Socio-cultural factors influencing the use of ICT in intermediate schools in Saudi Arabia

Submitted by

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I certify that all material in this thesis which is not my own work has been identified and that no material has previously been submitted and approved for the award of a degree by this or any other University.

Signature: ……..

Dedication

I dedicate my thesis to two dear people, My dad Saleh and mother Norah Alrumih. their support and words of wisdom encouraged me to sincerely and passionately complete this degree.

I also dedicate this work to my beloved wife Hend, my son Bader, and my dear daughters Mais and Watin, for their patience and support towards me during my studies and their willingness to reside in the UK whilst giving up the comfort and familiarity of Saudi- Arabia.

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"*He who does not thank people (for their favours) has not thanked Allaah.*"

Prophet Muhammad (PBUH).

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Abstract

Culture has been widely reported as a major factor affecting teachers' use of information and communication technology (ICT). However, culture cannot be analysed at a single level . This study used three levels of culture, classroom, school and national levels, to analyse teachers' use of ICT. The study investigates the socio-cultural factors that influence students' and language teachers' usage of ICT in their schools and how students and language teachers use ICT in their schools. The study was undertaken within the interpretive paradigm and adopted and integrated several theories: socio-cultural theory, ecological perspective, Hofstede's model, and a metaphor from the Concern Based Adoption Model (CBAM). A multiple case study design was employed to yield detailed data to assist in understanding the use of ICT in schools. Classroom observation, teachers' semi-structured interviews, and focus groups were conducted to collect data. The sample was composed of six English teachers, five Arabic teachers, three school leaders, three supervisors, and twenty students aged between thirteen to fifteen years old taking part in four focus groups. Participants were selected from three intermediate boys' schools in Arrass city in Saudi Arabia. The study suggested a new framework that helps determine the level of teachers' use ICT based on the type of concerns. In teachers' decisions to use ICT in their classrooms, three types of concern 'self-concern, task concern and impact concern' emerged from the data analysis as influential factors. Self-concerns had the strongest effect in that teachers who had more self-concerns tended not to use ICT. Recommendations for policymakers and institutional practices are made.

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1 Chapter One: Introduction

This chapter presents the study background as an introduction to the research problem. The research objectives are also highlighted in addition to the thesis overall structure.

1.1 Research background

The use of information communication technology (ICT)[1] for learning purposes is widely spread in education all over the world. The Ministry of Saudi education (MOE) has launched several projects in order to integrate ICT with teaching and learning in Saudi schools. One of these projects is the establishment of learning resources centres (LRC) in schools in 2001. The LRC aims to improve the school library and equip it with additional learning resources such as books, CDs, computers and internet access. The LRC room is also equipped with projectors, computers with internet access for the use of teachers and students for collaborative learning. The LRC is run by a specialist who helps teachers to effectively use ICT by providing training courses and presentation materials such as PowerPoint.

I worked as an LRC specialist for more than ten years. At the beginning of the LRC project, I found that most teachers were enthusiastic to use ICT and were eager to use the only equipped room in the school. However, some teachers do use ICT even after attended training courses about ICT use in the classroom. They often debate about the benefits of ICT use for students' learning and some teachers might reject changes in their teaching methods. The reasons for the

[1] The terms ICT and technology have been used interchangeably in this thesis.

rejection of use ICT are not clearly obvious; however, this was acceptable in the beginning of the introduction of ICT.

After more than fifteen years of introducing ICT in Saudi schools, and after most classrooms in Saudi schools had been equipped with ICT tools, some teachers still refused to use ICT in their teaching. However, teachers use technology in their daily life such as banking services and administration tasks. In fact, most teachers know how to use ICT, technology prices lower than in the past, the teaching materials are free to use and the repair of ICT is easier.

Although most challenges have been addressed, some Saudi teachers still do not use ICT and debate about the impact of using ICT on students' learning in their school environment in the Saudi context.

The benefits of using ICT for learning are a global issue. Although computers have been used in education for a long time, "there is a little sign that the major problems of education are getting any better" (Bork, 1995, p. 97). This quote from Bork might still be relevant today, more than twenty years later. Similarly, Isaacs (2011) stated that "there is no consensus as yet regarding the actual benefits of technology in ensuring quality learning" (p.218) as the change and the development occur in the use of ICT rather than in teaching practices (Ertmer & Ottenbreit-Leftwich, 2010). The negative views about using ICT in education might be rooted to the old promise that the computer will change education by replacing the teachers and the book (Crooks, 2018), which might explain why some teachers reject adopting computers and technology (Ertmer & Ottenbreit-Leftwich, 2010).

Hence, the belief of teachers as an individual factor is one of the important determinants of ICT adoption. This belief seems to be based on the teacher's

culture as many studies on ICT adoption have analysed individual factors without taking into account the social influence of other actors such as colleagues and school leaders (Salinas, Nussbaum, Herrera, Solarte, & Aldunate, 2017).

Furthermore, Li (2014) states that research on technology use in school by language teachers followed two approaches: (1) studies on teachers' beliefs and (2) on teachers' uptake. Both approaches focus on the teachers' background and their context. However, several issues are worth noting about previous studies on using ICT. The first issue is that the description of ICT use is suggested by designers or policy while it should be discovered by users (Hammond, 2014). Considering this view, the differences between policy and practice are the main issue and the user voice is important to describe how to use ICT in the classroom. Teachers have their perspectives toward using ICT in their teaching based on the circumstances surrounding their job. Another issue related to understanding how ICT is used in the classroom is that it a complexed problem as research into ICT often examines how a system acts in isolation (Zhao & Frank, 2003) while sociocultural approaches reject this isolation (Lim, 2002). Hence, if we seek to understand how ICT is used in teaching and learning, it is necessary to consider the context before examining the interactions between teachers and ICT and how they contribute to the final product. We also need to illustrate how teachers engage with new technology as individuals and as members of the school society; therefore, we need an approach that allows this complexity to be drawn out (Tatnall & Davey, 2003).

1.2 Research Problem

In the literature, many factors were reported to affect teachers' use ICT including socio-cultural factors. According to Nistor, Lerche, Weinberger, Ceobanu, and Heymann (2014) little attention has been paid to the cultural factors that affect the adoption of technology while Osborne (2014) states that more attention should be paid to understanding the role of education and technology in a sociocultural context. Socio-cultural factors have mainly been discussed in the literature, separately or collectively, at the institutional and individual levels, also called respectively the macro and micro levels (Binothman, 2015; Tearle, 2003; Tondeur, Devos, Van Houtte, van Braak, & Valcke, 2009; Vanderlinde, Aesaert, & Van Braak, 2014; Zhao & Frank, 2003). The national level, however, has been studied in isolation from the institution level (Myers & Tan, 2002; Nistor et al., 2014; Siakas & Mitalas, 2004) in the Saudi context (Al-Gahtani, Hubona, & Wang, 2007; Glowacki-Dudka & Treff, 2011). The separation between these levels of culture might arise the need to study all three levels in one study as a holistic culture to explore the relationship and the impact of these levels.

