in our schools. So, by introducing E-learning which allows students to learn from anywhere, for example in their home, the provision of a virtual school can help to cover a wider range of schools with fewer but highly qualified teachers without compromising the quality of service. This is going to be very good for subjects with skill shortage such as EFL. (NL-5)</i></p> <p>نعتقد أن استخدام التعلم الإلكتروني سيكون فعالاً من حيث التكلفة. كما تعلمون، المملكة العربية السعودية بلد كبير وهناك دائماً نقص في المعلمين المؤهلين في مدارسنا. لذلك، من خلال تقديم التعليم الإلكتروني الذي يسمح للطلاب بالتعلم من أي مكان، على سبيل المثال في منزلهم، يمكن أن يساعد توفير مدرسة افتراضية في تغطية مجموعة أوسع من المدارس مع عدد أقل من المعلمين المؤهلين تأهيلاً عالياً دون المساس بجودة الخدمة. هذا سيكون جيداً جداً بالنسبة إلى الأشخاص ذوي نقص المهارات مثل اللغة الإنجليزية. (NL-5)</p>

		<p>5)</p> <p>... Cost-wise, to reduce printing some books. ... We have about 3,070 textbooks needing to be printed based on the number of students distributed over this education types. ... Most of the textbooks to be in digital forms like pdf, and like videos, and like SCORM or interactive materials. (NL-1).</p> <p>... من حيث التكلفة ، للحد من طباعة بعض الكتب. ... لدينا حوالي 3070 كتاباً مدرسياً يلزم طباعتها بناءً على عدد الطلاب الذين يتم توزيعهم على هذا النوع من التعليم. ... معظم الكتب المدرسية تكون بأشكال رقمية مثل pdf ، مثل مقاطع الفيديو ، مثل SCORM أو المواد التفاعلية. (NL-1)</p> <p>... MoE for some time now has been saying that the government spends a lot of money in printing and importing textbooks in order to meet the needs of students. These books keep changing from time to time and the old books become obsolete. As a result, the government thinks that it will reduce the cost of printing textbooks if students are able to learn using E-learning (NL-2).</p> <p>..وزارة التربية منذ وقت و الحكومة تنفق الكثير من المال في طبع واستيراد الكتب المدرسية من أجل تلبية احتياجات الطلاب. تتغير هذه الكتب من وقت لآخر ، وتصبح الكتب القديمة بالية. ونتيجة لذلك ، تعتقد الحكومة أنها ستقلل من تكلفة طباعة الكتب الدراسية إذا كان الطلاب قادرين على التعلم باستخدام الويب أو التعلم الإلكتروني (NL-2).</p>
	<p>Towards Building a Knowledge-based Economy</p>	<p>I think Saudi Arabia is ambitious and part of our ambition is to build a knowledge-based economy. If the country is able to implement the use of E-learning in our schools effectively, I am sure that will help in improving our educational system and our desire not to rely solely on oil revenue in the long term. I think this is a good plan because I do not know what else the country can do if the oil runs out and the people have no other way of making ends meet. (NL-1).</p> <p>أعتقد أن المملكة العربية السعودية طموحة و جزء من طموحنا هو بناء اقتصاد قائم على المعرفة. إذا كانت الدولة قادرة على تنفيذ استخدام التعلم الإلكتروني في مدارسنا بشكل فعال ، فأنا متأكد من أنه سيساعد في تحسين نظامنا التعليمي و رغبتنا في عدم الاعتماد فقط على عائدات النفط على المدى الطويل. أعتقد أن هذه خطة جيدة لأنني لا أعرف ما الذي يمكن أن تفعله البلاد إذا نفذ النفط ولم يكن لدى الناس طريقة أخرى لتغطية نفقاتهم . (NL-1).</p> <p>..., I have my doubts. There are inadequate computers and no Internet connectivity in schools throughout Saudi Arabia. We also have many rural schools that find it difficult to recruit teachers. I am aware of the MoE Tatwer's programme, a project called knowledge gift, through which computer tablets are supplied to students. These are given to students free of charge but this is insufficient for all students in the country. I think more needs to be done if indeed we are working towards building a knowledge-based economy. (NL-5).</p> <p>...، لدي شكوكي. هناك أجهزة كمبيوتر غير كافية ولا اتصال بالإنترنت في المدارس في جميع أنحاء المملكة. لدينا أيضاً العديد من المدارس الريفية التي تجد صعوبة في تعيين معلمين. إنني على علم ببرنامج وزارة التربية والتعليم "تطوير" ، وهو مشروع يسمى "هدية المعرفة" ، يتم من خلاله تقديم أجهزة الكمبيوتر اللوحية للطلاب. يتم إعطاؤها للطلاب مجاناً ولكن هذا غير كاف لجميع الطلاب في الدولة. أعتقد أنه يجب عمل المزيد إذا كنا نعمل بالفعل على بناء اقتصاد قائم على المعرفة. (NL-5)</p>
<p>Skill Level of</p>	<p>Skill Level of</p>	<p>.... the majority of teachers were trained for face to face teaching ...</p>

Teachers	Teachers	<p><i>most of them need to be trained how to use E-learning system.... ideally schools should have technical assistant units to help teachers... But there is a shortage of such units in the country ... I know that we have trained all the head-teachers of the 150 schools are running E-learning right now. We have also trained about 500 male teachers and 500 female teachers in those schools, and some of them are also now qualified to provide training to other teachers. ... (NL-2).</i></p> <p>...تم تدريب غالبية المعلمين على التدريس وجهاً لوجه ... معظمهم بحاجة إلى تدريب على كيفية استخدام نظام التعلم الإلكتروني ... من الناحية المثالية ، يجب أن يكون لدى المدارس وحدات مساعدة فنية لمساعدة المدرسين ... لكن هناك نقص في هذه الوحدات في البلاد ... أنا أعلم أننا دربنا جميع المعلمين الرئيسيين في 150 مدرسة تقوم بتشغيل التعليم الإلكتروني في الوقت الحالي. كما قمنا بتدريب حوالي 500 معلم ذكور و 500 معلمة في تلك المدارس ، وبعضهم مؤهل الآن لتوفير التدريب للمدرسين الآخرين ... (NL-2).</p> <p>.... a big number of teachers lack the right skills to use E-learning. For example, teachers will need to acquire skills in how to use E-learning tools such as virtual classroom, how to create culturally appropriate videos and upload them to the E-learning system and so on. So for me this is a big challenge that needs to be looked at before we implement the E-learning programme. There must be training programmes for all teachers. (NL-4).</p> <p>...عدد كبير من المعلمين يفتقرون إلى المهارات الصحيحة لاستخدام التعلم الإلكتروني. على سبيل المثال ، سيحتاج المعلمون إلى اكتساب مهارات في كيفية استخدام أدوات التعلم الإلكتروني مثل الفصول الافتراضية ، وكيفية إنشاء مقاطع فيديو مناسبة ثقافياً وتحميلها إلى نظام التعلم الإلكتروني وما إلى ذلك. بالنسبة لي ، هذا تحد كبير يجب النظر إليه قبل تنفيذ برنامج التعليم الإلكتروني. يجب أن يكون هناك برامج تدريبية لجميع المعلمين.. (NL-4).</p>
The Current State of the Infrastructure for E-learning	The Current State of the Infrastructure for E-learning	<p><i>The MoE is facing many obstacles when it comes to infrastructure of the schools. ... There are around 7000 computer labs in our schools, or more, 70% of the computers in those schools are very old, and 80% without Internet. I am also aware that the quality of the Internet varies from one school to other. There are schools, for example, with DSL connection with speed of 4MB and others with 1MB. The new contract signed by the MoE is to ensure that all schools have up to 4MB speed. Other schools have mobile broadband Internet service, either 3g or 4g. But overall this is not good news for the proposed implementation of E-learning in these schools, is it? I think before the MoE take any further steps, these schools will need to be equipped with new computers and provided with good Internet access. It is really an obstacle. ... Yes. (NL-2)</i></p> <p>تواجه وزارة التعليم العديد من العقبات عندما يتعلق الأمر بالبنية التحتية للمدارس. ... هناك حوالي 7000 مختبر كمبيوتر في مدارسنا ، أو أكثر ، 70٪ من أجهزة الكمبيوتر في تلك المدارس قديمة جدًا ، و 80٪ بدون إنترنت. كما أنني أدرك أن جودة الإنترنت تختلف من مدرسة إلى أخرى. هناك مدارس ، على سبيل المثال ، مع اتصال DSL بسرعة 4 ميغابايت وغيرها بسرعة 1 ميغابايت. العقد الجديد الذي وقعته وزارة التعليم هو التأكد من أن جميع المدارس لديها سرعة تصل إلى 4 ميغابايت. لدى مدارس أخرى خدمة إنترنت ذات نطاق ترددي عريض ، إما 3g أو 4g. لكن بشكل عام هذه ليست أخباراً جيدة للتطبيق المقترح للتعلم الإلكتروني في هذه المدارس ، أليس كذلك؟ أعتقد أنه قبل اتخاذ وزارة التربية والتعليم أي خطوات إضافية ، ستحتاج هذه المدارس إلى أن تكون مجهزة بأجهزة كمبيوتر جديدة ومزودة بخدمة إنترنت جيدة. إنها حقا عقبة. ... نعم فعلا. (NL-2)</p> <p>..., schools are not ready to implement E-learning because most of our schools lack computers and Internet facility. Most schools have</p>

		<p><i>old buildings, and some are even not big enough to have learning resource centres which can be equipped with enough number of computers for students to use... (NL-4)</i></p> <p>...، المدارس ليست على استعداد لتنفيذ التعلم الإلكتروني لأن معظم مدارسنا تفتقر إلى أجهزة الكمبيوتر ومرافق الإنترنت. تحتوي معظم المدارس على مباني قديمة ، وبعضها ليس كبيرًا بما يكفي لتوفير مراكز موارد تعليمية يمكن تزويدها بعدد كافٍ من أجهزة الكمبيوتر للطلاب لاستخدامها (NL-4)</p> <p><i>If the money is mine, I would spend it on education, but the government has some priorities as well. Health and other sectors need to be improved as well as.... (NL-5)</i></p> <p>إذا كان المال لي ، فأنفقه على التعليم ، لكن الحكومة لديها بعض الأولويات أيضًا. يجب تحسين الصحة والقطاعات الأخرى بالإضافة إلى ... (NL-5)</p> <p><i>[Girls] have very, very good school complexes for education. I have not heard that girls' schools have less good computer resources in the schools. It just isn't true that schools for girls are worse resourced than schools for boys. They are treated equally. And we do not care about the gender at all. ... (NL-1)</i></p> <p>[البنات] لديهن مجمعات مدرسية جيدة جدًا للتعليم. لم أسمع أن مدارس الفتيات لديها موارد كمبيوتر أقل جودة في المدارس. ليس صحيحًا أن مدارس البنات أسوأ من المدارس المخصصة للذكور. يعاملون على قدم المساواة. ونحن لا نهتم بالجنس على الإطلاق. ... (NL-1)</p> <p><i>All schools, male and female are similar in their situation, both need to be reformed again, but it is difficult to reform because of the high numbers of schools. We can't be sure that the readiness of schools in terms of infrastructure meet the required standard to implement E-learning. Boys' and girls' schools are similar to each other, they are almost non-existent of computers or very old computers as well as Internet contact is poor. (NL-4)</i></p> <p>جميع المدارس ، الذكور والإناث متشابهة في أوضاعهم ، يحتاج كلاهما إلى الإصلاح مرة أخرى ، لكن من الصعب إصلاحه بسبب ارتفاع عدد المدارس. لا يمكننا التأكد من أن استعداد المدارس من حيث البنية التحتية يستوفي المعيار المطلوب لتنفيذ التعلم الإلكتروني. فمدارس الأولاد والبنات متشابهة مع بعضها البعض ، فهي تكاد تكون معدومة من أجهزة الكمبيوتر أو أجهزة الكمبيوتر القديمة جدا وكذلك الاتصال بالإنترنت ضعيف. (NL-4)</p>
<p>Access at Home and Gender Issues</p>	<p>Culture and Gender Issues</p>	<p><i>... Even when we provide the students with laptop, the parents ... they break it because they do not want the student - girl student - to access the Internet. But the culture has been changing for the last three years.... (NL-1)</i></p> <p>... حتى عندما تزود الطلاب بالكمبيوتر المحمول ، فإن الآباء ... يكسرون ذلك لأنهم لا يريدون للطالب - طالبة - الوصول إلى الإنترنت. لكن الثقافة تتغير في السنوات الثلاث الأخيرة ... (NL-1)</p> <p><i>We have a problem. The culture of the people is not to accept different genders to be in the same class even online. ... This makes the use of E-learning in our teaching and learning difficult... (NL-3)</i></p> <p>لدينا مشكلة. ثقافة الناس ليست قبول أنواع مختلفة لتكون في نفس الفئة حتى عبر الإنترنت. ... وهذا يجعل استخدام التعلم الإلكتروني في التدريس والتعلم صعباً ... (NL-3)</p> <p><i>... some parents still have resistance against E-learning in general.</i></p>