In addition, as cultural factors are numerous, varied and complex, it is necessary to find ways to study the complexity of cultural factors from the lens of a theoretical framework. Although several theoretical frameworks for studying culture, such as Hofstede model and the ecological perspective, have been suggested, they have limitations. For example, Hofstede's model (2010) mainly describes the national level of culture, while the ecological perspective model covers the individual level, the school level, and the district level and is limited at the national level. Therefore, to the best of my knowledge, there is no holistic theoretical framework that covers all the levels of culture. This gap in the

literature has been mentioned by Myers and Tan (2002) who called for a strong theoretical framework to study the socio-cultural factors.

Moreover, Zhao, Lei, and Frank (2006) indicated factors that affect the use of ICT in school at different levels: the context of school, the school itself, and the teachers performing the process. Within the school context, many studies point to the importance of the organisational culture claiming that policies and teacher training are the main factors affecting the use of ICT (Salinas et al., 2017; Vanderlinde et al., 2014). In the current study, the school context is seen as more related to the organisational level while the overall context is composed of national factors that affect the people in Saudi Arabia.

With regards the Saudi context, based on my experience as an educational technology assistant in Saudi schools , I have witnessed several issues that have been reported by studies focusing on the use of ICT in Saudi context. These studies, for example, asserted that most uses of technology in teaching are not yet satisfactory (Bingimlas, 2009; Binothman, 2015; Oyaid, 2009) insofar as the use of ICT is still in the early stages of implementation due to many barriers and factors. Alenezi (2015), for instance, called for the use of a framework integrating ICT with pedagogy, grounded in Islamic values and traditions. Such framework, with these special characteristics, may help the transition from ICT adoption to ICT implementation in Saudi Arabia. The characteristics of the Saudi context will be described in Chapter Two.

In terms of students' use of ICT in the literature, most studies that investigated ICT implementation in education (Binothman, 2015; Tearle, 2003; Tondeur et al., 2009; Vanderlinde et al., 2014; Zhao & Frank, 2003) focused on ICT integration into the teaching process at the teacher level, rather than devoting attention to students' use of ICT. Furthermore, as the literature called for a

strong theoretical framework (Alenezi, 2015; Myers & Tan, 2002), the current study attempts to address the need for a theoretical framework that illustrates the effects of socio-cultural factors on using ICT in the classroom as this complex picture requires a holistic lens that can help determine the factors that surround the use of ICT. This holistic view requires a clear framework that guides the study to investigate socio-cultural factors. Such a holistic framework can help identify the factors that most affect, help or limit teachers' use of ICT beyond focusing on just one of the cultural levels, i.e. national, school and classrooms. Based on these factors, a framework is needed to explore how the Saudi culture, based on Islamic fundamentals, affects the use of ICT in schools. Because the national culture addresses teachers' behaviour, a holistic framework may also provide a better way to categorise teachers based on their use of ICT. In consequences, using the framework helps to improve teachers' use of ICT by focusing on their concerns towards these factors. Based on the above gaps in the literature, this study seeks to achieve a number of t objectives, as explained in the section below.

1.3 Objectives of the Study

Based on the research problem that requires to explore the socio-cultural factors that affect the use of ICT in the classroom, it is important to use a strong theoretical framework that can describe how these factors affect teachers use of ICT. These factors also need to be divided based on how they affect teachers' use of ICT. Based on teachers' influences on these factors, teachers could be divided into categories with every group of teachers being influenced by one group of sociocultural factors. Therefore, this study's aims can be summarised as follows:

1- to identify the socio-cultural barriers that could affect teachers' use of ICT in the classroom
2- to investigate how socio-cultural factors affect teachers' use of ICT
3- to classify teachers based on the influence of these socio-cultural factors and describe the level of ICT integration in three schools in Saudi Arabia
4- to determine the relationship between teachers' level of use of ICT and their concerns towards using ICT.
5- to suggest a new theoretical model to study the effects of culture on teachers
6- to suggest a new model to help supervisors develop teachers' use of ICT

1.4 Research Questions

The aims of study that reported earlier are suggested to address the following questions:

1. What are the socio-cultural factors that influence students' and language teachers' usage of ICT in their schools?
2. How do students and language teachers use ICT in their schools?
3. How does culture affect students' and language teachers' usage of ICT?
4. What are the intermediate school students' and language teachers' views about ICT in teaching and learning?

1.5 Structure of the Thesis

Chapter One: Introduction

Chapter one has outlined the research background, and the gap in the literature. It also presented the research objectives and the structure of the whole thesis.

Chapter Two: Saudi Context

Chapter Two outlines the Saudi context and provides background information about teachers and the Saudi culture. The Saudi education system is discussed with particular focus on the “Tatweer” project and “Active Learning”. This chapter generally provides necessary background information about Saudi schools and teachers

Chapter Three: Theoretical Framework

This chapter presens the theoretical framework adopted in this research and discusses the existing theories. It discusses the sociocultural theory, the ecological perspective, the concern-based adoption model (CBAM), and Hofstede’s model. The chapter suggests a new model by integrating existing theories.

Chapter Four: Literature Review

Chapter Four discusses the three levels of culture suggested by the theoretical framework. The notions of *culture* and *value* are examined and three levels of culture are investigated: the national culture, the organisational culture and the classroom culture. At the national level, the national dimension is studied. At the organisational level, school leadership, teachers’ professional development, and exams pressure are factors that most affect this level. Teachers’ beliefs, roles and feelings and students’ roles in the classroom are factors that most affect the classroom level. Following the review of the relevant literature, the knowledge gap is identified and the research questions are posed.

Chapter Five: Research Methodology

That chapter begins by exploring the nature of research knowledge and how the nature of research determines the methodology. The ontology and

epistemology of this study are presented and the case study as a methodology of this study is also highlighted. The chapter also presents the methods of data collection employed in this research which are semi-structured interviews, classroom observations, and focus groups with four groups of students. The chapter ends with a discussion on the ethical issues related to this research.

Chapter Six: Data Analysis

Chapter Six documents the data from the research cases. It starts by describing each school and their individual differences in terns of administration. The chapter presents the findings and the main factors based on the teachers' concerns. Three types of teachers' concerns are identified: the self-, task- and impact-concerns. Also, socio-cultural factors are highlighted at three levels: the national, institutional and classroom level. Finally, the chapter presents the findings related to the teachers' use of ICT at three levels: the non-use, the routine use and the integration use. The relationship between professional development and peer support is also presented. At the end of the chapter the unexpected results are presented: "culture is stable or dynamic" and "culture affects the use of ICT/is influenced by the use of ICT".

Chapter Seven: Discussion of the Findings

Chapter seven discusses the key findings presented in Chapter Six and suggests a new theoretical framework. Some unexpected findings are discussed to shed light on the way culture affects the use of ICT. The chapter also discusses the relation between teachers' concern and their level of use, how to improve their level of use, and the role of e-learning to attain the integration level. Finally, the chapter relates all these findings to the theoretical framework and to the relevant literature.