		<p>... They still have very strong cultures in terms of the segregation between girls and boys. The irony for me is that some parents are willing to give their daughters and sons mobile devices, or smart devices to text with strangers. But, they do not want to allow their children to be part of an E-learning classroom. I believe these parents are the minority, not majority and such mentality is fast changing. (NL-5)</p> <p>... بعض الآباء لا يزال لديهم مقاومة ضد التعلم الإلكتروني بشكل عام. ... لا يزال لديهم ثقافات قوية للغاية فيما يتعلق بالفصل بين الفتيات والفتيان. المفارقة بالنسبة لي هي أن بعض الآباء والأمهات على استعداد لإعطاء أبنائهم وأبنائهم الأجهزة النقالة ، أو الأجهزة الذكية للنص مع الغرباء. لكنهم لا يريدون السماح لأطفالهم بأن يكونوا جزءاً من الفصل الدراسي للتعلم الإلكتروني. أعتقد أن هؤلاء الآباء هم الأقلية ، وليس الأغلبية ، وهذه العقلية تتغير بسرعة. (NL-5)</p> <p>.... the MoE is trying to make many programmes to support education including online learning which encourages in many ways the mixing of males and females. I will give you an example of what we do in the Ministry. We provide lessons for students online and this is mixed girls with boys all together and virtual classroom. ... (NL-4)</p> <p>.... تحاول وزارة التعليم تقديم العديد من البرامج لدعم التعليم بما في ذلك التعلم عبر الإنترنت مما يشجع على دمج الذكور والإناث من عدة جوانب. سأقدم لك مثلاً عما نقوم به في الوزارة. نحن نقدم دروساً للطلاب عبر الإنترنت ، وهذا هو الفتيات المختلطات مع الأولاد معاً والفصول الافتراضية. ... (NL-4)</p> <p>In general, ... the Saudi society culture, their resistance and refusal to any change grows under such similar circumstances. For example, we faced such resistance with the beginning of the TV and then with the mobile and now with the Internet... I think when the people begin to know the importance of E-learning in their children's education, they will accept it.... But until they learn these benefits, families will continue to say no to their children using E-learning because of their cultural and religious views... Families are even more restricted with their girls than their boys ... (NL-2)</p> <p>بصفة عامة ... تنمو ثقافة المجتمع السعودي ومقاومته ورفضه لأي تغيير في ظل ظروف مماثلة. على سبيل المثال ، واجهنا مثل هذه المقاومة مع بداية التلفزيون ومن ثم مع الهاتف المحمول والآن مع الإنترنت ... أعتقد أنه عندما يبدأ الناس في معرفة أهمية التعلم الإلكتروني في تعليم أبنائهم ، فإنهم سوف يقبلونه. ولكن إلى أن يتعلموا هذه الفوائد ، فإن العائلات سوف تستمر في قول لا لأطفالهم الذين يستخدمون التعلم الإلكتروني بسبب آرائهم الثقافية والدينية ... والأسر أكثر تقييداً بفتياتهم من الأولاد ... (NL-2)</p>
	<p>Government Support and Parents' Awareness</p>	<p>About 70% of family households in Saudi have access to computers and Internet, but one computer in a household might not be enough because of the large family sizes. We live in big families, the average number of children per family is six to eight. Suppose that a family has six students in the household and only one computer. What will happen if all of them need to attend an online lesson or need to do some homework or activities? So, this is a challenge for the MoE and for families with a lot of children. This could also mean that E-learning is likely to only benefit families that have the financial ability to provide equipment for all their children, unless the government is willing to provide these families with such equipment. (RL-4)</p> <p>حوالي 70% من الأسر المعيشية في السعودية لديها إمكانية الوصول إلى أجهزة الكمبيوتر والإنترنت ، ولكن قد لا يكون جهاز كمبيوتر واحد في المنزل كافياً بسبب حجم الأسرة</p>

		<p>الكبير. نحن نعيش في عائلات كبيرة ، ويبلغ متوسط عدد الأطفال لكل أسرة ستة إلى ثمانية. افترض أن عائلة لديها ستة طلاب في المنزل وجهاز كمبيوتر واحد فقط. ماذا سيحدث إذا كان جميعهم بحاجة إلى حضور درس عبر الإنترنت أو بحاجة إلى القيام ببعض الواجبات المنزلية أو الأنشطة؟ لذا ، فإن هذا يمثل تحديًا لوزارة التعليم وللأسر التي لديها الكثير من الأطفال. وقد يعني هذا أيضًا أن التعلم الإلكتروني من المرجح أن يفيد العائلات التي تمتلك القدرة المالية على توفير المعدات لجميع أطفالها ، ما لم تكن الحكومة مستعدة لتزويد هذه العائلات بهذه المعدات. (RL-4)</p> <p><i>E-learning is an option for students, parents who know the benefits of E-learning and what its future results will allow their children to use it. But parents always prefer their children to have traditional learning. This is actually because they [families] learned in this way by going to the schools and the teachers talk and use the chalk. ... They [families] do not have the ability to provide the needed computer and Internet connection to their children. (NL-2)</i></p> <p>التعلم الإلكتروني هو خيار للطلاب وأولياء الأمور الذين يعرفون فوائد التعلم الإلكتروني وما سوف تسمح نتائجه المستقبلية لأطفالهم من استخدامه. لكن الآباء يفضلون دائما أن يحصل أطفالهم على التعليم التقليدي. هذا في الواقع لأنهم [العائلات] تعلموا بهذه الطريقة بالذهاب إلى المدارس والمعلمين يتحدثون ويستخدمون الطباشير. ... ليس لديهم [العائلات] القدرة على توفير الكمبيوتر والاتصال بالإنترنت اللازمين لأطفالهم. (NL-2)</p> <p><i>I think, when students use E-learning in their schools and see its benefits, they will influence their families at home, and this will change in the near future, but this will take time. (NL-4)</i></p> <p>أعتقد أنه عندما يستخدم الطلاب التعلم الإلكتروني في مدارسهم ويرون أنه مفيد ، فإنهم سيؤثرون على عائلاتهم في المنزل ، وهذا سيتغير في المستقبل القريب ، لكن هذا سيستغرق بعض الوقت. (NL-4)</p> <p><i>I do not have, now, a real statistic regarding how many people can access the computer from home. But ... more than 50% or 60% of the Saudi people, nationality, use the Internet. And we can access the Internet from mobile ... in Riyadh ... it seems to be 90%. We are using Internet access by mobile. If we talk about the south, for example, we are more poor people. We start up 12 channels. (NL-3)</i></p> <p>ليس لدي ، الآن ، إحصاء حقيقي يتعلق بعدد الأشخاص الذين يمكنهم الوصول إلى الكمبيوتر من المنزل. لكن ... أكثر من 50٪ أو 60٪ من الشعب السعودي ، الجنسية ، يستخدمون الإنترنت. ويمكننا الوصول إلى الإنترنت من الهاتف المحمول ... في الرياض ... يبدو أنه 90٪. نحن نستخدم الوصول إلى الإنترنت عن طريق الهاتف المحمول. إذا كنا نتحدث عن الجنوب ، على سبيل المثال ، نحن أكثر الناس فقراء. نبدأ 12 قناة. (NL-3)</p>
Implementing E-learning	Implementing E-learning	<p><i>..., we launched of the Future Gate Project which aims to have both educational systems, traditional learning and E-learning. A total of 150 schools constituting 75 boys' schools and 75 girls' schools, in three provinces out of 13 provinces have so far implemented this project. The aim is that next year we will have reached 1500 schools and by 2020 we are aiming that all schools in Saudi Arabia will be using both educational systems... The plan now is that any school that becomes ready in terms of equipment, computers and Internet connection, we provide to their teachers with an online training for all aspect they need to use E-learning. (NL-2)</i></p> <p>... ، أطلقنا مشروع بوابة المستقبل الذي يهدف إلى الحصول على كل من الأنظمة التعليمية والتعلم التقليدي والتعلم الإلكتروني. وقد نفذ هذا المشروع حتى الآن ما مجموعه 150 مدرسة تشكل 75 مدرسة للبنين و 75 مدرسة للبنات ، في ثلاث مناطق من أصل 13 مقاطعة. الهدف هو أنه في العام القادم سنكون قد وصلنا إلى 1500 مدرسة ، وبحلول</p>

		<p>عام 2020 نهدف إلى أن تستخدم جميع المدارس في المملكة العربية السعودية كلا النظامين التعليميين ... الخطة الآن هي أن تصبح أي مدرسة جاهزة من حيث المعدات وأجهزة الكمبيوتر والاتصال بالإنترنت نقدم للمدرسين تدريباً عبر الإنترنت لجميع الجوانب التي يحتاجون إليها لاستخدام التعلم الإلكتروني. (NL-2)</p> <p><i>There is currently no flexibility in the implementation of the E-learning project in Saudi Arabia because of the centralised nature of the MoE. Things are difficult right now because teachers and students lack the basic skills to use E-learning if it is implemented in Saudi schools. We need to train our people and provide them with the needed resources for a successful implementation of the E-learning project... We are now trying to provide online training courses for those who need training. (NL-4)</i></p> <p>لا توجد حالياً مرونة في تنفيذ مشروع التعلم الإلكتروني في المملكة العربية السعودية بسبب الطبيعة المركزية لوزارة التعليم. الأمور صعبة الآن لأن المعلمين والطلاب يفتقرون إلى المهارات الأساسية لاستخدام التعلم الإلكتروني إذا تم تنفيذه في المدارس السعودية. نحن بحاجة إلى تدريب موظفينا وتزويدهم بالموارد اللازمة لتنفيذ الناجح لمشروع التعلم الإلكتروني ... نحن نحاول الآن توفير دورات تدريبية عبر الإنترنت لأولئك الذين يحتاجون إلى التدريب. (NL-4)</p> <p><i>... the MoE thus seem to have an expansion criterion although we do not know the details for now. We have moved from English to maths to science now, to computer, step by step. (NL-1)</i></p> <p>... يبدو أن وزارة التعليم لديها معايير توسيع على الرغم من أننا لا نعرف التفاصيل في الوقت الحالي. لقد انتقلنا من الإنجليزية إلى الرياضيات إلى العلوم الآن ، إلى الكمبيوتر ، خطوة بخطوة. (NL-1)</p> <p><i>.... There is no long-term educational strategy in Saudi Arabia. This is because successive MoE constantly effect policy changes depending on what they think is right for the country at any given time. This is making it difficult for teachers and schools to follow particular policies through. Things would better if there is a long term plan in place... (NL-5)</i></p> <p>.... لا توجد استراتيجية تعليمية طويلة الأجل في المملكة العربية السعودية. ويرجع السبب في ذلك إلى أن وزارة التربية والتعليم المتعاقبة تؤثر بشكل دائم على التغييرات في السياسة بناءً على ما تعتقد أنه مناسب للبلاد في أي وقت من الأوقات. هذا يجعل من الصعب على المعلمين والمدارس اتباع سياسات معينة من خلال الأمور أفضل إذا كانت هناك خطة طويلة الأجل ... (NL-5)</p> <p><i>The MoE currently does not have a systematic plan to raise awareness of the society about the benefits of E-learning, we do some adverts using Facebook, Twitter and YouTube. I think education departments in each province should establish educational centres in the markets centres. ... (NL-3)</i></p> <p>لا يوجد لدى وزارة التعليم حالياً خطة منظمة لرفع الوعي حول المجتمع حول فوائد التعليم الإلكتروني ، ونحن نقوم ببعض الإعلانات باستخدام فيس بوك و تويتر و يوتيوب. أعتقد أن إدارات التعليم في كل منطقة يجب أن تنشئ مراكز تعليمية في مراكز الأسواق. ... (NL-3)</p>
E-learning Evaluation	E-learning Evaluation	<p><i>... Our E-learning project has been evaluated by international organisations such as UNESCO and has given us a good evaluation report. (NL-3)</i></p> <p>... لقد تم تقييم مشروع التعلم الإلكتروني لدينا من قبل المنظمات الدولية مثل اليونسكو</p>

		<p>وقدم لنا تقرير تقييم جيد. (NL-3)</p> <p><i>The 150 schools that are now using E-learning will give us the opportunity to judge and evaluate the success of E-learning. So, the MoE is trying to put in place some form of evaluation... but not so far. (NL-5)</i></p> <p>ستتيح لنا 150 مدرسة تستخدم الآن التعليم الإلكتروني الفرصة للحكم وتقييم نجاح التعلم الإلكتروني. لذا ، تحاول وزارة التعليم وضع شكل من أشكال التقييم ... لكن ليس حتى الآن. (NL-5)</p> <p><i>..., there are no clear evaluation criteria and no ability to compare E-learning assisted exam results with those from traditional teaching. The MoE has no criteria to evaluate the impact E-learning is making in our schools in terms of effective teaching and learning.... We think when schools are equipped with computers and Internet connectivity, such schools will automatically start to do better academically.... But this might not be the situation at all. (NL-2)</i></p> <p>... ، لا توجد معايير تقييم واضحة ولا القدرة على مقارنة نتائج الامتحانات بمساعدة التعلم الإلكتروني مع تلك من التعليم التقليدي. لا يوجد لدى وزارة التربية والتعليم أي معايير لتقييم الأثر الذي يحدثه التعليم الإلكتروني في مدارسنا من حيث التعليم والتعلم الفعال ... نعتقد أنه عندما تكون المدارس مجهزة بأجهزة كمبيوتر واتصال بالإنترنت ، فإن هذه المدارس ستبدأ بشكل تلقائي في تحسين أدائها أكاديمياً ... لكن هذا قد لا يكون الوضع على الإطلاق. (NL-2)</p> <p><i>Actually we do not have accurate statistics showing that E-learning is helping to improve teaching and learning in this country ... I think what we need are comparative studies evaluating the results between the use of E-learning and other traditional learning methods... We can do this either in terms of subject areas or using the entire educational system. But because we are still in the beginning with E-learning project, these data are not available... We are still working on the governance of E-learning. (NL-1)</i></p> <p>في الواقع ، ليس لدينا إحصائيات دقيقة توضح أن التعليم الإلكتروني يساعد في تحسين التعليم والتعلم في هذا البلد ... أعتقد أن ما نحتاجه هو دراسات مقارنة تقييم النتائج بين استخدام التعلم الإلكتروني وأساليب التعلم التقليدية الأخرى ... يمكننا القيام بذلك سواء من حيث المجالات أو استخدام النظام التعليمي بأكمله. ولكن لأننا لا نزال في البداية مع مشروع التعلم الإلكتروني ، فإن هذه البيانات غير متوفرة ... ما زلنا نعمل على إدارة التعليم الإلكتروني. (NL-1)</p> <p><i>The current situation of the schools implementing E-learning are not known and I am not sure if we have any clear cut strategy of evaluating the E-learning project... I am not sure.... (NL-4)</i></p> <p>إن الوضع الحالي للمدارس التي تنفذ التعليم الإلكتروني غير معروف ، ولست متأكدًا مما إذا كان لدينا أي استراتيجية واضحة لتقييم مشروع التعلم الإلكتروني ... لست متأكدًا من ذلك. (NL-4)</p>
Regional Education Officials interview data		
Regional Commitment to E-learning	Regional Commitment to E-learning	<p><i>... the region is committed to E-learning because we're told to do so.... the only reason for introducing E-learning in the region is that we are tasked to follow the lead by the MoE. (RL-4)</i></p> <p>... تلتزم المنطقة بالتعليم الإلكتروني لأنه قيل لنا أن نعمل ذلك ... السبب الوحيد لإدخال التعلم الإلكتروني في المنطقة هو أننا مكلفون بمتابعة القيادة من قبل وزارة التعليم. (RL-)</p> <p style="text-align: right;">(4)</p>

We at the regional level have no involvement in any policy formation about E-learning implementation. Always such policies, and decisions are made at a senior level at the MoE. ... (RL-5)

نحن على المستوى الإقليمي لا نشارك في أي تشكيل للسياسة حول تنفيذ التعلم الإلكتروني. دائما هذه السياسات ، ويتم اتخاذ القرارات على مستوى رفيع في وزارة التعليم. ... (RL-5)

... MoE has proposed so many reforms in the schools education for the past few years, but not all has succeeded. This is because their decisions are based on their expectations but do not meet the expectations of the people in the field. I can see the same strategy with E-learning implementation, which brings a big question mark about the successful implementation of E-learning.... (RL-3)

... اقترحت وزارة التربية العديد من الإصلاحات في التعليم المدرسي خلال السنوات القليلة الماضية ، ولكن لم ينجح كل ذلك. وذلك لأن قراراتهم تستند إلى توقعاتهم ولكنها لا تلبى توقعات الناس في هذا المجال. أستطيع أن أرى نفس الاستراتيجية مع تنفيذ التعليم الإلكتروني ، الأمر الذي يجلب علامة استفهام كبيرة حول التنفيذ الناجح للتعلم الإلكتروني (RL-3) ...

We face a problem in our traditional education as being talk and chalk, and the MoE want to take advantage financial support by the government to support excellence in teaching and learning through the optimal implementation of E-learning in order to achieve national goals. Actually, there is a belief in E-learning from the MoE that E-learning will have a big positive impact on the educational system. In my viewpoint, the main driver behind this was the desire and need to make our education one of the best in the world. The MoE is behind the introduction of E-learning, but, I personally think this project makes the MoE look better than it actual is in relation to their support for teaching and learning. We in Jazan Education Department have no involvement in E-learning strategic planning, we only have to apply the strategy. (RL-1)

إننا نواجه مشكلة في تعليمنا التقليدي على أنها حديث وطباشير ، وتريد وزارة التعليم الاستفادة من الدعم المالي من الحكومة لدعم التميز في التدريس والتعلم من خلال التنفيذ الأمثل للتعلم الإلكتروني من أجل تحقيق الأهداف الوطنية. في الواقع ، هناك اعتقاد في التعلم الإلكتروني من وزارة التعليم أن التعليم الإلكتروني سيكون له تأثير إيجابي كبير على النظام التعليمي. من وجهة نظري ، كان الدافع الرئيسي وراء ذلك هو الرغبة والحاجة إلى جعل تعليمنا من أفضل التعليم في العالم. إن وزارة التربية والتعليم هي وراء تقديم التعليم الإلكتروني ، ولكني شخصيا أعتقد أن هذا المشروع يجعل وزارة التعليم تبدو أفضل مما هو واقعي فيما يتعلق بدعمها للتعليم والتعلم. نحن في قسم التربية بجازان لا نشارك في التخطيط الإستراتيجي للتعلم الإلكتروني ، لكن علينا فقط تطبيق الإستراتيجية. (RL-1)

... E-learning will provide students and teachers with different tools that they can use in their teaching and learning. For example, teachers will be able to post homework to the students online and track their progress. In terms of students, for example, self-assessment tool online tutorial etc. (RL-4)

... سيزود التعلم الإلكتروني الطلاب والمعلمين بأدوات مختلفة يمكنهم استخدامها في تعليمهم وتعلمهم. على سبيل المثال ، سيتمكن المدرسون من نشر الواجبات المنزلية للطلاب عبر الإنترنت وتتبع تقدمهم. من حيث الطلاب ، على سبيل المثال ، أداة التقييم الذاتي عبر الإنترنت أداة الخ (RL-4)

... There is a huge belief in the importance of E-learning, and how it

		<p>will help students who are studying EFL. For example, students can have alongside the face-to-face teaching in the school, a 24 online tutorial to develop themselves. (RL-2)</p> <p>... هناك إيمان كبير بأهمية التعلم الإلكتروني ، وكيف سيساعد الطلاب على دراسة اللغة الإنجليزية كلغة أجنبية. على سبيل المثال ، يمكن للطلاب أن يكونوا جنباً إلى جنب مع التدريس المباشر في المدرسة ، وهو برنامج تعليمي عبر الإنترنت 24 لتطوير أنفسهم. (RL-2)</p>
<p>Level of Teacher and Student Skills</p>	<p>Level of Teacher and Student Skills</p>	<p>I have visited a large number of schools over the last year to explain the idea of E-learning, its goals and benefits for teaching and learning. Generally, I think most if not all of the teachers under my supervision in my area hold positive attitudes towards using E-learning in their teaching and are willing to use it in their daily teaching activities. Unfortunately most of the teachers lack basic skills and knowledge on how to use E-learning although they are looking forward to apply it. So, I think teachers need to have training to build up their skills.... (RL-1)</p> <p>لقد زرت عدداً كبيراً من المدارس خلال العام الماضي لشرح فكرة التعلم الإلكتروني وأهدافه ومزاياه في التعليم والتعلم. بشكل عام ، أعتقد أن معظم المعلمين إن لم يكن جميعهم تحت إشرافي في منطقتي لديهم مواقف إيجابية تجاه استخدام التعلم الإلكتروني في تعليمهم وعلى استعداد لاستخدامه في نشاطاتهم التعليمية اليومية. للأسف ، يفتقر معظم المعلمين إلى المهارات الأساسية والمعرفة حول كيفية استخدام التعلم الإلكتروني على الرغم من أنهم يتطلعون إلى تطبيقه. لذا ، أعتقد أن المعلمين بحاجة إلى تدريب لبناء مهاراتهم ... (RL-1)</p> <p>... although we have an online training programme for teachers in how to use E-learning, we are not able to execute such training programmes because we cannot do so without the right infrastructure in the schools – computers and Internet... (RL-2)</p> <p>على الرغم من أن لدينا برنامجاً تدريبياً عبر الإنترنت للمدرسين في كيفية استخدام التعلم الإلكتروني ، فإننا غير قادرين على تنفيذ مثل هذه البرامج التدريبية لأننا لا نستطيع القيام بذلك بدون البنية التحتية المناسبة في المدارس - أجهزة الكمبيوتر والإنترنت ... (RL-2)</p> <p>Male teachers are normally introduced more to technology than female teachers in their pre-service teacher training since there are more male lecturers in this area. And, normally, the MoE starts to train the male teachers before the female teachers, again because there are more male trainers available than the female trainers. So, because of these I think there would be a gender differences... (RL-1)</p> <p>عادة ما يتم تقديم المعلمين الذكور إلى التكنولوجيا أكثر من المدرسات في تدريب المعلمين قبل الخدمة حيث يوجد عدد أكبر من المحاضرين الذكور في هذا المجال. وعادة ، تبدأ وزارة التربية والتعليم بتدريب المعلمين الذكور قبل المدرسات ، ومرة أخرى بسبب توفر المدربين الذكور أكثر من المدربين الإناث. لذا ، بسبب هذه ، أعتقد أنه سيكون هناك اختلاف بين الجنسين ... (RL-1)</p> <p>Yes, there are gender differences at all levels and in the way we do things. Maybe this is a cultural problem but it affects the way things are done in Saudi Arabia including how E-learning is implemented. For example, out of the number of regional supervisors trained by the MoE so far, there is no female supervisor. In my opinion this is not good enough because male supervisors cannot work in female schools... (RL-3)</p> <p>نعم ، هناك اختلافات بين الجنسين على جميع المستويات وفي الطريقة التي تؤدي بها</p>

الأشياء. ربما تكون هذه مشكلة ثقافية ولكنها تؤثر على الطريقة التي تتم بها الأمور في المملكة العربية السعودية بما في ذلك كيفية تنفيذ التعلم الإلكتروني. على سبيل المثال ، من بين عدد المشرفين الإقليميين المدربين من قبل وزارة التربية حتى الآن ، لا توجد مشرف في رأيي ، هذا ليس جيداً بما يكفي لأن المشرفين الذكور لا يمكنهم العمل في المدارس النسائية ... (RL-3)

There isn't any female E-learning supervisors right now. So far I'm the manager and there are five E-learning supervisors for each Education Office – Jazan office, Abu-Arish office, Al-Arethah office, Ahad-Almsarh office, Samtah office and Farsan office. Normally, we should have five male and five female supervisors. But currently, I am only working with male supervisors because there is a lack of female supervisors. Either they are not qualified or most of them are not interested in such jobs. It is a lot of responsibility and female supervisors will have to work with males most the time. But you know our culture This is why we lack female supervisors (RL-4)

لا يوجد الآن أي مشرفات للتعلم الإلكتروني من الإناث. حتى الآن أنا المدير وهناك خمسة مشرفين على التعلم الإلكتروني لكل مكتب تعليمي - مكتب جازان ، مكتب أبو العريش ، مكتب العريضة ، مكتب أحد الأصول ، مكتب صامطة ومكتب فرسان. عادة ، يجب أن يكون لدينا خمسة مشرفين وخمس مشرفات. لكن في الوقت الحالي ، أنا أعمل فقط مع المشرفين الذكور لأن هناك نقصاً في المشرفات. إما أنهم غير مؤهلين أو معظمهم غير مهتمين بمثل هذه الوظائف. إنها مسؤولية كبيرة ويجب على المشرفات أن يعملن مع الرجال في معظم الأوقات. لكنك تعلم ثقافتنا ... لهذا السبب نفتقر إلى المشرفات الإناث ... (RL-4)

..., students will face challenges to use E-learning as a result of the lack of skill to use E-learning. This lack of skill, I think is also a result of most Saudi students usually do not have a proper computer literacy preparation program in the schools. They usually study computer literacy theoretically but not practically. When they come to use E-learning, they will then need more training and preparation to use E-learning otherwise students will find it difficult to use and they might avoid using it at all. (RL-2)

... ، سيواجه الطلاب تحديات لاستخدام التعلم الإلكتروني كنتيجة لنقص المهارة في استخدام التعلم الإلكتروني. هذا النقص في المهارة ، كما أعتقد هو أيضاً نتيجة لمعظم الطلاب السعوديين عادة ليس لديهم برنامج إعداد محو الأمية الكمبيوتر في المدارس. وعادة ما يدرسون محو الأمية الحاسوبية نظرياً ولكن ليس عملياً. عندما يأتون إلى استخدام التعلم الإلكتروني ، سيحتاجون بعد ذلك إلى مزيد من التدريب والإعداد لاستخدام التعلم الإلكتروني ، وإلا سيجد الطلاب صعوبة في استخدامه وقد يتجنبون استخدامه على الإطلاق. (RL-2)

... We lack prior research into students' skills regarding the use of technology in general and E-learning in particular. We also appear not to know how much the impact of the lack of data is affecting us. (RL-1)

... نحن نفتقر إلى البحوث السابقة في مهارات الطلاب فيما يتعلق باستخدام التكنولوجيا بشكل عام والتعلم الإلكتروني على وجه الخصوص. يبدو أيضاً أننا لا نعرف مدى تأثير تأثير نقص البيانات علينا. (RL-1)

I think there is no difference since we have unified education system for both male and female student. (RL-5)

أعتقد أنه لا يوجد فرق لأن لدينا نظام تعليمي موحد لكل من الطلاب والطالبات. (RL-5)

girls' schools have less computers and Internet, which means that

		<p>they have less IT literacy introduction ... (RL-3)</p> <p>مدارس البنات لديها أجهزة كمبيوتر وإنترنت أقل ، مما يعني أنها لا تملك سوى قدر أقل من تكنولوجيا المعلومات ... (RL-3)</p>
The Current State of the Infrastructure for E-learning	The Current State of the Infrastructure for E-learning	<p>Apart from the rural areas, most of the schools have a good Internet access. I do not have an exact number but maybe the ratio is one computer for every two students. ... Some students also use their mobile phones for online learning... So, as a supervisor I would say that I am satisfied with the level of infrastructure in the country... But the MoE can do more to cover the parts of the country where infrastructure is lacking (RL-5)</p> <p>وبصرف النظر عن المناطق الريفية ، فإن معظم المدارس لديها وصول جيد للإنترنت. ليس لدي رقم محدد ولكن ربما تكون النسبة عبارة عن جهاز كمبيوتر واحد لكل اثنين من الطلاب. ... بعض الطلاب يستخدمون هواتفهم المحمولة للتعليم عبر الإنترنت ... لذا ، كمشراف ، أود أن أقول إنني راضٍ عن مستوى البنية التحتية في البلاد ... لكن وزارة التعليم تستطيع أن تفعل المزيد لتغطية أجزاء البلد التي توجد بها بنية تحتية ناقصة ... (RL-5)</p> <p>In general, it [ICT infrastructure] is good. But in the rural areas maybe we have a low level of infrastructure... no Internet access. The official explanation is that the lack of Internet access is for security reason. But, some days it works and some days it does not work ... (RL-3)</p> <p>بشكل عام، [البنية التحتية لتكنولوجيا المعلومات والاتصالات] جيدة. ولكن في المناطق الريفية ربما يكون لدينا مستوى منخفض من البنية التحتية ... لا يوجد اتصال بالإنترنت. التفسير الرسمي هو أن عدم الوصول إلى الإنترنت هو لسبب أمني. ولكن ، في بعض الأيام كان يعمل ويعمل في بعض الأيام ... (RL-3)</p> <p>I do not think there is adequate IT infrastructure all over the country. In general, most of the schools are not fully equipped by computers and Internet connection. Here in Jazan province,, I have sent several requests to the MoE to equip both our male and female schools but we have not had any response yet. ... You know, it's really a sad situation... The last request was sent to the MoE a year ago but I understand the MoE has a lot of responsibilities and can't fulfil them all... Most of my colleagues in other province have the same problem. ... I think with this many schools over the country, each Education Department in each province needs to have the powers to make its own decision in terms of processing infrastructure for schools and so on. (RL-4)</p> <p>لا أعتقد أن هناك بنية تحتية كافية لتكنولوجيا المعلومات في جميع أنحاء البلاد. بشكل عام ، معظم المدارس ليست مجهزة بالكامل من قبل أجهزة الكمبيوتر واتصال الإنترنت. هنا في منطقة جازان ، أرسلت عدة طلبات إلى وزارة التربية لتجهيز مدارسنا الذكورية والإناث على حد سواء ، لكن لم تتلق أي رد حتى الآن. ... كما تعلمون ، إنه وضع محزن حقاً ... تم إرسال آخر طلب إلى وزارة التعليم منذ عام ، لكنني أفهم أن وزارة البنية لديها الكثير من المسؤوليات ولا يمكنها الوفاء بها جميعاً ... معظم زملائي في منطقة أخرى يعانون من نفس المشكلة أعتقد أنه مع العديد من المدارس في جميع أنحاء البلاد ، تحتاج كل إدارة تعليمية في كل منطقة إلى أن تكون لها صلاحيات اتخاذ القرار الخاص بها فيما يتعلق بمعالجة البنية التحتية للمدارس وما إلى ذلك. (RL-4)</p> <p>In my opinion, schools are not ready to implement E-learning, schools infrastructure are almost bad.... For me the solution is to improve the quality of school buildings and quality of IT in schools. Part of the problem is the centralised nature of the Saudi system. I</p>