Chapter Eight: Conclusion and Implications

Chapter Eight summarises the main findings from this research, and highlights the study's main contribution to knowledge, which particular respect to its theoretical contribution. The chapter also examines the implications of this study makes and recommendations based on the three levels of culture. The limitations of this research are also presented in addition to recommendations for future research on the integration of ICT in Saudi schools. The chapter ends with personal reflection and final remarks.

2 Chapter Two: Research Context

This study will investigate intermediate students' and languages teachers' views on the use of ICT in the classroom and the socio-cultural factors affecting this usage. First of all, it is logical to show a brief background to the Kingdom of Saudi Arabia (KSA) to describe the fundamentals of Saudi culture such as the economic level, education system, the history of ICT use in its schools, and Tatweer project. This will elucidate the effect of socio-cultural factors on the relationship between students and teachers, and between teachers and teachers, inside one selected school.

2.1 Location, Population and Area

Saudi Arabia covers approximately 80% of the Arabian Peninsula. It is a large country that covers 868,730 square miles, an area roughly equal to that of Western Europe. It occupies a strategically important location in the northern hemisphere between the three great continents of Asia, Africa and Europe, and thus it has been engaged with diverse civilizations. Many people consider it a sacred site (The Ministry of Culture & Information, 2015). It borders Jordan, Iraq and Kuwait to the north, the Arabian Gulf, Bahrain, Qatar and United Arab Emirates to the east, Oman and Yemen to the south, and the long coast of the Red Sea to the west (See Figure 1.1, Algahtani, 2011). In 2014, the total population of Saudi Arabia was 30,770,000. Of these, the native Saudi population was 20,702,000 and those of non-Saudi nationality made up 10,067,000. The Saudi population growth rate is 2.1% a year (General Authority for statistics, 2018).

Figure 2-1.1 Map of Saudi Arabia (Algahtani, 2011)

2.2 Historical Overview

Saudi Arabia is considered is at the heart of the Islamic religion as its hosts the two holiest places in Islam: Makkah and Madinah. Saudi Arabia's history is therefore closely related to Islam. The establishment of Saudi Arabia originates from the alliance of Muhammad bin Saud (1765) and Shaikh Muhammad bin Abdul-Wahhab (1703-1792), a religious leader at that time who called for explicit monotheism and the indivisibility of religion and state. Their first aim was to halt the decline of social virtues in the eighteenth century. This union between ideology and the military lead to the birth of Saudi Arabia (Baki, 2004). The alliance between the two families Al-Saud and Al-Shaikh has continued until this day.

Saudi culture, as with any nation's culture, is varied and complex; it is influenced by many factors. As Saudi Arabia is considered as a religious country, the religion factor is the main factor that affects the education system, social manners, traditions, obligations and practices of society. Traditional kinship and tribal systems still affect the individual in society and could be a factor in success or failure (Aldraehim, 2013). According to Abdullah (2006), the tribal system has a major impact on the work place. Schools, as work places, might be impacted by the tribal system.

Islamic principles are the first element of Saudi culture. They are based on the Holy Quran and the Sunnah (the sayings and practices of the prophet Mohammed, peace be upon him). The widespread statement is that morals come from religion (Hofstede & Hofstede, 2010). In the Saudi culture, self-interest comes after family interest. The importance of family is emphasised by the Quran and the Sunnah (Aldraehim, 2013). The strong relationships in the Saudi family have some drawbacks in that the person who has the more powerful position has to solve many personal problems of his/her family members, such as helping to find a job regardless of the efficiency of the person to perform that job (Hill, et al., 1998). Therefore, religion is a crucial factor when analysing any aspect of Saudi Arabia in general and education in particular (Jamjoom, 2012).

2.3 Economic Background

Saudi Arabia is a rich country in the Middle East that has joined the group of the twenty richest nations (G20). The central plan of the Saudi economy is to reduce the nation's dependence on income from oil and its products. Thus, it has established a series of five-year plans. Roughly half of the budget is

dedicated to education and social care. In the economic plan of 2015, approximately 217 billion riyals (£36.1 billion) were allotted to education, of which 25% were to be paid in 2015. 1.1 billion Riyal (£183,330,000) were spent on e-learning (Ministry of Finance Report, 2015).

2.4 Saudi Education

State educational institutions have played a major role in contributing to the upgrading of citizens' capabilities and qualifications, in order to cope with rapid domestic and international socio-economic and technological change (Ministry of Economy and Planning, 2014). The Ministry of Education (MOE) in Saudi Arabia is responsible for education policy, designing textbooks and school buildings and equipment. The number of schools has increased from 3,098 schools in 1970 to 35,397 schools in 2015. The number of students increased from 536,400 in 1970 to about 5.4 million in 2015. Of these, nearly 2.6 million students were in the elementary stage and 2.5 million in the intermediate and secondary stages (Ministry of Economy and Planning, 2016).

Saudi Arabian culture is strongly influenced by Islamic doctrines, meaning that all human interaction, ethics and affairs of life have to be judged by these doctrines, and that if there is any Islamic rule against an act it means that it is illegal. This influence shows in Saudi people's lives and habits. One of the aspects affected by these principles is education (see 2.5) and "there is a strong link between culture and learning that is reflected in how people prefer to learn and how they tend to process information" (Samovar, Porter, McDaniel, & Roy, 2015, p. 338). For example, in the Saudi context the segregation between boys and girls is based on Islamic doctrine and social culture. However, Habbash (2011) argues that there exist misconceptions about the Saudi society

being a traditional culture, especially in the Western mainstream media. He reports that:

> *Today's Saudi Arabia is a multifaceted combination of tradition and modernity. In a country where a restive government sought to speed up economic transformation and modernization, one does not need to live in Saudi Arabia to have a sense of the inextricable bond between the Saudi people, their culture and the Arabic language. (p.31)*

This observation is very important to this study in that the influence of teachers' religious beliefs on the development of their practices is significant (Mansour, 2008). Nevertheless, there are also Western influences on the education system in Saudi Arabia (Al-Jadidi, 2012).

2.5 Education Policy and Goals

The Saudi education policy has not changed since it was issued in 1969 (Al Shaer, 2008). This policy states that the purpose of the education system is to fulfil the needs of society and to reflect society's cultural rules and ways of life. The principal objects and goals, as defined by this policy, are as follows:

- *belief in Allah (God) and Islam as a religion and Muhammed as its prophet*
- *compulsory Islamic vision of the universe, human beings and life*
- *The individual has a duty to receive education and the state must provide for this.*
- *Muslim females have a right to education in a manner suitable for their nature and on an equal footing with males.*
- *correlation of all phases of education with the state's public development plan*
- *Arabic is the language of all phases of education (Al Shaer, 2008).*

This policy shows how the education system in Saudi Arabia is related to religion. The latest ten-year strategic plan (2004-2014) "emphasizes the right

Islamic orientation and provides for extensive scientific and technological development, with the ultimate objective of promoting human dignity and prosperity" (Al Shaer, 2008, p. 3). The policy and its goals see religion as the centre of educational goals because they see Islam as a comprehensive religion; therefore, the education system is derived from Islamic doctrines. Furthermore, the Saudi education policy aims to become more effective in order to "meet the growing economic and social needs of the nation […] and shaping them into a workforce of international standards" (Habbash, 2011, p. 34). All these principles apply to all parts of the education system. More specifically, there are principles guiding improvement in performance in technology, as follows (Alebaikan, 2010):

1. *Development of a national education gate that allows teachers and students to establish communication networks for the exchange of experience and expertise.*
2. *Facilitation of students' learning of basic concepts in the curriculum through creation of digital content.*
3. *Building teachers' capacity to integrate their lessons with the technology curriculum.*
4. *Technical professional development for teachers.*
5. *Provision of high-quality learning opportunities for all students in all regions.*

However, while it is common to find plans and policies which have been carefully created, they need to be promoted and implemented in a suitable way in order to achieve changes in classroom practice (Fox, 2003). Saudi policy and goals are set out in the Ministry of Education's documents but, nevertheless, the question remains as to whether the plans are applicable. And, if they are appropriate, what is the situation in the schools and classrooms? Indeed, this issue seems to be a global one.