		<p><i>think each Education Department in each province in the country should be allowed some autonomy. For example, independent budgets and should be allowed to make their own decisions... (RL-2)</i></p> <p>في رأيي ، المدارس ليست على استعداد لتنفيذ التعلم الإلكتروني ، والبنية التحتية للمدارس سيئة تقريبا ... بالنسبة لي ، فإن الحل هو تحسين جودة المباني المدرسية وجودة تكنولوجيا المعلومات في المدارس. جزء من المشكلة هو الطبيعة المركزية للنظام السعودي. أعتقد أن كل إدارة تعليمية في كل مقاطعة في البلاد ينبغي أن تسمح بعض الاستقلالية. على سبيل المثال ، الميزانيات المستقلة ويجب أن يسمح لها باتخاذ قراراتها الخاصة ... (RL-2)</p> <p><i>girls' schools have less computers and Internet, compared to male schools because of the priority given to male education in Saudi Arabia generally ... (RL-1)</i></p> <p>مدارس الفتيات لديها أجهزة كمبيوتر وإنترنت أقل ، مقارنة بالمدارس الذكور بسبب الأولوية المعطاة لتعليم الذكور في المملكة العربية السعودية بشكل عام ... (RL-1)</p> <p><i>The girl schools are in worse situation and with less learning resource centres than boy schools. You know, we have a problem, for example, if female Head teachers want to ask for computers and Internet for their schools, they cannot go to the education department directly because all the workers there are men. So, such female head teachers will need to send the request by post which can either get lost or sometime be ignored. (RL-2)</i></p> <p>مدارس البنات في وضع أسوأ ومع وجود مراكز موارد تعليمية أقل من مدارس الصبيان. كما تعلمون ، لدينا مشكلة ، على سبيل المثال ، إذا أراد معلمو المدارس أن يطلبوا أجهزة الكمبيوتر والإنترنت لمدارسهم ، فإنهم لا يستطيعون الذهاب إلى قسم التعليم مباشرة لأن جميع العمال هناك هم من الرجال. لذا ، ستحتاج هذه المعلمات رئيس لإرسال الطلب عن طريق البريد الذي يمكن إما أن تضيع أو في وقت ما يتم تجاهلها. (RL-2)</p> <p><i>..., male schools are much better than the female schools. As far as I'm aware, there is a big number of female schools that are not even in government buildings which makes those schools difficult to have computer labs since they are small buildings with huge number of students... (RL-5)</i></p> <p>... ، مدارس الذكور أفضل بكثير من المدارس النسائية. على حد علمي ، هناك عدد كبير من المدارس النسائية التي لا توجد حتى في المباني الحكومية مما يجعل من الصعب على هذه المدارس أن تمتلك مختبرات حاسوب لأنها مبان صغيرة تحتوي على عدد كبير من الطلاب ... (RL-5)</p> <p><i>When there is good infrastructure in the schools to support E-learning usage, teachers but particularly female teachers will be more inclined to use E-learning in their teaching.... I think females are more motivated to use technology than male but they can only do so if it is available and in good condition.... (RL-4)</i></p> <p>عندما تكون هناك بنية تحتية جيدة في المدارس لدعم استخدام التعليم الإلكتروني ، سيكون المعلمون ، ولكن بشكل خاص المعلمات ، أكثر ميلاً لاستخدام التعليم الإلكتروني في تعليمهم ... أعتقد أن النساء أكثر تحفيزاً لاستخدام التكنولوجيا من الذكور ، لكن لا يمكنهن فعل ذلك إلا إذا كان متاحاً وفي حالة جيدة ... (RL-4)</p>
Access at Home and Gender Issues	Culture and gender issues	<p><i>We have a very strong culture and parents would not allow their children to go online and interact with people not known to the parents. You are talking about students at school going age. What is</i></p>

	<p><i>common is, parents allow their children to only engage with other children within the society... their exposure is limited ... that is to teachers, family friends and their friends in school. (RL-4)</i></p> <p><i>لدينا ثقافة قوية للغاية ولن يسمح الآباء لأطفالهم بالاتصال بالإنترنت والتفاعل مع أشخاص غير معروفين للوالدين. أنت تتحدث عن الطلاب في سن المدرسة. ما هو شائع هو أن الآباء يسمحون لأطفالهم بالتواصل مع الأطفال الآخرين فقط داخل المجتمع ... إن تعرضهم محدود... وهذا هو للمعلمين وأفراد العائلة وأصدقائهم في المدرسة. (RL-4)</i></p> <p><i>The reluctance of people to allow their children to use E-learning can be traced back to two important points. One, families worry about gender-mixing online; and two, the fact that parents think they cannot control or do not know what is happening online and who is at the other end. As you know, Saudi society have their own culture and they always try to keep their own privacy. For example, the society's view of the woman is completely different from western countries, they will not allow her even in an online gender-mixing environment. I'm sure some families will restrict mixing in the virtual world, especially girls more than boys. (RL-1)</i></p> <p><i>إن عودة الناس إلى السماح لأطفالهم باستخدام التعليم الإلكتروني تعود إلى نقطتين هامتين. أولاً ، تعلق الأسر حول الاختلاط بين الجنسين عبر الإنترنت ؛ وإثبات ، حقيقة أن الآباء يعتقدون أنهم لا يستطيعون السيطرة أو لا يعرفون ما يحدث على الإنترنت ومن هو في الطرف الآخر. كما تعلم ، لدى المجتمع السعودي ثقافته الخاصة ويحاول دائماً الحفاظ على خصوصيته الخاصة. على سبيل المثال ، تختلف وجهة نظر المجتمع عن المرأة تماماً عن الدول الغربية ، ولن تسمح لها بذلك حتى في بيئة خلط بين الجنسين على الإنترنت. أنا متأكد من أن بعض العائلات سوف تقيد الاختلاط في العالم الافتراضي ، وخاصة الفتيات أكثر من الأولاد. (RL-1)</i></p> <p><i>The main problem for Saudi culture with E-learning is with regard to synchronous E-learning lessons. Even in the MoE, there is divided opinion on the idea of an online mix-gender education. Those who are in support of gender-mixing argue that it is the only choice available to break any existing barriers that stop boys and girls from sitting in the same classroom. Those who object to the idea on the other hand stress the need to keep the society's culture while we can have a gender segregated E-learning. (RL-3)</i></p> <p><i>المشكلة الرئيسية للثقافة السعودية مع التعلم الإلكتروني هي فيما يتعلق بدروس التعلم الإلكتروني المتزامن. حتى في وزارة التعليم ، هناك رأي منقسم حول فكرة التعليم المختلط عبر الإنترنت. يجادل أولئك الذين يؤيدون الاختلاط بين الجنسين بأن هذا هو الخيار الوحيد متاح لكسر أي حواجز قائمة تمنع الفتيان والفتيات من الجلوس في نفس الفصل الدراسي. إن من يعترض على الفكرة من جهة أخرى يشدد على الحاجة إلى الحفاظ على ثقافة المجتمع بينما يمكننا أن نحصل على تعليم إلكتروني منفصل عن الجنسين. (RL-3)</i></p>
Parents' awareness	<p><i>Most families lack the awareness of the importance of E-learning and fear of its unexpected results about their children studies as most of the families prefer face to face ... if MoE informs families about the importance of E-learning, in this case, the mother and the father will see their children being on the computer and Internet, would be part of their learning. (RL-2)</i></p> <p><i>تفتقر معظم العائلات إلى الوعي بأهمية التعلم الإلكتروني والخوف من نتائجها غير المتوقعة حول دراسات أبنائها لأن معظم الأسر تفضل وجها لوجه ... إذا أبلغت وزارة التربية الأسر حول أهمية التعلم الإلكتروني ، في هذه الحالة ، فإن الأم وسوف يرى الأب أطفالهم على الكمبيوتر والإنترنت ، سيكون جزءاً من تعلمهم. (RL-2)</i></p> <p><i>It depends on the family itself, actually. I can see that male students have more access to computers and Internet than the female</i></p>

		<p>students. This is true, families restrict girls to access the Internet to avoid gender mixing in the Internet. But this would change in the future if the families are educated enough by the advantages of technology in their children education for both male and female. (RL-5)</p> <p>هذا يعتمد على الأسرة نفسها ، في الواقع. أستطيع أن أرى أن الطلاب الذكور لديهم وصول أكبر إلى أجهزة الكمبيوتر والإنترنت أكثر من الطالبات. هذا صحيح ، فالعائلات تقيد الفتيات على الوصول إلى الإنترنت لتجنب الاختلاط بين الجنسين في الإنترنت. لكن هذا سيتغير في المستقبل إذا تم تثقيف العائلات بما فيه الكفاية من خلال مزايا التكنولوجيا في تعليم أبنائهم لكل من الذكور والإناث. (RL-5)</p> <p>rising up parents' awareness about E-learning is a very important strategy which will help to expand E-learning all over the country more faster and with less parents' reluctant. ... Unfortunately, there no such programme to build parents' awareness in online learning and that is supervised by the MoE. ... You know, we cannot say that the MoE is the only one responsible, head-teachers should take the initiative to meet with parents and explain to them that online learning and that is supervised by the MoE and this would help to mitigate the restrictions on girls from parents. (RL-4)</p> <p>يعد رفع مستوى وعي الأهل حول التعلم الإلكتروني من الاستراتيجيات المهمة جدًا التي ستساعد على توسيع التعلم الإلكتروني في جميع أنحاء البلاد بشكل أسرع وبقدر أقل من تردد أولياء الأمور. ... للأسف ، لا يوجد مثل هذا البرنامج لبناء وعي الوالدين في التعلم عبر الإنترنت وتشرف عليه وزارة التعليم. ... كما تعلمون ، لا يمكننا أن نقول أن وزارة التعليم هي المسؤولة الوحيدة ، على المعلمين أن يأخذوا زمام المبادرة للقاء الوالدين وأن يشروحو لهم أن التعلم عبر الإنترنت والذي تشرف عليه وزارة التعليم سيساعد على التخفيف من القيود المفروضة على الفتيات من الآباء. (RL-4)</p> <p>When a student registers for his first time in the schools, the schools ask for the parents' contact details such as phone number and email and we keep all of these information in my system called Nor. Unfortunately, we accessed these information to directly build accounts for parents and their children in the E-learning system and sent the details to them, but all the information is very old. There has been no update for them for many years... The lack of such information itself is a problem for us as E-learning support centre to spread the culture of E-learning in the society. (RL-3)</p> <p>عندما يسجل الطالب للمرة الأولى في المدارس ، تسأل المدارس عن تفاصيل الاتصال الخاصة بالأبوين مثل رقم الهاتف والبريد الإلكتروني ونحتفظ بجميع هذه المعلومات في نظامي باسم نور. ولسوء الحظ ، قمنا بالوصول إلى هذه المعلومات لإنشاء حسابات مباشرة للآباء وأطفالهم في نظام التعلم الإلكتروني وإرسال التفاصيل إليهم ، ولكن جميع المعلومات قديمة جدًا. لم يكن هناك أي تحديث لها لسنوات عديدة ... عدم وجود مثل هذه المعلومات بحد ذاتها يمثل مشكلة بالنسبة لنا كمركز دعم للتعليم الإلكتروني لنشر ثقافة التعلم الإلكتروني في المجتمع. (RL-3)</p>
E-learning Evaluation	E-learning Evaluation	<p>... part of our duty is to gather data which help us to evaluate the level of participation at the individual and school level. But what we actually do is gather information, then forward this data to the MoE. Whatever they then decide to do with the data is up to them... (RL-1)</p> <p>... جزء من واجبنا هو جمع البيانات التي تساعدنا على تقييم مستوى المشاركة على مستوى الفرد والمدرسة. لكن ما نقوم به بالفعل هو جمع المعلومات ، ثم إرسال هذه البيانات إلى وزارة التعليم. كل ما يقررون القيام به مع البيانات متروك لهم ... (RL-1)</p> <p>We are as a support centre, there is a form supervisor, at the end of</p>

		<p><i>term we prepare a report to our headmaster. In this report, we have a school of which they activates their online account and school didn't activate their account. Number of teachers who did active his/her account E-learning, like this, okay? At the end we have some points about the obstacles or difficulties that face us. (RL-5)</i></p> <p><i>نحن كمركز دعم ، وهناك مشرف على النموذج ، وفي نهاية الفصل نقوم بإعداد تقرير إلى مدير المدرسة. في هذا التقرير ، لدينا مدرسة ينشطون بها حسابهم عبر الإنترنت ولم تقم المدرسة بتنشيط حسابهم. عدد المدرسين الذين قاموا بتفعيل حسابهم الإلكتروني ، مثل هذا ، حسناً؟ في النهاية لدينا بعض النقاط حول العقبات أو الصعوبات التي تواجهنا. (RL-5)</i></p> <p><i>I'm not aware that the MoE even ask for any feedback about E-learning implementation. What I am aware of is that the committee in-charge of E-learning designing and development in the MoE takes decisions and circulate them to all schools throughout the Kingdom. But not how they evaluate what they do or at least I do not know about it... (RL-2)</i></p> <p><i>لست على علم بأن وزارة التربية والتعليم حتى تسأل عن أي ملاحظات حول تنفيذ التعلم الإلكتروني. ما أدركه هو أن اللجنة المسؤولة عن تصميم التعليم الإلكتروني وتطويره في وزارة التربية تأخذ القرارات وتعممها على جميع المدارس في جميع أنحاء المملكة. ولكن ليس كيفية تقييم ما يفعلونه أو على الأقل لا أعرف عنه ... (RL-2)</i></p>
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Heads of Families Interview Data