2.6 Education System

Education in Saudi Arabia is compulsory for all children aged 6 to 15 years. There are three school stages: primary for ages 6 to 12 years, intermediate for ages 13 to 15 years, and secondary for ages 16 to 18 years. Usually, every stage is separated from the other stages. The number of students in the 2014/2015 school year was 5,441,480 and the number of teachers was 531,553 in all schools of Saudi Arabia (MOE Statistics Report, 2016). There is also gender segregation in the school system so that girls' schools are taught by female teachers and female leaders, and men are not allowed to enter these schools during school time.

2.7 Intermediate Schools

The intermediate stage in the Saudi education system covers years 7 to 9. The age of students is from 12 to15 years old. The objectives of this stage are related to the main policy for education, which are (UNESCO, 2010):

1. *Supplying students with skills and knowledge suitable to their age, enabling them to learn the general principles and fundamental rules of education and sciences.*
2. *Stimulating the students to search for knowledge and getting them used to scientific thinking.*
3. *Developing, orienting and refining the various mental facilities and skills in the students.*
4. *Nurturing students into Islamic social life which is marked by fraternity, cooperation and sense of duty and shouldering of responsibility.*
5. *Stimulating the students' ambition to restore the glory of the Islamic nation to which they belong and resume the march on the path of dignity and glory.*
6. *Training students to use their time for useful reading and in religious activities and to employ their efforts in strengthening and advancing their Islamic character.*

Although these objectives require a high level of skill and character, they have not mentioned ICT skills. They mention searching for knowledge but without mentioning the tools or skills that are used to attain this knowledge. At the intermediate stage, the school year is divided into two terms. There are 35 lessons in each week, lasting 45 minutes each, and divided among 11 subjects, as listed in the following Table 2-1.

Table 2-1: Intermediate school weekly timetable.

Subject	**Weekly lessons**
Islamic education	8
Arabic language	6
English Language	4
Maths	4
Science	4
Computer skills	1
History	2
Geography	2
Civics	1
Fine arts	2
Physical education	1
Total	35

This table shows the variety of subjects that students have each week. They need many skills to cover all the requirements of these subjects and this is a challenge for intermediate students. These subjects have been developed over the last three years (2013-2015). The new curriculums involve ICT skills (MOE, 2014). For example, a maths and science project uses ‘McGraw-Hill’ to improve students’ skills in these subjects, and students use an online environment to

help with their homework and make them engage with E-learning (MOE). In addition, the teaching of English now uses ICT in the form of a student book, notebook and CD to help students with self-study at home.

There is a lack of research into the use of ICT in the intermediate phase of education, especially in the Saudi context. This could be because the intermediate stage is considered by the MOE to be a part of the secondary school stage (MOE), so research refers to the secondary rather than intermediate phase.

2.8 Using ICT in Schools

According to UNESCO (2004), "Introducing change into a system is relatively easy; ensuring that change flows from policy to the classroom is a formidable challenge" (p.19). In Saudi schools, also the issue will be addressed when the MOE creates learning resource centres in schools and adds computer skills as a subject in intermediate schools. The national plan for information technology was established for introduction into education in 2006. Thus, the National Centre for E-learning and Distance Learning was established to provide:

> *Technical support, tools, and the means necessary for the development of digital educational content in Higher Education throughout the country … The centre strives to provide rich multimedia resources to enable lecturers to integrate blended learning that fits their course and university needs (Alebaikan, 2010, p. 10).*

Lastly, the strong relationship between the Saudi education system and the Islamic religion obliges researchers to consider religion when they want to study any educational issue in this society. However, we need to complete the background picture by presenting some aspects of the whole education system in the Saudi context.

2.9 ICT in the Saudi School

The Saudi MOE has established many projects during the last two decades. In the intermediated stage, it changed the school libraries to learning resource centre (LRCs) to help students and teachers integrate technology in learning. Another project was Tatweer, which aimed to develop the school environment, including teachers, textbooks, and school equipment. Effective use of technology was one of the main aims of this project. The third project was the development of the mathematics and science curriculums. This project has cooperated with McGraw-Hill Education to develop students' thinking by using technology. In 2016, MOE the changes all textbooks to two copies, one on traditional paper and the other electronic which can be used on tablets.

2.10 Tatweer Project

In 2007, Saudi MOE launched the new project King Abdullah project for developing public education (Tatweer project). This project aims to reform the Saudi education system by improving the quality of teaching and learning in public school in order to meet the economic plan of Saudi Arabia and to meet the social need in the 21st century (Tatweer,2010). Tatweer project has two phases.

Phase One, called Tatweer 1, aims to implement 50 secondary schools from different districts in different technologies to become smart schools. Tatweer project equipped every classroom in Smart school by interactive whiteboards, data-show projector, high-speed wireless internet and provided a laptop for every students and teacher (Hakami, 2013). The second phase of Tatweer project aims to integrate ICT in the teaching at all levels (primary, intermediate, and secondary school). They started with 333 schools from different levels and

equipped every classroom, but stopped providing a laptop for every student and teacher. This phase, called Tatweer 2, replaced the first one which faced many issues and consequently forced to stop the implementation of phase 1. The differences between the two phases of Tatweer projects are as follows:

- Tatweer 1 was very costly and Tatweer 2 focuses on internal capacity so that schools can manage themselves
- Supervision in Tatweer 2 is through leading the school with nine teachers. The leading responsibility is becoming collective rather than individual.
- In Tatweer phase 2, schools are related to the Tatweer company directly. This step is to make the educational system decentralised (Alyami, 2014).

Recently, Tatweer company launched a project called “Future Gate” to transform the learning based on the Saudi vision 2030. This project aims to develop the use of ICT using learning management systems (LMS). The LMS provides interactive educational content so that students can participate in conference and discussion forums. This project covers the lack of experience of students in research and provides educational tools and curriculum explanations. It aims to give opportunities for students to study outside school at any time.[2]

2.11 Summary

From the above, it can be seen that socio-cultural factors have the power to influence the entire Saudi education system, including the policy of ICT use in

[2] For more information about this project see: http://tetco.sa/

schools. The Saudi MOE aims to develop the education system with its large budget, and one of its main aims is to spread the use of technology across all schools. Therefore, nowadays, it is becoming common to use ICT in all school subjects, and Saudi textbooks are also incorporating ICT. The next chapter explains how culture can be studied.

3 Chapter Three: Theoretical Framework

As this research aims to answer the research questions presented in 1.4 in order to fill the gap in the literature, before reviewing the literature, the current research needs a theoretical framework that can serve as a conceptual guideline for the study to enable it to be conducted practically. In other words, it needs to use this framework as a lens to understand the phenomena under investigation (Anfara Jr & Mertz, 2014). Therefore, the theoretical framework guiding the research will be considered here as premise to the literature review chapter.

The terms *theory* and *model* have been widely used in the literature; in the current study, theory refers to : “a particular kind of model that is intended to account for some subset of phenomena in the real world […] it is an artefact built by humans to achieve some purpose” (Davison & Martinsons, 2016, p. 242). Thus, it is a conceptual guideline that helps interpret the relationships between factors relating to a phenomenon. However, Davison and Martinsons (2016) states that educational researchers have borrowed theories from other disciplines such as economics, but have ignored the notion of context when adopting theories in ICT. Therefore, educational theories need to be understood bearing in mind various contextual differences in a way that can contribute to our knowledge about the relationship between ICT and the new contexts where theories are applied (Davison & Martinsons, 2016).

Furthermore, Myers and Tan (2002) calls for a strong theoretical approach to understand and study the culture of global information systems. Hence, the use of multi-layered theoretical framework is extremely beneficial because it allows

focusing on the phenomenon from different perspectives (Anfara Jr & Mertz, 2014) of course, when the theories are connected to each other.

Furthermore, a theoretical framework can be a guide in the process of data collection informs the supporting role of the literature (Troudi, 2014). As this research has to connect with existing knowledge, it needs to be guided by a relevant theory to justify the choices made in terms of research methods and in order to address the research questions.

It should be noted that “the theoretical framework, as distinct from theory, is sometimes referred to as the paradigm” (Mackenzie & Knipe, 2006, p. 16). This is a common confusion because the theoretical framework is similar to the research framework or the paradigm in that both are related to philosophy and intellectuality; however, a theoretical framework is purely theoretical in nature while the research framework is both theoretical and practical at the same time (Troudi, 2014). This means that using a theoretical framework, a researcher can construct his/her research, investigate research questions, decide how to collect data, and how to relate the research questions and the data to the literature. In other words, every piece of research has a unique theoretical framework while the research framework and paradigm represent a wider view because they involve major assumptions such as the nature of knowledge, the nature of reality, and the research methodology and methods. Therefore, the research framework is theoretical and practical. The theoretical side relates to the notions of epistemology and ontology, while the practical is evident in the choice of methodology and methods. Hence, the paradigm and the research framework of this study are discussed in the Methodology Chapter.

The subject of using ICT in the classroom is not new, and a large number of studies have viewed the phenomenon from different angles. Researchers have

used different approaches, such as case studies, historical analyses or surveys, and have usually focused on the reasons for not using technology to its full potential or in ways that could lead to the difference between learning and teaching (Zhao & Frank, 2003).

Recent studies focus on the relationship between users and the material theoretically. Leonardi (2013), for instance, reports that the currently most popular and most critiqued concept in the fields of ICT and management is that of the *sociomaterial*. This term refers to a theoretical concept about the relationship between the social and the material. However, this concept and the discussion around sociomateriality have not yet reached a clear philosophical view; therefore, it is not yet very clear as to how to study the field of ICT from this theoretical perspective.

Based on the above, this thesis sheds light on the theory or theories that guided the research questions. According to Shneiderman and Shrieidermnn (2003), there are five ways in which theory can be used in social research:

1- to identify variables by using descriptive theory to make basic conceptual distinctions;
2- to suggest explanations of why and how the relationships and processes work by using explanatory theories;
3- to facilitate creativity and discovery using generative theories;
4- to provide guidelines based on best practice by using prescriptive theories;
5- to make predictions about performance in context and new situation by using predictive theories.

Although, this study aims to investigate why and how the relationship between the teachers' use of ICT and the socio-culture factors, this knowledge of this relationship may help to predict a suggestion guideline to improve the teachers' use (this will be discussed in Chapter 8).

More specifically, this study aims to understand the perspectives of teachers, students and staff regarding their daily usage of ICT and how the social culture of the school affects that usage. The current study's aims drive the study to use a theory which helps to investigate teachers' and students' perspectives. Therefore, this study does not aim to merely describe phenomena; rather, it aims to achieve a deep understanding of participants' perspectives and their relations based on the environment's culture in order to show how culture affects teachers' use of ICT in the classroom. This approach fits with what (Shneiderman & Shrieidermnn, 2003) called the *prescriptive theory* to provide guidelines based on participants' practice.

This study seeks to find a way to answer the research questions by covering all aspects of the study (the environment, culture, school members and the relation between all aspects). The fundamental aspects of this study are: (1) Information and Communications Technology (ICT), (2) organisations (schools), (3) people (students, teachers and administrators) and (4) implicit aspects (cultural values).

Because society in the school refers to a group of people (teachers, students, school principal) who share the same living area (school, classroom) and share the same culture, the society influences attitudes, behaviours, and life chances. However, individual differences are matters to shape attitudes and behaviours (Aljeeran, 2016; Barkan, 2013). In the current study, both the society and the individuals (teachers and students) are investigated.

In order to understand the complex relationship between teachers, students, ICT usage, and the processes occurring between them by investigating the effect of culture on these processes, to do so, this study needs to be conducted within a theoretical framework that can lead to greater understanding of ICT use in school from teachers' and students' perspectives. Therefore, the current study seeks to investigate opportunities and practices that affect teachers' perceptions rather than establish statistical correlations between factors associated with ICT use.

In the rest of the chapter, Vygotsky's Sociocultural Theory is discussed in relation to the research questions. In addition, other models under the sociocultural theory umbrella are discussed in order to adopt the most appropriate model. The ecological perspective model, CBAM model, and Hofstede's framework are also discussed to draw on multiple models and provide insights into the research questions.

This chapter will describe the concepts of the theoretical framework. Which are; the sociocultural theory, the ecological perspective, the Hofstede's model, and the concern-based adoption model CBAM. The three levels of culture will be presented to show the study's theoretical framework. The first theory of the theoretical framework is the sociocultural theory.

3.1 The Sociocultural Theory

The sociocultural theory of Vygotsky has been used as an umbrella theory for this research as it claims that mental functioning and human actions are mediated by technological and psychological tools or signs (Lim, 2002). The learning of individuals is not only isolated within the minds but also comes as a

result of a variety of tools and people who help the learners achieve their goals, in addition to activities in the school as a sociocultural environment (Lim, 2002).

Vygotsky's Sociocultural theory has made a significant contribution to the literature as he uncovered the importance of the relationship between the learner and society. He lived in the period of the Russian Revolution in 1917 and influenced the Soviet psychologists as he sought to develop a Marxist theory of human intellectual functioning by using a developmental and historical approach to studying human nature.(Vygotsky, 1980).