<p>Access at Home and Parental Control</p>	<p>Access at Home and Parental Control</p>	<p><i>We have a computer and access to the Internet at home. In our family we use the computer everyday at home (FR-5)</i></p> <p><i>لدينا جهاز كمبيوتر والوصول إلى الإنترنت في المنزل. في عائلتنا ، نستخدم الكمبيوتر كل يوم في المنزل (FR-5)</i></p> <p><i>To be honest, I just used the computer and Internet after I retired. There was no need to use computer and Internet for my teaching. Now I use the computer and Internet because I have more free time. I try to spend my time doing some reading, looking after news or other stuff. My daughters do not have access to the computer or Internet.... (FR-7)</i></p> <p><i>أن تكون صادقين ، أنا فقط استخدمت الكمبيوتر والإنترنت بعد أن تقاعدت. لم تكن هناك حاجة لاستخدام الكمبيوتر والإنترنت لتدريسي. الآن أنا استخدم الكمبيوتر والإنترنت لأن لدي المزيد من وقت الفراغ. أحاول أن أقضي وقتي في القيام ببعض القراءة ، ورعاية الأخبار أو أشياء أخرى. لا تستطيع بناتي الوصول إلى الكمبيوتر أو الإنترنت ... (FR-7)</i></p> <p><i>I allow my daughters to use the computer and Internet at home. I also allow them access to the Internet via their mobile phones. ... But, I am looking for a parental control software that could control or limit their access, especially via their mobile phones... At the moment I just control them by taking their mobile phones from them for some days and giving it back to them. It is a fear of the dangers on the Internet. I am sure many parents have the same fears. I think schools should do something about it by educating us and assurance that the use of E-learning is going to be safe. (FR-8)</i></p> <p><i>أسمح لبناتي باستخدام الكمبيوتر والإنترنت في المنزل. كما أسمح لهم بالوصول إلى الإنترنت عبر هواتفهم المحمولة. ... لكن ، أنا أبحث عن برمجيات مراقبة أوعية يمكنها التحكم أو الحد من وصولهم ، خاصة عبر هواتفهم المحمولة ... في اللحظة التي أتحكم فيها فقط عن طريق أخذ هواتفهم المحمولة منها لعدة أيام وإعادة إعدادتها لهم. إنه الخوف من الأخطار على الإنترنت. أنا متأكد من أن العديد من الآباء لديهم نفس المخاوف. أعتقد أن المدارس يجب أن تفعل شيئاً حيال ذلك من خلال تثقيفنا والتأكيد على أن استخدام التعلم الإلكتروني سيكون آمناً. (FR-8)</i></p>
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		<p><i>As a father, I prefer the traditional means of teaching and learning in the classroom. I know the world is changing but that is what we are used to in this society. The problem is that if we allow our children to use this technology, they will be exposed to things that are not accepted in our culture and religion... this is why I do not allow my children to use the computer at home ... (FR-10)</i></p> <p>كأب ، أفضّل الوسائل التقليدية للتعليم والتعلم في الفصل الدراسي. أعرف أن العالم يتغير لكن هذا ما اعتدنا عليه في هذا المجتمع. المشكلة هي أنه إذا سمحنا لأطفالنا باستخدام هذه التكنولوجيا ، فسيتعرضون لأشياء غير مقبولة في ثقافتنا وديننا ... ولهذا السبب لا أسمح لأطفالي باستخدام الكمبيوتر في المنزل ... (FR-10)</p> <p><i>... I allow my children limited access to the Internet via their mobile phones but not by the home computer. In fact they are only allowed to use the Internet while they are in the living room. I think allowing them access to the Internet without monitoring is dangerous. I always tell them about the dangers of the Internet in terms of sexual issues and other things that can affect their religion. (FR-14)</i></p> <p>... أسمح لأطفالي الوصول المحدود إلى الإنترنت عبر هواتفهم المحمولة ولكن ليس من خلال الكمبيوتر المنزلي. في الواقع ، لا يُسمح لهم باستخدام الإنترنت إلا أثناء وجودهم في غرفة المعيشة. أعتقد أن السماح لهم بالوصول إلى الإنترنت دون مراقبة أمر خطير. أنا دائما أقول لهم عن مخاطر الإنترنت من حيث القضايا الجنسية وغيرها من الأشياء التي يمكن أن تؤثر على دينهم. (FR-14)</p> <p><i>I allow my children access to Internet most of the time but talk to them regularly about the dangers of it.... For example, I tell them that there are good and bad sides to the use of the Internet and that they should not trust people they meet online easily... (FR-4)</i></p> <p>أسمح لأطفالي بالوصول إلى الإنترنت معظم الوقت ولكن تحدثوا معهم بانتظام حول مخاطر ذلك ... على سبيل المثال ، أخبرهم أن هناك جوانب جيدة وسيئة لاستخدام الإنترنت وأنهم لا ينبغي أن يثقوا بالأشخاص الذين يلتقون بهم على الإنترنت بسهولة ... (FR-4)</p>
<p>Parents Views of English Language</p>	<p>Parents Views of English Language</p>	<p><i>You know, nowadays most of the universities teach in English which makes English very important for all students. In fact all students now need English in order to be successful in their education ... I wish our children knew this and are motivated more to learn English. But some of them do not seem to be motivated ... (FR-12)</i></p> <p>تعلمون، في الوقت الحاضر معظم الجامعات تدرس باللغة الإنجليزية مما يجعل اللغة الإنجليزية مهمة للغاية لجميع الطلاب. في الواقع ، يحتاج جميع الطلاب الآن إلى اللغة الإنجليزية لكي ينجحوا في تعليمهم ... أتمنى لو كان أطفالنا يعرفون ذلك ويتم تحفيزهم أكثر لتعلم اللغة الإنجليزية. لكن البعض منهم لا يبدو أنهم متحمسون ... (FR-12)</p> <p><i>... Of course, I feel that my daughters must learn English, it is so important for their future access to knowledge. I also think that when they learn English, it will help them to continue their education to the highest level. They can be more successful with a good background in English language. (FR-9)</i></p> <p>... بالطبع ، أشعر أن بناتي يجب أن يتعلمن اللغة الإنجليزية ، فهي مهمة للغاية للوصول إلى المعرفة في المستقبل. أعتقد أيضا أنه عندما يتعلمون اللغة الإنجليزية ، فإنه سوف يساعدهم على مواصلة تعليمهم إلى أعلى مستوى. يمكن أن تكون أكثر نجاحًا مع خلفية جيدة في اللغة الإنجليزية. (FR-9)</p>

Well, you see nowadays in Saudi Arabia we live a revolution, there is a new vision in Saudi Arabia, 2030, and all things in Saudi Arabia depends on two basic things, English and computer. Okay. Especially the good jobs here. If you want your child to have a good position in the society, you have to make them learn two basically in English and computer. With these two things, with these two skills, there is a big opportunity for them, a big chance for them to be highly ranked in the society. In my opinion, that's why it's important. (FR-1)

حسناً ، أنت ترى اليوم في السعودية نعيش ثورة ، هناك رؤية جديدة في المملكة العربية السعودية ، 2030 ، وكل الأشياء في المملكة العربية السعودية تعتمد على أمرين أساسيين ، هما الإنجليزية والكمبيوتر. حسناً. خاصة الوظائف الجيدة هنا. إذا كنت تريد أن يكون لطفلك مكانة جيدة في المجتمع ، فعليك أن تجعله يتعلم بشكل أساسي باللغة الإنجليزية والكمبيوتر. مع هذين الأمرين ، مع هاتين المهارتين ، هناك فرصة كبيرة بالنسبة لهم ، فرصة كبيرة لهم لتكون مرتبة عالية في المجتمع. في رأيي ، هذا هو السبب في أنه مهم. (FR-1)

I think that learning English is a good thing but our methods ill-prepare students for the international job market. ... There are many people here in Saudi Arabia who have not learned enough English that will allow them to communicate meaningful with others. They have only learnt the basics and so, it is very difficult for such people to seek employment outside Saudi Arabia or even with international companies in Saudi Arabia... (FR-3)

أعتقد أن تعلم اللغة الإنجليزية أمر جيد ولكن أساليبنا تعد الطلاب لدخول سوق العمل الدولي. ... هناك الكثير من الناس هنا في المملكة العربية السعودية الذين لم يتعلموا الإنجليزية الكافية التي تسمح لهم بالتواصل مع الآخرين. لقد تعلموا الأساسيات فقط ، لذا ، من الصعب جداً على هؤلاء الناس البحث عن عمل خارج المملكة العربية السعودية أو حتى مع الشركات العالمية في المملكة العربية السعودية ... (FR-3)

the language of the sciences in the modern era (FR-15)

لغة العلوم في العصر الحديث (FR-15)

My children are actually not doing great in English and that is because they study English for one hour, four times a week. I think many reasons are in play here, for example, poor teaching method and teachers, and the time for studying English is not enough. They should increase the time for learning English to two or three hours a day. This will allow students more opportunities to learn and practice EFL. Improvement of teaching in the intermediate and high schools and increasing their quotas is equally important. I also believe that the learning and teaching environments in their schools are inappropriate and very deficient, both in terms of the large number of students in the classroom, the weakness of the curriculum and the means of learning, and even the weak qualifications of many English teachers. Something need to be done about this in order to help improve our English in this country (FR-16)

في الواقع ، لا يقوم أطفالنا بعمل عظيم في اللغة الإنجليزية ، وذلك لأنهم يدرسون اللغة الإنجليزية لمدة ساعة واحدة ، أربع مرات في الأسبوع. أعتقد أن هناك العديد من الأسباب هنا ، على سبيل المثال ، أسلوب التدريس الضعيف والمعلمين ، والوقت لدراسة اللغة الإنجليزية لا يكفي. يجب عليهم زيادة وقت تعلم اللغة الإنجليزية إلى ساعتين أو ثلاث ساعات في اليوم. هذا سيسمح للطلاب المزيد من الفرص لتعلم وممارسة اللغة الإنجليزية كلغة أجنبية. تحسين التعليم في المدارس المتوسطة والثانوية وزيادة حصصهم أمر لا يقل أهمية. كما أعتقد أن بيئات التعلم والتعليم في مدارسهم غير مناسبة وقاصرة للغاية ، سواء

		<p>من حيث العدد الكبير للطلاب في الفصل الدراسي ، وضعف المناهج الدراسية ووسائل التعلم ، وحتى المؤهلات الضعيفة للعديد من الإنجليزية معلمون. يجب القيام بشيء حيال هذا من أجل المساعدة في تحسين لغتنا الإنجليزية في هذا البلد (FR-16)</p>
Parental Attitudes Towards E-learning	Parental Attitudes Towards E-learning	<p><i>Yeah, if this E-learning is controlled well and serves the human priority or the people's priority, I think there is no fear to have this kind of thing. (FR-1)</i></p> <p>نعم ، إذا كان يتم التحكم في هذا التعليم الإلكتروني بشكل جيد ويخدم الأولوية البشرية أو أولوية الناس ، أعتقد أنه لا يوجد خوف من وجود هذا النوع من الأشياء. (FR-1)</p> <p><i>the key thing for me is using E-learning within the strict traditional customs of Saudi society. As long as that is met, I'm happy with the use of E-learning ... chatting should be monitored by teachers and not done in private. (FR-3)</i></p> <p>الشيء الرئيسي بالنسبة لي هو استخدام التعلم الإلكتروني ضمن العادات التقليدية الصارمة للمجتمع السعودي. وطالما تم استيفاء ذلك ، يسعدني استخدام التعلم الإلكتروني ... يجب مراقبة المحادثة من قبل المعلمين وعدم إجراء ذلك على أفراد. (FR-3)</p> <p><i>We are happy with our traditional system of education and there is no need to make it modern. I think the notion that our education system needs improvement is wrong. I am worried because I just do not know anything about E-learning.... But if E-learning will be used in line with our Saudi culture – that is, gender segregated, fully approved and completely control by the school, I would accept that... (FR-11)</i></p> <p>نحن سعداء بنظام التعليم التقليدي لدينا وليس هناك حاجة لجعله حديثاً. أعتقد أن الفكرة القائلة بأن نظامنا التعليمي بحاجة إلى تحسين هو مفهوم خاطئ. أشعر بالقلق لأنني لا أعرف أي شيء عن التعلم الإلكتروني ... ولكن إذا تم استخدام التعلم الإلكتروني تماشياً مع ثقافتنا السعودية - أي ، الفصل بين الجنسين ، والموافقة الكاملة والسيطرة الكاملة من قبل المدرسة ، سأقبل ذلك ... (FR-11)</p> <p><i>My girls have absolutely no need to use computer and Internet for learning English, if they need more support to learning English, I can provide them with private female teachers. Why would there be any need to use E-learning? I think everything is working fine in the schools, what is needed are more training for teachers and the supply of more trained teachers in our schools. (FR-7)</i></p> <p>ليس لدى فتيات بلدي على الإطلاق حاجة لاستخدام الكمبيوتر والإنترنت لتعلم اللغة الإنجليزية ، إذا كانوا بحاجة إلى المزيد من الدعم لتعلم اللغة الإنجليزية ، يمكنني تزويدهم بمعلمات خاصات. لماذا سيكون هناك أي حاجة لاستخدام التعلم الإلكتروني؟ أعتقد أن كل شيء يسير على ما يرام في المدارس ، ما هو مطلوب هو المزيد من التدريب للمدرسين وتزويد المزيد من المعلمين المدربين في مدارسنا. (FR-7)</p> <p><i>For me my restriction [of E-learning] has nothing to do with cultural implications or religious beliefs. I simply think that face-to-face teaching is a better alternative. For instance it helps with direct contact between students and teachers which I believe is more necessary for my girls to learn English than the use of E-learning. (FR-8)</i></p> <p>بالنسبة لي ، فإن تقديدي [للتعلم الإلكتروني] لا علاقة له بالآثار الثقافية أو المعتقدات الدينية. أعتقد ببساطة أن التدريس وجها لوجه هو بديل أفضل. على سبيل المثال ، يساعد ذلك في التواصل المباشر بين الطلاب والمعلمين ، وهو ما أعتقد أنه ضروري أكثر لتعلم البنات الإنجليزية من استخدام التعلم الإلكتروني. (FR-8)</p>

... I am unable to accept the prospect of my daughters to be taught by male teachers or even communicating with other male students who are not close relatives to them. As a result I am worried about gender-mixing even in the virtual world. It is a cultural issue in Saudi society and my strict family beliefs will not permit me to do such a thing ... I might be able to accept recorded lessons if necessary and under my control. (FR-10)

... أنا غير قادر على قبول احتمال أن يتم تدريس بناتي من قبل معلمين ذكور أو حتى التواصل مع الطلاب الذكور الآخرين الذين ليسوا أقارب لهم. ونتيجة لذلك ، أشعر بالقلق من الاختلاط بين الجنسين حتى في العالم الافتراضي. إنها قضية ثقافية في المجتمع السعودي ، ولا تسمح لي معتقداتي العائلية الصارمة بأن أفعل مثل هذا الشيء ... قد أكون قادرة على قبول الدروس المسجلة إذا لزم الأمر وتحت سيطرتي. (FR-10)

I think it is not a question of whether one prefers the traditional teaching method over E-learning, or not. It is much about the fact that my daughters and other girls of their age are not matured psychological to use E-learning ... that is, they are not maturity enough or have the self-discipline to use E-learning without parents worrying about what they are doing, who they are meeting etc. Allowing them to use the computer and the Internet at this age will not be used for learning but for games which will affect their level of education. I can see them spending more time on their mobiles for games. I think E-learning can be useful at the university level. ... Schools have not informed me about the introduction of E-learning yet. I have read about this project on the MoE website but the understanding I get is not great because the information provided is very brief. I wish schools had explained this more to us... (FR-12)

أعتقد أن الأمر لا يتعلق بما إذا كان الشخص يفضل طريقة التدريس التقليدية على التعلم الإلكتروني أم لا. الأمر يتعلق بحقيقة أن بناتي وفتيات أخريات في سنهن لا ينضجون نفسياً لاستخدام التعلم الإلكتروني ... أي أنهم ليسوا ناضجين بما فيه الكفاية أو لديهم الانضباط الذاتي لاستخدام التعلم الإلكتروني دون قلق الأباء بشأن ما يفعلون ، من يجتمعون وما إلى ذلك. لن يسمح باستخدامهم الكمبيوتر والإنترنت في هذا العمر للتعلم ولكن للألعاب التي سوف تؤثر على مستواهم التعليمي. أستطيع أن أرىهم يقضون المزيد من الوقت على هواتفهم المحمولة للألعاب. أعتقد أن التعلم الإلكتروني يمكن أن يكون مفيداً على المستوى الجامعي. ... المدارس لم تبلغني عن إدخال التعليم الإلكتروني حتى الآن. لقد قرأت عن هذا المشروع على موقع وزارة التعليم الإلكتروني لكن الفهم الذي أحصل عليه ليس كبيراً لأن المعلومات المقدمة قصيرة جداً. أتمنى لو أن المدارس أوضحت لنا المزيد ... (FR-12)

I'm okay with the E-learning ... take it gradual, it's very difficult just to push them [Saudi society] to E-learning at once. (FR-15)

أنا بخير مع التعلم الإلكتروني ... اعتبره تدريجياً ، من الصعب جداً فقط دفعهم [المجتمع السعودي] إلى التعلم الإلكتروني في الحال. (FR-15)

I do not want my kids to be victims for this way of learning [E-learning] as it's unusual in Saudi Arabia. I will strive as long as I can to avoid it ... At least we should be given the opportunity to opt out if we think it is not in the best interest of our children ... (FR-13)

لا أريد أن يكون أطفالنا ضحايا لهذه الطريقة في التعلم [التعلم الإلكتروني] لأنه أمر غير معتاد في المملكة العربية السعودية. سأبذل قصارى جهدي لتفادي ذلك ... على الأقل يجب أن نمنح فرصة الانسحاب إذا كنا نعتقد أنها ليست في مصلحة أطفالنا ... (FR-13)

... our culture must be respected at all times and places but the introduction of E-learning in our schools will compromise this in many ways. For example, our children will have access to the

opposite gender... (FR-18)

... يجب أن تحترم ثقافتنا في جميع الأوقات والأماكن ولكن إدخال التعليم الإلكتروني في مدارسنا سيعرض ذلك للخطر بطرق عديدة. على سبيل المثال ، سيتمكن أطفالنا من الوصول إلى الجنس الآخر ... (FR-18)

I think this type of teaching and learning will be against our culture and religion and it not the right method for learning. ... I do not want my son and daughter to be in a gender-mixed education, online or even in the classrooms. Segregation between male and female in schools is one of our Islamic values and a culture that we are proud of. ... I am keen about the education of my sons and daughters, but I do not think educating them with the help E-learning is a good idea. ... I am more anxious about my daughters than the boys and really do not want the girls to mix with boys at all. ... There are actually no programmes educating parents about E-learning and the dangers associated with it. In fact, there is none that I'm aware of here in Saudi Arabia. As parents we need to be familiar with E-learning in order to be able to be of help in area... (FR-14)

أعتقد أن هذا النوع من التعليم والتعلم سيكون ضد ثقافتنا وديننا وليست الطريقة الصحيحة للتعليم. ... لا أريد أن يكون ابني وابنتي في تعليم مختلط الجنس ، عبر الإنترنت أو حتى في الفصول الدراسية. يعتبر الفصل بين الذكور والإناث في المدارس أحد قيمنا الإسلامية وثقافتنا التي نفخر بها. ... أنا حريصة على تعليم أبنائي وبناتي ، لكنني لا أعتقد أن تثقيفهم بمساعدة مساعدة التعلم الإلكتروني هي فكرة جيدة. ... أنا أكثر قلقاً بشأن بناتي أكثر من الأولاد ، وفي الحقيقة لا أريد أن تختلط الفتيات مع الأولاد على الإطلاق. ... لا توجد في الواقع برامج تثقيف الآباء حول التعلم الإلكتروني والمخاطر المرتبطة به. في الواقع ، لا يوجد شيء أعرفه هنا في المملكة العربية السعودية. كآباء يجب أن نكون على دراية بالتعليم الإلكتروني حتى نكون قادرين على المساعدة في المجال ... (FR-14)

I'm really keen about both my son and daughters, but more about my daughters. Honestly, I do not like the idea of a mixed gender education. I actually prefer teaching English using the everyday school teaching, face-to-face, that I can keep track of what my children are doing. (FR-16)

أنا حريصة حقاً على كل من ابني وبناتي، ولكن المزيد عن بناتي. بصراحة ، أنا لا أحب فكرة التعليم المختلط بين الجنسين. أنا أفضل بالفعل تدريس اللغة الإنجليزية باستخدام التعليم المدرسي اليومي ، وجهاً لوجه ، بحيث يمكنني تتبع ما يفعله أطفالي. (FR-16)

I prefer the face-to-face method to E-learning because I think E-learning will be too expensive for parents who have a lot of children. In my case, I have seven children and each of them will like to have a computer. That is going to be too much for me to manage. In that sense I prefer face-to-face teaching and learning which also guarantees that teachers have more control over the students (FR-17)

أفضل طريقة التعلم الإلكتروني وجهاً لوجه لأنني أعتقد أن التعلم الإلكتروني سيكون باهظ الثمن بالنسبة للآباء الذين لديهم الكثير من الأطفال. في حالتي ، لدي سبعة أطفال وكل واحد منهم يرغب في الحصول على جهاز كمبيوتر. هذا سيكون كثيراً بالنسبة لي لإدارة. بهذا المعنى ، أفضل التدريس والتعلم وجهاً لوجه والذي يضمن أيضاً للمعلمين سيطرة أكبر على الطلاب (FR-17)

Appendix K: Data from group interviews (students and teachers) – Abridge version

Major-theme	Main-theme	Sub-theme	Quotes (English and Arabic)
Personal factors	Self-efficacy	Skill and Knowledge in E-learning	<p>..., sometimes E-learning requires high skills in computer and use of the Internet..., some students are not educated enough in schools to manage the use of computer.</p> <p>... ، يتطلب التعلم الإلكتروني أحياناً مهارات عالية في الكمبيوتر واستخدام الإنترنت ...، لا يتم تعليم بعض الطلاب بما فيه الكفاية في المدارس لإدارة استخدام الكمبيوتر. (M.S.)</p> <p>We hope to see E-learning as a tool that can be used to support what the students are learning in the classroom. But to do this, managers in charge of the programme, first of all, need to give us and the students the appropriate assistance to raise our skills to a level that will enable us use this type of technology. (F.T.)</p> <p>نأمل أن نرى التعلم الإلكتروني كأداة لدعم وممارسة ما يتعلمه الطلاب في الفصل الدراسي ، ولكن يحتاج المدير أولاً إلى إعطائنا المهارات المناسبة للطلاب لهذا النوع من التكنولوجيا. (F.T.)</p> <p>... We do not have enough skill in using the computer and Internet through the school to be able to use E-learning, but at least we have good skills in using computer and Internet outside the school. (F.S.)</p> <p>... ليس لدينا ما يكفي من المهارات في استخدام الكمبيوتر والإنترنت من خلال المدرسة لنتمكن من استخدام التعلم الإلكتروني ، ولكن على الأقل لدينا مهارات جيدة في استخدام الكمبيوتر والإنترنت خارج المدرسة. (F.S.)</p> <p>..., it is not just the students who do not have enough skill to use E-learning. ... Some teachers also have difficulties in using E-learning. (F.T.)</p> <p>... ، ليس فقط الطلاب الذين ليس لديهم المهارات الكافية لاستخدام التعلم الإلكتروني. ... بعض المعلمين يواجهون صعوبات في استخدام التعلم الإلكتروني. (F.T.)</p> <p>... based on weakness in teaching computer subject in the school from the early stages, this is why some students if not the majority have low level of knowledge and skill using computer and Internet needed to use E-learning successfully. (F.T.)</p> <p>... على أساس ضعف في تدريس مادة الكمبيوتر في المدرسة من المراحل المبكرة ، وهذا هو السبب في أن بعض الطلاب ، إن لم يكن الأغلبية ، لديهم مستوى منخفض من المعرفة والمهارة باستخدام الكمبيوتر والإنترنت اللازمين لاستخدام التعلم الإلكتروني بنجاح. (F.T.)</p> <p>Because we do not have any skill with this technology, we will have anxiety about E-learning, so, we think this kind of lack of skill will stop us using E-learning. (F.S.)</p>

			<p>نظرًا لأننا لا نملك أي مهارة في هذه التقنية ، سيكون لدينا قلق بشأن التعلم الإلكتروني ، لذلك ، نعتقد أن هذا النوع من عدم المهارات سيوقفنا عن استخدام التعلم الإلكتروني. (F.S.)</p>
	Experience		<p>..., having some prior experience in E-learning generally is one of the factors which enhances students' use of E-learning (F.S.)</p> <p>... ، وجود بعض الخبرة السابقة في التعلم الإلكتروني بشكل عام هو أحد العوامل التي تعزز استخدام الطلاب للتعلم الإلكتروني ... (F.S.)</p> <p>You know, my dad is a mathematics teacher, sometimes he helps me to access some websites which are designed to help students learn mathematics. (F.S.)</p> <p>أنت تعرف أن والدي هو مدرس رياضيات ، وأحيانًا يساعدني في الوصول إلى بعض المواقع التي تم تصميمها لمساعدة الطلاب على تعلم الرياضيات. (F.S.)</p> <p>..., using E-learning without experience is very difficult ... it is difficult to use E-learning for learning English without prior experience (F.S.)</p> <p>... ، استخدام التعلم الإلكتروني بدون خبرة أمر صعب للغاية ... من الصعب استخدام التعلم الإلكتروني لتعلم اللغة الإنجليزية دون خبرة سابقة (F.S.)</p> <p>..., [having no experience] makes us feel a bit scared to use E-learning to teach students because we have no previous experience.... (F.T.)</p> <p>... ، [بدون خبرة] يجعلنا نشعر بالخوف قليلاً لاستخدام التعلم الإلكتروني لتعليم الطلاب لأننا لا نملك خبرة سابقة (F.T.) ...</p>
	Training in E-learning		<p>..., for us, actually, to use E-learning in our teaching will require having training first... (F.T.)</p> <p>... ، بالنسبة لنا ، في الواقع ، لاستخدام التعلم الإلكتروني في تدريسنا سيطلب التدريب أولاً ... (F.T.)</p> <p>We are confident that E-learning would be good for teaching English, but this would involve training first on how to use E-learning in teaching. (F.T.)</p> <p>نحن واثقون من أن التعلم الإلكتروني سيكون مفيدًا لتدريس اللغة الإنجليزية ، ولكن هذا سوف يتضمن التدريب أولاً على كيفية استخدام التعلم الإلكتروني في التدريس. (F.T.)</p> <p>We believe that providing for us and other students training is an important factor for E-learning success, before or during its implementation for learning English... (F.S.)</p> <p>نحن نؤمن بأن توفير التدريب لنا ولطلاب آخرين هو عامل مهم لنجاح التعلم الإلكتروني ، قبل أو أثناء تنفيذه لتعلم اللغة الإنجليزية ... (F.S.)</p> <p>..., providing training outside the school or inside the school will help student to be skilled in computer and that will help them to use E-learning. And it is very important to provide training to all users towards the use of E-learning.</p>

			<p><i>We think it is important to provide training for teachers before the actual implementation of E-learning.... (M.S.)</i></p> <p>... ، سيساعد توفير التدريب خارج المدرسة أو داخل المدرسة الطالب على أن يكونوا ماهرين في الكمبيوتر وأن يساعدهم على استخدام التعلم الإلكتروني. ومن المهم للغاية توفير التدريب لجميع المستخدمين نحو استخدام التعلم الإلكتروني. نعتقد أنه من المهم توفير التدريب للمعلمين قبل التنفيذ الفعلي للتعلم الإلكتروني ... (M.S.)</p> <p><i>..., the most important factor for us is some training before the actual use of E-learning, to encourage us to use it ... We think it is difficult to use E-learning without prior training... (F.S.)</i></p> <p>... ، أهم عامل بالنسبة لنا هو بعض التدريب قبل الاستخدام الفعلي للتعلم الإلكتروني ، لتشجيعنا على استخدامه ... نعتقد أنه من الصعب استخدام التعلم الإلكتروني دون تدريب مسبق ... (F.S.)</p> <p><i>... traditional teachers need some training regarding the use of E-learning. (M.T.)</i></p> <p><i>"... يحتاج المعلمون التقليديون إلى بعض التدريب فيما يتعلق باستخدام التعلم الإلكتروني. (M.T.)"</i></p>
Personal Access to Tools	Computer and Internet		<p><i>..., it is not everyone that have access to a computer and Internet connection at home especially students (F.T.)</i></p> <p>...، ليس كل شخص لديه حق الوصول إلى الكمبيوتر والاتصال بالإنترنت في المنزل وخاصة الطلاب ... (F.T.)</p> <p><i>... In our country, there aren't any homes without a computer and Internet, which makes the integration of E-learning easy. (F.T.)</i></p> <p><i>... في بلادنا ، لا توجد أي منازل بدون كمبيوتر وإنترنت ، مما يجعل دمج التعلم الإلكتروني سهلاً. (F.T.)</i></p> <p><i>... E-learning will be very costly for parents to provide at home because of the cost of computers and the Internet.... (F.S.)</i></p> <p><i>... سيكون التعليم الإلكتروني مكلفاً للغاية بالنسبة للآباء الذين سيقدمونه في المنزل بسبب تكلفة أجهزة الكمبيوتر والإنترنت ... (F.S.)</i></p> <p><i>... Even if we have these tools, maybe the Internet is very slow, which will create some difficulties in making contact with teachers and students. (M.T.)</i></p> <p><i>... حتى إذا كان لدينا هذه الأدوات ، ربما يكون الإنترنت بطيئاً جداً ، مما سيخلق بعض الصعوبات في إجراء اتصالات مع المعلمين والطلاب. (M.T.)</i></p>
Personal Drivers	Attitudes toward E-learning		<p><i>..., if the teacher has a positive attitude about E-learning this will influence the students' attitudes positively to use E-learning. You know, positive attitudes will help users to use E-learning, if it is negative they will not use E-learning. (F.T.)</i></p> <p><i>... إذا كان لدى المعلم موقفاً إيجابياً حول التعلم الإلكتروني ، فسيؤثر هذا على</i></p>