The Sociocultural Theory is fundamental to our understanding of learning as a social and cultural phenomenon rather than an individual phenomenon (Kozulin, Gindis, Ageyev, & Miller, 2003). The central tenets of this theory relate to (1) mediation as the agency of learning and (2) the importance of psychological tools. The notion of mediation relates to the role played by the humans and symbolic intermediaries placed between the learner and the material to be learned. Psychological tools refer to the cultural symbolic systems that, when adopted by learners, become cognitive tools (Kozulin et al., 2003).

Sociocultural Theory proposes three main concepts: (1) the Zone of Proximal Development (ZPD), (2) the cultural development law and (3) the sign, sign system and tool mediation (Hung, 2001). As defined by Vygotsky, "the difference between the level of solved tasks that can be performed with adult guidance and help and the level of independently solved tasks is the zone of proximal development" (Vygotsky, 1980). This means that what the learner is able to do with help and assistance today (through collaboration), he or she will be able to do if by him/herself tomorrow (independently). Vygotsky argued that the main characteristic of instruction is creating the ZPD (Hedegaard, 2005). Considering this notion of ZPD, the child is seen as a whole while his/her

performance is not understood through a single task; hence, the child's internal psychological structure and development are seen as changes in the structural relationship (Chaiklin, 2003). Moreover, Vygotsky claimed that, in school success, for example, the size of ZPD is more predictive than the IQ (Chaiklin, 2003; Kozulin et al., 2003), which suggests that the child's learning is more affected by collaboration than by individual intelligence.

The second proposition of the sociocultural theory is the cultural development law. According to Hung (2001), the generic law of cultural development lies at the heart of the Vygotskian thesis of the social formation of the mind and how the social connects with the psychological. Therefore, studies need to consider the relationship between the child and the social environment, and what the environment means for the child. This relationship between the social and individual levels is sitting within the ZPD, and it occurs by psychological tools and signs mediation.

The third claim of the sociocultural theory is the sign, sign system and the tool mediation. The symbolic tool mediators are used by the child, such as mediation through another human, from organised learning activities, scaffolding and apprenticeship. The symbolic tools, such as mathematical codes, embody rich educational knowledge, but they do not affect unless they have a human mediator to facilitate the learner's use of these tools. Therefore, the object of examining mediation is as a human communication activity "or speech, not language as a system abstracted from use" (Wertsch, 1993p.115).

As the current study aims to investigate the sociocultural factors which influence students' and teachers' use of ICT tools in the classroom, these socio-cultural factors are considered as 'mediators' of teachers' beliefs and practices (Mansour, 2013). Some research also suggests that culture has a mediating

role which affects teachers' actions, beliefs and attitudes (Tezci, 2011). Furthermore, a central tenet of the sociocultural theory is that, to comprehend the human mind and its actions, we need to understand the mediating tools that are considered as components of the environment from which they emerge, which encompasses the physical environment and its historical and social surroundings in addition to the individual's beliefs and knowledge from an internal aspect (Murphy & Ivinson, 2003).

Although Vygotsky's theory is suitable to the current study's focus, it seems to be too broad to illustrate in depth the relationship between humans and ICT; therefore, the research questions that relate to the usage of ICT might not be covered deeply enough from this theoretical perspective alone. Nevertheless, this theory can act as an umbrella theoretical framework, while more specific frameworks can be adopted to account for the breadth and depth of the study.

Based on this, the current research emphasises on the idea that the use of ICT in school can be considered a sign that draws the relationship between social and psychological as a cultural law (Hung, 2001). This relationship, in the current research, is occurred on the classroom, school and outside the school. These levels are needs more investigated. However, sociocultural theory is more general to study every level separately in order to investigate the effects of every level on the learning. Therefore, the current study adopted the ecological perspective model.

3.2 The Ecological Perspective

Technology has become part of people's lives, and children use technology in their homes and school on a daily basis. This technological revolution has changed the features of computers and, at the same time, it has changed how

people view technology in education (Salinas et al., 2017). Research into ICT has often examined how a system acts in isolation (Zhao & Frank, 2003), but if we seek to understand how ICT is used for teaching and learning, then it is necessary to examine the interactions between teachers and ICT and how they contribute to the final product. We also need to illustrate how teachers engage with new technology as individuals and as members of schools and society; therefore, we need an approach that allows this complexity to be drawn out (Tatnall & Davey, 2003).

The school is a complex social environment with a variety of connected networks between groups and, when technology is newly introduced in the school system, a great number of changes can occur within this system including teaching practices, learning activities and social relationships (Zhao, Lei, & Frank, 2006). Therefore, to understand how technology can be used inside the school environment and enhance the teaching and learning process, we need to comprehend the complex relationships and interactions that exist between all the school's components. Therefore, we need to adopt an approach that helps us understand the distinction between people, including teachers and students, resources, such as ICT, and the environment. These entities are seen as similar to the natural objects of the environment, called organisms, resources and environment (Tatnall & Davey, 2010).

The ecological perspective framework has been borrowed from the science of ecology in the natural world (ecological system theory) to show the interrelationships between actors (teachers and students in this study) and the context. A possible drawback of this theory is that it might portray these relationships as "more linear than they actually are" (Perrotta, 2013, p. 320). The ecological system theory has also been used in social science by

Bronfenbrenner (1979) in his book, *The ecology of human development: Experiments by nature and design*. The ecological approach employs the term "ecosocial system" (cited in Lemke, 1997) to refer to the study of cultural change. Despite the fact that ecological theory has been used widely in the social sciences, it appears as a rather general social theory that suggests that numerous different levels of an environment can influence human development, from institutions and individuals to cultural forces. The five levels of the environmental system are: (1) the *microsystem*, which refers to the immediate environment that influences the child, such as home and school; (2) the *mesosystem*, which refers to the relation between home and school as an immediate environment; (3) the *exosystem* which relates to the environment that indirectly influences the child, such as the parents' workplaces; (4) the *macrosystem*, which includes the cultural values and, finally, (5) the *chronosystem* which pertains to the time affecting all systems and processes (See Figure 3.1).

While this theory seeks to explain the child development, it emerged prior to the internet revolution (Johnson, 2010), which therefore suggests that this study needs to adopt the ecological theory in a way that could include ICT. Therefore, we need to follow the principles of the ecological approach to understand the complex situation of ICT use in school. Such principles include the following:

> *Organisms behave in ways that optimise the balance between their energy expenditure and the satisfaction they obtain. Organisms operate within a competitive environment that ensures only the most efficient of them will survive. (Tatnall & Davey, 2010, p. 128)*

The main points raised by these principles are that the competitive environment gives the most efficient organisms (here ICT products on the one hand and English and Arabic subjects on the other hand) the opportunity to survive, which

requires organisms to optimise their energy expenditure to obtain optimum results from their efforts (Tatnall & Davey, 2003). Therefore, the ecological perspective might provide a useful lens to examine the nature of technology in education.