		<p>مواقف الطلاب بشكل إيجابي لاستخدام التعلم الإلكتروني. كما تعلم ، ستساعد المواقف الإيجابية المستخدمين على استخدام التعلم الإلكتروني ، إذا كان سلبياً ، فإنهم لن يستخدموا التعلم الإلكتروني. (F.T.)</p> <p>.... <i>Some students are growing up with this kind of technology with their daily lives. This means that most of the students have experience with those kind of technologies, so they for sure will have a positive attitude towards E-learning, because of their experience. (F.T.)</i></p> <p>... ينشأ بعض الطلاب مع هذا النوع من التكنولوجيا في حياتهم اليومية. هذا يعني أن معظم الطلاب لديهم خبرة في هذا النوع من التقنيات ، لذلك سيكون لديهم بالتأكيد موقف إيجابي تجاه التعلم الإلكتروني ، بسبب خبرتهم. (F.T.)</p> <p>... <i>We like using technology, and we think the learning level of students using E-learning will be better than with traditional method of education.... (M.T.)</i></p> <p>... نحب استخدام التكنولوجيا ، ونعتقد أن مستوى التعلم لدى الطلاب الذين يستخدمون التعليم الإلكتروني سيكون أفضل من أسلوب التعليم التقليدي.... (M.T.)</p> <p>.... <i>Sometimes we find difficulties to understand the context not because we can't use computers, it's about the explanation of substance which needs a teacher. So, for us, we do not think E-learning will enhance the learning of English process. (M.S)</i></p> <p>... أحياناً نجد صعوبة في فهم السياق ليس لأنه لا يمكننا استخدام أجهزة الكمبيوتر ، بل يتعلق بشرح المحتوى الذي يحتاج إلى معلم. لذا ، بالنسبة لنا ، لا نعتقد أن التعلم الإلكتروني سيعزز تعلم عملية اللغة الإنجليزية. (M.S)</p>
	<p>Motivation</p>	<p>...., <i>providing adequate incentives for teachers will help to integrate E-learning into the teaching process because teachers have to spend more time and more effort preparing the materials to the students. (F.T.)</i></p> <p>... ، توفير الحوافز المناسبة للمعلمين سيساعد على دمج التعلم الإلكتروني في العملية التعليمية لأن المعلمين يضطرون إلى قضاء المزيد من الوقت والمزيد من الجهد في إعداد المواد للطلاب. (F.T.)</p> <p><i>Giving incentives and awards to both students and teachers who use E-learning will encourage other students and teachers to use E-learning. (M.T.)</i></p> <p>إن إعطاء الحوافز والجوائز لكل من الطلاب والمعلمين الذين يستخدمون التعلم الإلكتروني سيشجع الطلاب والمعلمين الآخرين على استخدام التعلم الإلكتروني. (M.T.)</p> <p>...., <i>they consider the use of E-learning to obtain information easily as a good motivator. (F.S.)</i></p> <p>... ، يعتبرون استخدام التعلم الإلكتروني للحصول على المعلومات بسهولة كحافز جيد. (F.S.)</p> <p><i>If you want to work, do not wait for someone to thank you. The stimulus is not important aspect, but that could raise the morale of teachers. (M.T.)</i></p>

			<p>إذا كنت ترغب في العمل ، فلا تنتظر أن يشرك أحد الحافز ليس جانباً هاماً ، ولكن هذا يمكن أن يرفع من معنويات المعلمين. (M.T.)</p>
		Time commitment	<p>..., it will require teachers to prepare some lessons through E-learning or some exercises or may be more than that, for example to be online to meet students or other teachers ... (F.T.)</p> <p>...، سيتطلب الأمر من المعلمين إعداد بعض الدروس من خلال التعلم الإلكتروني أو بعض التمارين أو قد يكون أكثر من ذلك ، على سبيل المثال أن تكون على الإنترنت لمقابلة الطلاب أو المعلمين الآخرين ... (F.T.)</p> <p>..., using such kind of technology needs too much effort - more time and training. (F.T.)</p> <p>...، استخدام مثل هذا النوع من التكنولوجيا يحتاج إلى الكثير من الجهد - المزيد من الوقت والتدريب. (F.T.)</p> <p>..., shifting from traditional education to E-learning, teachers will find it as waste of time because it requires a lot of practice to learn and to apply it. (M.T.)</p> <p>...، ينتقل المدرسون من التعليم التقليدي إلى التعليم الإلكتروني ، ويجدونه مضيقاً للوقت لأنه يتطلب الكثير من الممارسة للتعلم وتطبيقه. (M.T.)</p> <p>..., we're impressed by it because we can get information without effort and wasting time. It will really be amazing ... (F.S.)</p> <p>...، لقد أعجبنا ذلك لأنه يمكننا الحصول على معلومات بدون جهد وإضاعة الوقت. سيكون حقاً مدهشاً ... (F.S.)</p>
External factors	Social Factors	<p>Family Support (Family acceptance of the technology and</p> <p>Prioritising the technology and providing access to the technology)</p>	<p>They [Families] do not want their children to use Internet in order to protect them from the danger they hear about it. You know most of the families perceived the Internet as a dangerous place for the children. (F.T.)</p> <p>إنهم [العائلات] لا يرغبون في أن يستخدم أطفالهم الإنترنت لحمايتهم من الخطر الذي يسمعون عنه. أنت تعرف أن معظم العائلات تعتبر الإنترنت مكاناً خطيراً للأطفال. (F.T.)</p> <p>..., the Internet leads to contact between males and females which is unacceptable in the Saudi culture. (M.T.)</p> <p>... ، يؤدي الإنترنت إلى الاتصال بين الذكور والإناث وهو أمر غير مقبول في الثقافة السعودية. (M.T.)</p> <p>..., to be honest, our families are less strict with our brothers even if they are younger. Parents deal differently in some cases between girls and boys in our culture. (F.S.)</p> <p>...، لنكون صادقين ، أسرنا أقل صرامة مع إخواننا حتى لو كانوا أصغر سناً. يتعامل الوالدان بشكل مختلف في بعض الحالات بين الفتيات والفتيان في ثقافتنا. (F.S.)</p> <p>..., parents deal differently with boys and girls regarding the use of Internet because they want to keep us [girls] safe and be away from many dangers that can occur via the</p>

			<p><i>Internet (F.S.)</i></p> <p>... يتعامل الوالدان بشكل مختلف مع الأولاد والبنات فيما يتعلق باستخدام الإنترنت لأنهم يريدون إبقاءنا [الفتيات] في أمان والتخلص من العديد من المخاطر التي يمكن أن تحدث عبر الإنترنت ... (F.S.)</p> <p>..., parents see the Internet as time wasting (F.S.)</p> <p>...، يرى الآباء الإنترنت كهدر للوقت. (F.S.)</p> <p>..., using E-learning will not be consistent with our parents' worldview They do not understand the advantages of using E-learning for our studies and won't allow us to use this technology. (F.S.)</p> <p>...، لن يكون استخدام التعلم الإلكتروني متسقاً مع وجهة نظر آبائنا حول العالم ... فهم لا يفهمون مزايا استخدام التعلم الإلكتروني في دراستنا ولن نسمح لنا باستخدام هذه التقنية. (F.S.)</p> <p><i>Students who have laptops and their parents allow them to connect to the Internet anytime, means that their parents understand that technologies are very useful to their children's studies.... (F.S.)</i></p> <p>الطلاب الذين لديهم أجهزة الكمبيوتر المحمولة وأولياء أمورهم يسمحون لهم بالاتصال بالإنترنت في أي وقت ، يعني أن آباءهم يفهمون أن التقنيات مفيدة جداً لدراسات أطفالهم ... (F.S.)</p> <p>..., the high cost of Internet which will be an additional strain on the family budget... influences the readiness of the student to use E-learning ... (M.S.)</p> <p>...، والتكلفة العالية للإنترنت التي ستكون ضغطاً إضافياً على ميزانية الأسرة ... تؤثر على استعداد الطالب لاستخدام التعلم الإلكتروني ... (M.S.)</p> <p>..., my dad is a mathematics teacher, sometimes he helps me to access some websites which are designed to help students learn mathematics. He knows that E-learning is useful for students, so he will let me use E-learning. (F.S.)</p> <p>...، والذي هو مدرس رياضيات، ويساعدني أحياناً في الوصول إلى بعض المواقع التي تم تصميمها لمساعدة الطلاب على تعلم الرياضيات. وهو يعلم أن التعلم الإلكتروني مفيد للطلاب ، لذا سيسمح لي باستخدام التعلم الإلكتروني. (F.S.)</p>
	Perceived Peer Support		<p>..., sometimes it is possible to have chats with some people on Facebook. We might not know them, but the idea is to have some friends from outside the country so that you can try to communicate in English with them.... These friends we meet online are really supportive in our communication in English. (F.S.)</p> <p>...، من الممكن في بعض الأحيان إجراء محادثات مع بعض الأشخاص على فيس بوك. قد لا نعرفها ، لكن الفكرة هي أن يكون لديك أصدقاء من خارج البلاد حتى تتمكن من التواصل باللغة الإنجليزية معهم ... هؤلاء الأصدقاء الذين نلتقي بهم عبر الإنترنت مؤيدون حقاً في اتصالاتنا باللغة الإنجليزية. (F.S.)</p> <p>..., it is absolutely right, the first time I used E-learning I</p>

			<p><i>found it so difficult, but I asked for some help from friends.... (F.S.)</i></p> <p>...، هذا صحيح تماما ...، في المرة الأولى التي استخدمت فيها التعلم الإلكتروني ، وجدت صعوبة كبيرة ، لكنني طلبت بعض المساعدة من الأصدقاء... (F.S.)</p> <p><i>..., a friend built my confidence to use the computer and Internet in my teaching when she introduced me to the technology and taught me how to use it. This has helped me prepare for my lessons.... (F.T.)</i></p> <p>...، قام صديق ببناء ثقتي لاستخدام الكمبيوتر والإنترنت في التدريس عندما عرفتني على التكنولوجيا وعلمتني كيفية استخدامها. لقد ساعدني هذا في الاستعداد لدرستي ... (F.T.)</p> <p><i>..., I think, if I do not see my colleague using E-learning I will be less motivated to use it. (F.T.)</i></p> <p>... أعتقد أنه إذا كنت لا أرى زميلي يستخدم التعليم الإلكتروني ، فسأكون أقل تحفيزًا لاستخدامه. (F.T.)</p> <p><i>Sometimes there is no encouragement from colleagues to use E-learning. I think we have more teachers who prefer the traditional teaching than the teachers who like to use E-learning. Traditional teachers will have negative influences over each other. (M.T.)</i></p> <p>في بعض الأحيان لا يكون هناك تشجيع من الزملاء على استخدام التعلم الإلكتروني. أعتقد أن لدينا المزيد من المعلمين الذين يفضلون التدريس التقليدي من المعلمين الذين يحبون استخدام التعلم الإلكتروني. سيكون للمدرسين التقليديين تأثيرات سلبية على بعضهم البعض. (M.T.)</p>
	<p>In-school factors</p> <p>Provision of Equipment</p>		<p><i>..., [to use E-learning] that needs availability of Internet and computer [in schools]. (F.S.)</i></p> <p>...، [لاستخدام التعلم الإلكتروني] الذي يحتاج إلى توافر الإنترنت والكمبيوتر [في المدارس]. (F.S.)</p> <p><i>..., unfortunately, there are a lot of schools here in Jazan without any equipment at all. (M.T.)</i></p> <p>... للأسف ، هناك الكثير من المدارس هنا في جازان دون أي معدات على الإطلاق. (M.T.)</p> <p><i>..., if the equipment in the school remains the same as now, honestly speaking, the situation for applying E-learning will be very bad since the equipment is the most important part towards E-learning usage (F.T.)</i></p> <p>...، إذا بقيت المعدات في المدرسة كما هي الآن ، فكلما صادقًا ، سيكون وضع تطبيق التعليم الإلكتروني سيئًا جدًا نظرًا لأن الجهاز هو الجزء الأكثر أهمية نحو استخدام التعليم الإلكتروني. (F.T.)</p> <p><i>To be honest, this type of learning can't be at the school level, because the condition of the facilities in the school isn't helping to apply this type of learning; old machines and slow Internet (M.S.)</i></p>

			<p>لنكون صادقين، لا يمكن لهذا النوع من التعلم أن يكون على مستوى المدرسة، لأن حالة المرافق في المدرسة لا تساعد في تطبيق هذا النوع من التعلم؛ الآلات القديمة وبطء الإنترنت. (M.S.)</p> <p><i>Providing the appropriate equipment in the classroom such as smart blackboards, computers and Internet will encourage the use of E-learning by both teachers and students. (M.T.)</i></p> <p>إن توفير المعدات المناسبة في الفصل مثل السبورات الذكية وأجهزة الكمبيوتر والإنترنت سيثبج على استخدام التعلم الإلكتروني من قبل المعلمين والطلاب على حد سواء. (M.T.)</p> <p><i>We will need the school's support to use E-learning. ..., providing and selecting the appropriate requirement for E-learning, will influence us positively to use E-learning. For those of us who do not have access to the computer and Internet at home to use, if computers and Internet are available in the school, then that will influence us to use E-learning in the school. (F.S.)</i></p> <p>سنحتاج إلى دعم المدرسة لاستخدام التعلم الإلكتروني. ...، توفير واختيار المتطلبات المناسبة للتعلم الإلكتروني، سيؤثر علينا بشكل إيجابي لاستخدام التعلم الإلكتروني. بالنسبة لأولئك منا الذين لا يستطيعون الوصول إلى الكمبيوتر والإنترنت في المنزل للاستخدام، إذا كانت أجهزة الكمبيوتر والإنترنت متوفرة في المدرسة، فإن ذلك سيؤثر علينا في استخدام التعلم الإلكتروني في المدرسة. (F.S.)</p>
	<p>School support (Support by the school management and Technical support)</p>		<p><i>I tried to motivate my students to use E-learning and I asked the school to help me to apply this method but there wasn't any support from the school which can help me to use E-learning. (M.T.)</i></p> <p>حاولت تحفيز طلابي على استخدام التعلم الإلكتروني وطلبت من المدرسة مساعدتي في تطبيق هذه الطريقة، ولكن لم يكن هناك أي دعم من المدرسة يمكن أن يساعدني في استخدام التعلم الإلكتروني. (M.T.)</p> <p><i>..., another barrier I can think of, is the absence of management support in the school, some head teachers can't differentiate between the traditional education and E-learning and how to mix the two methods together. So, the teacher who wants to apply E-learning in his teaching will stop because the lack of head teacher support. (M.T.)</i></p> <p>...، حاجز آخر يمكنني التفكير فيه، هو غياب الدعم الإداري في المدرسة، بعض المعلمين الرئيسيين لا يمكنهم التفرقة بين التعليم التقليدي والتعليم الإلكتروني وكيفية خلط الطريقتين معاً. لذا، فإن المعلم الذي يريد تطبيق التعليم الإلكتروني في تعليمه سيتوقف بسبب نقص دعم المعلم الرئيسي. (M.T.)</p> <p><i>We have strong financial support from the government to provide technologies in our school. But whether the schools are equipped with those kinds of technologies depend on the school managers. Unfortunately, some older managers prefer face-to-face teaching and learning rather than using both traditional teaching and learning with E-learning. (M.S.)</i></p>

			<p>لدينا دعم مالي قوي من الحكومة لتوفير التقنيات في مدرستنا. ولكن ما إذا كانت المدارس مزودة بهذه الأنواع من التقنيات تعتمد على مديري المدارس. لسوء الحظ ، يفضل بعض المسؤولين الأقدمين التعليم والتعلم وجهاً لوجه بدلاً من استخدام التعليم والتعلم التقليديين مع التعلم الإلكتروني. (M.S.)</p> <p>..., we do not have full technical support or sometimes the technical support does not exist in some schools which makes the situation even worse. This makes it scary for those without previous experience to use E-learning to teach students since there is no technical support in the school. (F.T.)</p> <p>...، ليس لدينا دعم فني كامل أو في بعض الأحيان لا يتوفر الدعم الفني في بعض المدارس مما يزيد الموقف سوءاً. هذا يجعل الأمر مخيفاً لأولئك الذين ليس لديهم خبرة سابقة لاستخدام التعلم الإلكتروني لتعليم الطلاب نظراً لعدم وجود دعم تقني في المدرسة. (F.T.)</p> <p>..., my school has few computers that my classmates and I can use, but we do not have basic maintenance support of these computers... (F.S.)</p> <p>...، تحتوي مدرستي على عدد قليل من أجهزة الكمبيوتر التي يمكنني استخدامها أنا وزملائي ، ولكننا لا نملك دعماً أساسياً للصيانة من أجهزة الكمبيوتر هذه ... (F.S.)</p> <p>..., even if the equipment is available in the school, you have a lack of maintenance for that equipment. (M.T.)</p> <p>...، حتى لو كانت المعدات متوفرة في المدرسة ، لديك نقص في الصيانة لتلك المعدات. (M.T.)</p> <p>..., there should be a technical team in each school to help students with any skill related problems that might occur because we are not skilled enough to use E-learning without technical support.... (M.S.)</p> <p>...، يجب أن يكون هناك فريق تقني في كل مدرسة لمساعدة الطلاب في أي مشاكل تتعلق بالمهارات والتي قد تحدث لأننا لسنا ماهرين بما يكفي لاستخدام التعلم الإلكتروني بدون الدعم الفني ... (M.S.)</p>
E-learning characteristic factors	E-learning usability (ease of use and usefulness)		<p>..., if it [E-learning] is implemented in the right way, this will reduce the effort required to use it in the school, but that will mean teachers will do more work outside the school. It [E-learning] will also help students to rely on themselves and have different learning styles.... (F.T.)</p> <p>... إذا تم تنفيذ [التعليم الإلكتروني] بالطريقة الصحيحة ، فإن هذا سيقبل من الجهد اللازم لاستخدامه في المدرسة ، ولكن هذا سيعني أن المعلمين سيقومون بعمل إضافي خارج المدرسة. كما سيساعد [التعلم الإلكتروني] الطلاب على الاعتماد على أنفسهم والحصول على أساليب تعليمية مختلفة ... (F.T.)</p> <p>The one thing that stimulates students to use E-learning is the huge amount of information that is easily accessible on it. (F.S.)</p> <p>الشيء الوحيد الذي يحفز الطلاب على استخدام التعلم الإلكتروني هو الكم الهائل من المعلومات التي يمكن الوصول إليها بسهولة. (F.S.)</p>

			<p><i>You know, it will not be easy for students who do not have any experience with E-learning to use it. (F.S.)</i></p> <p>كما تعلم، لن يكون من السهل على الطلاب الذين ليس لديهم أي خبرة في التعلم الإلكتروني استخدامها. (F.S.)</p> <p><i>..., it's hard to replace face-to-face teaching and communication, not because teachers do not want to change, or we do not have enough skill to use computer and Internet but the idea of applying it [E-learning] in our teaching is very hard, and E-learning is a new style of teaching and the outcome of it is not known. (F.T.)</i></p> <p>...، من الصعب استبدال التدريس والتواصل وجهاً لوجه ، ليس لأن المعلمين لا يريدون التغيير ، أو ليس لدينا المهارات الكافية لاستخدام الكمبيوتر والإنترنت ولكن فكرة تطبيقه [التعلم الإلكتروني] في إن تعليمنا صعب للغاية ، والتعلم الإلكتروني هو أسلوب جديد في التدريس ولا يُعرف نتيجة ذلك. (F.T.)</p> <p><i>..., the adoption and use of E-learning in schools should not affect other skills that students acquire from face-to-face teaching and learning, such as handwriting skill.... (F.T.)</i></p> <p>... لا ينبغي أن يؤثر اعتماد واستخدام التعلم الإلكتروني في المدارس على المهارات الأخرى التي يكتسبها الطلاب من التدريس والتعلم وجهاً لوجه ، مثل مهارة الكتابة اليدوية ... (F.T.)</p> <p><i>... E-learning gives feedback on time, which is sometimes helpful especially when you do not need a teacher to know if your answer is correct or not. ..., this will really encourage us to use it. (F.S.)</i></p> <p>... يقدم التعليم الإلكتروني تعليقات على الوقت ، وهو أمر مفيد أحياناً خاصة عندما لا تحتاج إلى معلم لمعرفة ما إذا كانت إجابتك صحيحة أم لا ، سيُشجعنا ذلك حقاً على استخدامها. (F.S.)</p> <p><i>E-learning will open for students a big amount of information to use which will improve their English as opposed to traditional learning which students are restricted to the book. For example, nowadays with Google, translation is very easy and that will help learners to learn English. Also, listening is one of the most important skills in learning English. You know, E-learning can provide audio and video to listen and watch as much as you can, which will improve students with weak listening skills and something like this E-learning should be used. (M.S.)</i></p> <p>سيُفتح التعلم الإلكتروني للطلاب كمية كبيرة من المعلومات لاستخدامها والتي ستُحسن لغتهم الإنجليزية مقارنة بالتعليم التقليدي الذي يقتصِر على الطلاب على الكتاب. على سبيل المثال ، في الوقت الحالي مع قوقل ، الترجمة سهلة للغاية وستُساعد المتعلمين على تعلم اللغة الإنجليزية. أيضاً ، الاستماع هو واحد من أهم المهارات في تعلم اللغة الإنجليزية. كما تعلم ، يمكن للتعليم الإلكتروني توفير الصوت والفيديو للاستماع ومشاهدة أكبر قدر ممكن ، مما سيُحسن الطلاب ذوي مهارات الاستماع الضعيفة ويجب استخدام شيء مثل هذا التعلم الإلكتروني. (M.S.)</p>
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			<p><i>There are many positive aspects, for example speaking ... E-learning can maintain openness in communication if used in the right way which can be extended to the community. ... E-learning can also support students' speaking skills by using chat rooms that are available in English. Since we are in a non-English speaking country, using E-learning will help to develop students' speaking skills. (M.S.)</i></p> <p>هناك العديد من الجوانب الإيجابية ، على سبيل المثال تحدث ... يمكن للتعليم الإلكتروني الحفاظ على الانفتاح في التواصل إذا تم استخدامه بالطريقة الصحيحة التي يمكن أن تمتد إلى المجتمع. ... يمكن للتعليم الإلكتروني أيضًا دعم مهارات التحدث لدى الطلاب من خلال استخدام غرف الدردشة المتوفرة باللغة الإنجليزية. بما أننا في بلد لا يتكلم الإنجليزية ، فإن استخدام التعلم الإلكتروني سيساعد على تطوير مهارات التحدث لدى الطلاب. (M.S.)</p>
	<p>E-learning functionality (Flexibility and Interactivity)</p>		<p><i>Through [E-learning] students have access to coursework 24 hours/day which give them more flexibility on time to follow up what they missed in the classroom. This could help to improve their English. (F.T.)</i></p> <p>من خلال [التعلم الإلكتروني] ، يمكن للطلاب الوصول إلى الدورات الدراسية على مدار 24 ساعة في اليوم مما يمنحهم المزيد من المرونة في الوقت المناسب لمتابعة ما فاتهم في الفصل الدراسي. هذا يمكن أن يساعد على تحسين لغتهم الإنجليزية. (F.T.)</p> <p><i>..., students can have access to coursework within the school or home. They can also access it where ever they have access to a computer and Internet connection. Teachers also can have the same flexibility to monitor students' progress. (F.T.)</i></p> <p>...، يمكن للطلاب الوصول إلى الدورات الدراسية داخل المدرسة أو المنزل. يمكنهم أيضًا الوصول إليه حيث يمكنهم الوصول إلى جهاز كمبيوتر واتصال بالإنترنت. يمكن للمعلمين أيضًا التمتع بنفس المرونة لمراقبة تقدم الطلاب. (F.T.)</p> <p><i>We can use it [E-learning] any time which mean we have flexibility to use E-learning to do more exercises or to do homework. (F.S.)</i></p> <p>يمكننا استخدامه [التعلم الإلكتروني] في أي وقت مما يعني أن لدينا مرونة في استخدام التعلم الإلكتروني للقيام بمزيد من التمارين أو القيام بالواجبات المنزلية. (F.S.)</p> <p><i>The traditional classroom offers limited time to learn but with the use of E-learning we will have unlimited access to the lessons. Most students spend a lot of time on the Internet and can learn at their free times. In our learning of English nowadays, we are restricted in learning only in the classroom, which means we do not have place flexibility. E-learning will help to overcome all geographical and spatial barriers for students to learn English and exchange knowledge. (M.S.)</i></p> <p>يوفر الفصل الدراسي التقليدي وقتًا محدودًا للتعلم ولكن مع استخدام التعلم الإلكتروني ، سيكون لدينا وصول غير محدود إلى الدروس. يقضي معظم الطلاب الكثير من الوقت على الإنترنت ويمكنهم التعلم في أوقات فراغهم. في</p>

		<p>تعلمنا للغة الإنجليزية في الوقت الحاضر ، فنحن مقيدون بالتعلم فقط في الفصل الدراسي ، مما يعني أنه ليس لدينا مرونة في المكان. سيساعد التعلم الإلكتروني في التغلب على جميع الحواجز الجغرافية والمكانية للطلاب لتعلم اللغة الإنجليزية وتبادل المعرفة. (M.S.)</p> <p>..., the E-learning environment is different to traditional learning because E-learning can be a complete set of technology tools which allow teachers and students to interact in a new style through the Internet... (F.T.)</p> <p>...، تختلف بيئة التعلم الإلكتروني عن التعلم التقليدي لأن التعلم الإلكتروني يمكن أن يكون مجموعة كاملة من أدوات التكنولوجيا التي تسمح للمعلمين والطلاب بالتفاعل بأسلوب جديد عبر الإنترنت ... (F.T.)</p> <p>In our educational system now, the methods of teaching and learning in the classroom does not support interaction with students who come from different regions, while we in the school come from the same area. The use of E-learning will help us to interact somehow with other students even from different countries... (F.S.)</p> <p>في نظامنا التعليمي الآن ، لا تدعم طرق التدريس والتعلم في الفصل التفاعل مع الطلاب الذين يأتون من مناطق مختلفة ، بينما نحن في المدرسة نأتي من نفس المنطقة. سيساعدنا استخدام التعلم الإلكتروني على التفاعل بطريقة ما مع الطلاب الآخرين حتى من مختلف البلدان ... (F.S.)</p> <p>We will use it [E-learning], because it will add something new to our learning and allow us to interact with other students or teachers in a more open way even outside the school. (M.S.)</p> <p>سوف نستخدمه [التعلم الإلكتروني] ، لأنه سيضيف شيئاً جديداً إلى تعلمنا ويتيح لنا التفاعل مع الطلاب الآخرين أو المدرسين بطريقة أكثر انفتاحاً حتى خارج المدرسة. (M.S.)</p> <p>..., the online interaction aspect that E-learning will provide to students and teachers is one of the most important advantages of E-learning. For instance, E-learning will increase the possibility of contact between students and teachers using email, discussion boards and chat rooms. It also helps in activities such as, marking, sending and receiving the homework as well as providing immediate feedback. I think in this way, So, the students will have more time to participate and interact in the learning of English outside the classroom. (M.T.)</p> <p>...، جانب التفاعل عبر الإنترنت الذي سيوفره التعليم الإلكتروني للطلاب والمدرسين هو أحد أهم مزايا التعلم الإلكتروني. على سبيل المثال ، سيزيد التعلم الإلكتروني من إمكانية الاتصال بين الطلاب والمعلمين باستخدام البريد الإلكتروني ولوحات المناقشة وغرف الدردشة. كما أنه يساعد في أنشطة مثل ، ووضع العلامات ، وإرسال واستقبال الواجبات المنزلية ، فضلاً عن توفير ردود فعل فورية. أعتقد بهذه الطريقة ، لذلك ، سيكون لدى الطلاب المزيد من الوقت للمشاركة والتفاعل في تعلم اللغة الإنجليزية خارج الفصل الدراسي. (M.T.)</p>
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Appendix L: Teacher age distribution – A histogram