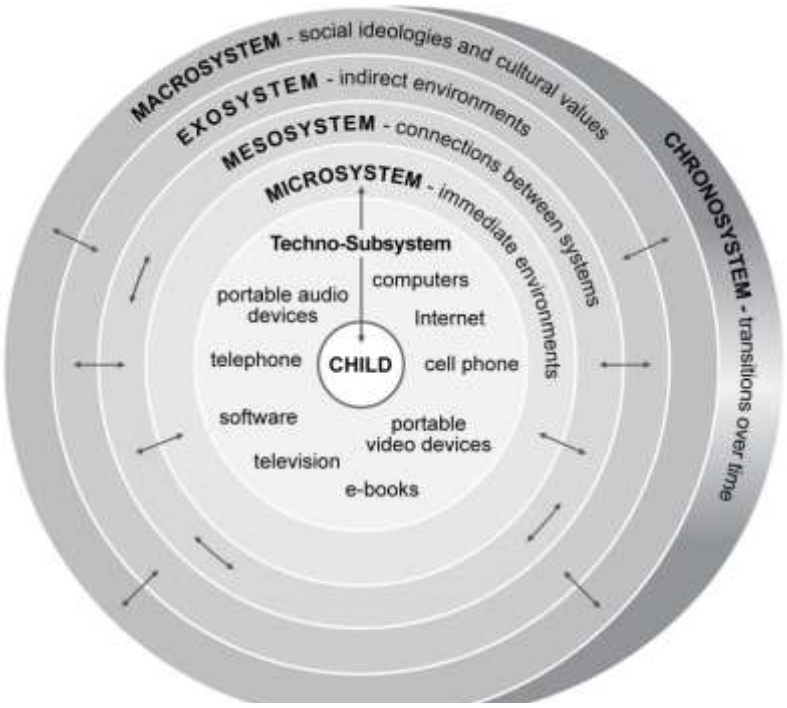


Figure 3-1:Ecological techno-subsystem (Johnson, 2010, p. 178).

The literature on ICT relates to two types of ecological theories. First, the ecological techno-sub-system by Johnson (2010), as explained in , takes into account technology in the microsystem and the “child interaction with both living (e.g. peers) and non-living (e.g. hardware) elements of communication, information, and recreation technologies in the immediate or direct environment” (p.178).

The ecological techno-subsystem seems to cover the children’s activity (learning), while the role of teachers and the teaching processes are not covered, which is the main limitation of this theory.

The second concept developed by the ecological theory is the concept of the *ecosystem* which contains *biotic* and *abiotic* communities. In the current study, the ecosystem encompasses the school and classrooms, which contain a variety of relationships and groups. Biotic communities consist of the people in this system such as teachers, students, parents and administrators, while abiotic communities refer to the physical setting, location of computers, grades and subjects taught. Furthermore, *species* refer to anything or anybody in the school, such as teachers, librarians, students, books, workbooks, dictionaries or disks. As in nature, each group has its own role and characteristics which affect other groups and create complex relationships between the groups (Zhao & Frank, 2003) and learning takes place when species interact with each other in the system (Zhao, Lei, & Frank, 2006). Such relationships and interactions are obvious in the classrooms and schools and we therefore need to examine how they affect ICT usage in the school. However, the ecosystem analytical framework is used as a metaphor which could apply to the school environment without all its principles because there are differences between the human environment (school) and the animal environment. Nonetheless, this ecosystem is an open system in which *new species*, such as technology, can be introduced, thereby affecting the equilibrium of the ecosystem because of the interaction with one or more existing species in the school. Hence, the equilibrium changes and other species create a new equilibrium by either working with each other or in a complementary manner (Zhao, Lei, & Frank, 2006).

Based on the above premises, the current study aims to understand the social factors that influence the usage of ICT in the school, bearing in mind that the school is a complex system that involves a variety of human groups, objects

and interactions and that the school itself is an environment. Thus, Zhao and Frank (2003)'s ecological approach seems to be more accurate than other models and their research has been widely cited and believed that it more logical diversion. This approach divides the environment to five levels: (1) the classroom level that contains the teacher, students, new technology, and the relationship between them, (2) the school level, which contains the relationship with administrators, staff and other teachers, (3) the district level, that the relationship with the school board and community, (4) the state level which contains the effect of the governor and legislature and (5) the nation level, that contains the president and legislature (see Figure 3-2).

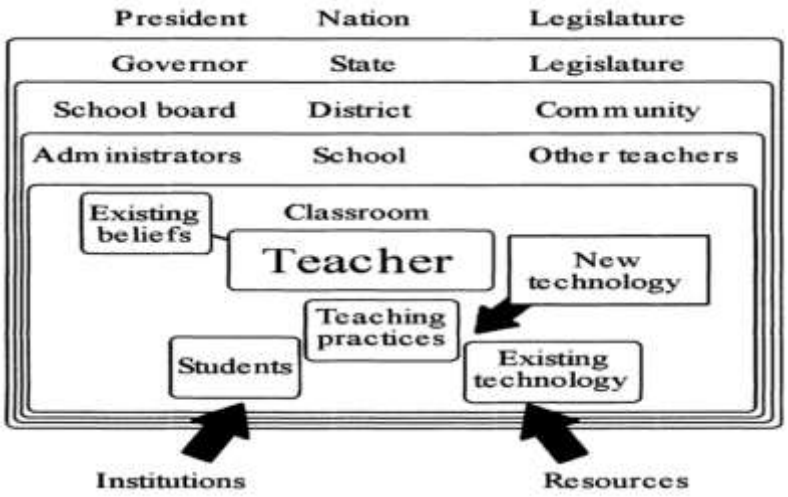


Figure 3-2:Ecological perspective (Zhao & Frank, 2003.p.815).

As mentioned earlier, the current study highlights both opportunities and practices that affect teachers' perceptions of dealing with ICT in the classroom. Zhao & Frank drew a parallel with the introduction of the zebra mussel (a shellfish) into the American Great Lakes establishing four metaphorical equivalents of the zebra mussel's life in its new ecological place: "(a) human

institutions (such as schools) are ecosystems; (b) man-made objects (computer uses) are living species; (c) teachers as individuals are keystone species; and (d) external educational innovations are invasions of exotic species" (Zhao et al., 2006, p. 140).

The notion of man-made objects and computer use as "living species" relates to the fact that "ideas and man-made artefacts do evolve as if they were living beings" (Zhao et al., 2006, p. 142). Zhao et al. also argue that when new technology enters the school, which is a cultural environment, it is either used and survives, or it is forgotten and dies depending on the degree or quality of adaptation to the school or because of the concerns of teachers. Therefore, certain elements of technology may be used more than others if their users find it better or more fit than other elements that will disappear (Zhao et al., 2006). The reasons that affect teachers' use or rejection of ICT are precisely the factors that the current study is investigating.

Furthermore, considering the above metaphorical representation, first, teachers are considered as individuals and as "keystone species", which means that, as research suggests, teachers are the key factor that influences the integration of technology in schools and play the most important role because they have the opportunity to decide which technology should be used, how it should be used and whether it can benefit the students. Teachers also have the opportunity to help others as individuals (Zhao et al., 2006). The second metaphor suggests that external innovation is considered as an invasion and the school tends to be blamed for not adopting innovations that people think are useful and should be used. In fact, if an innovation is introduced into the school ecosystem, the innovation changes the equilibrium and the school ecosystem conflicts with the innovation which acts as an "invader from outside". However, the conflict

between existing species (man-made) and invading species (new innovation) may result in one of them losing and dying and the other winning, or both of them winning and both obtaining new possessions.

However, when the school's ecosystem seeks to integrate the new technology, according to Zhao & Frank (2003), certain steps should be taken to ensure its integration. For instance, ICT hardware should be provided, external factors such as social factors should interact with ICT within the ecosystem and existing species, especially teachers, must interact with ICT whatever their personal history and pedagogical practice. The last step is to ensure that teachers and technology co-evolve to foster adaptation between the existing species and the new species.

Furthermore, to understand ICT in education from an ecological perspective, Zhao et al. (2006) highlighted five fundamental ideas: (1) technology is an active agent, (2) individuals are selfish actors, (3) technology use evolves, (4) relationships are important, and (5) opportunities for interaction need to be provided. Firstly, with regards the idea of technology as an active agent, they argue that technology is not neutral and has "its own propensities, biases, and inherent attributes" (p.141). This point is helpful to this study insofar as it illustrates why teachers and students prefer to use, for example, PowerPoint over lecturing and, despite the benefit of using a chatroom in lecturing, it is a good tool for communication. Therefore, this idea also suggests that technology is not necessarily "a slave to the pedagogical master" (p.141). Secondly, individuals are selfish actors and teachers, for instance, are more concerned with the well-being of their own classroom than other classrooms. They may, however, help other teachers because they know they may need help back, which helps in building a social environment. However, teachers usually help

each other when they feel that their school is a good environment and not only because they think that they will need help from other colleagues in return. Hence, it seems that Zhao et al. (2006), regarding this point, may have over generalised this point and did not provide any strong evidence for this. Thirdly, the use of technology evolves as new technology affects the social relationships between the existing species, thereby changing the equilibrium in the school. For example, when students use new ICT tools, they may change their learning practices; in other words, “technology use and learning practice evolve together” (Zhao et al. 2006, p.142). Fourthly, (Zhao & Frank, 2003) also point out the importance of relationships in a social environment like a school as it is essential to build relationships between teachers, students and administrators. In addition, teachers, for example, may need to use social networks to communicate with innovative people from outside the school as well. Finally, for Zhao & Frank, it is essential to provide opportunities for interaction insofar as teachers and students need help to build social capital and facilitate the relationships between human and technology and between teachers and students.

Moreover, it is worth bearing in mind that the ecological perspective constitutes a significant part of the current study as it appears to be a suitable framework to guide the understanding of the factors that influence ICT usage in the school because of its focus on the relationships and interactions between the groups in the school, which contains people and ICT. This theory may also help to describe the factors that influence teachers’ acceptance and use of ICT in addition to highlighting all the relevant factors that contribute to two fundamental points: (1) the nature of the uses and (2) the result of the teachers’ analysis of these uses (Zhao & Frank, 2003).

The most interesting aspect of the ecological perspective is that it may also help in covering the external factors that are related to policy makers and the social life outside the school as it focuses on both the microsystem (school, and classroom) and the macrosystem (national level). The microsystem in the current study includes the MOE policy, the curriculum and the supervisors because they are considered as part of the organisational factors.

3.2.1 Extending the ecological perspective

Despite the fact that adopting the ecological perspective has a great number of advantages, the main limitation of this perspective is that it focuses on teachers alone in their dealing with ICT. It cannot be accepted that teachers are the only "keystone species" because each one of them has opportunities to choose which aspect of ICT can be helpful in learning. In addition, the students' position in Zhao & Frank (2003) and in Zhao et al. (2006) has not been mentioned to any great extent apart from some hints that students constitute the secondary group within the ecosystem. In fact, students may be able to use technology to prepare presentations and acquire information.

The main focus of the current study is that socio-cultural factors influence the use of ICT in the school environment. To obtain a deep understanding of the interaction between groups in the school, a theory should be used to look at these relationships systematically. As the questions of this study are specifically related to the school environment where internal and external factors have an influence on the usage of ICT in the classroom, the current research refers to the external environment as the 'national level' and to the internal environment as 'the classroom'.

The internal factors relate to the background factors of teachers and students, the classroom level as well as the existing factors in the school and the education policy because the school is an institutional organization. The external factors, however, relate to the Saudi culture, the national culture, and the social life outside the school. External factors, therefore relate to the national level and referred to by Johnson (2010) as the macrosystem. The ecological perspective appears, therefore, suitable for this study as it covers its main points of focus because and accounts for different levels within the environment.

The ecological perspective covers the main aspects of school life, including human groups, physical objects, curriculum, policy and administration. The integration of new ICT tools in the school will entail some changes in the whole school system because certain teachers may accept the change while others may be resistant. This acceptance or rejection may be the result of the background of the teachers, the national culture, the school culture, the relationships within the school or other factors that this study seeks to investigate in light of the literature and the data collected from teachers and students throughout the research process. The metaphor of the ecological perspective has been chosen, and adapted to this study, because it is wide enough to cover all aspects of the research (teachers, students, administrators, librarians, policy makers, and the physical items) and also given that it is sufficiently specific to include issues pertaining to the relationships between humans and ICT. To adapt the ecological theory to this study, it seems essential to add active students at the core of this theory in order to focus on the relationship between the students and with their parents and teachers. Furthermore, the use of metaphors in qualitative, interpretative research “is

often recommended as a way to generate insights into organizations"(Kaarst-Brown & Robey, 1999, p. 214).

The levels of environment that suggested by the ecological perspective are considered as culture that the culture has many levels. According to Leidner & Kayworth (2006), there are three levels of culture: national or cross-cultural, organisational and sub-unit. To identify the differences between these levels, it is essential to recognise the most powerful cultural values that affect individuals. However, culture is not objective and cannot be analysed in a single level (Leidner & Kayworth, 2006). Furthermore, more recent literature has rejected the view of culture as a distinct and stable element with clear borders (Walsh & Kefi, 2008) suggesting that culture is dynamic. Hence, it seems difficult to identify what level of culture should be studied precisely. Likewise, most research on organisational culture, according to Leidner and Kayworth (2006), has been conducted on business organisations, such as companies or factories, which differ from non-profit organisations such as schools.

Sociocultural factors can have an influence at three levels: the classroom environment, the school environment and the national culture. In the present research, the macro level has been divided into two levels: (1) the school or institutional level and (2) the classroom level as a sub-level. This is because, to investigate the individuals, here teachers and students, the current research needs to create a new level called 'classroom level' as the suggestion by the ecological perspective (see Figure 3.3).

The new level of culture, *the classroom level*, suggests that the relations and influences between these levels are very complex. One of the main aims of this study is to investigate the sociocultural factors that influence the use of ICT in the classroom as these factors relate to multiple environmental levels and

culture cannot be described as a stable, well-defined object (Walsh & Kefi, 2008). Therefore, the initial framework of the current research can be described in the form of the following figure.

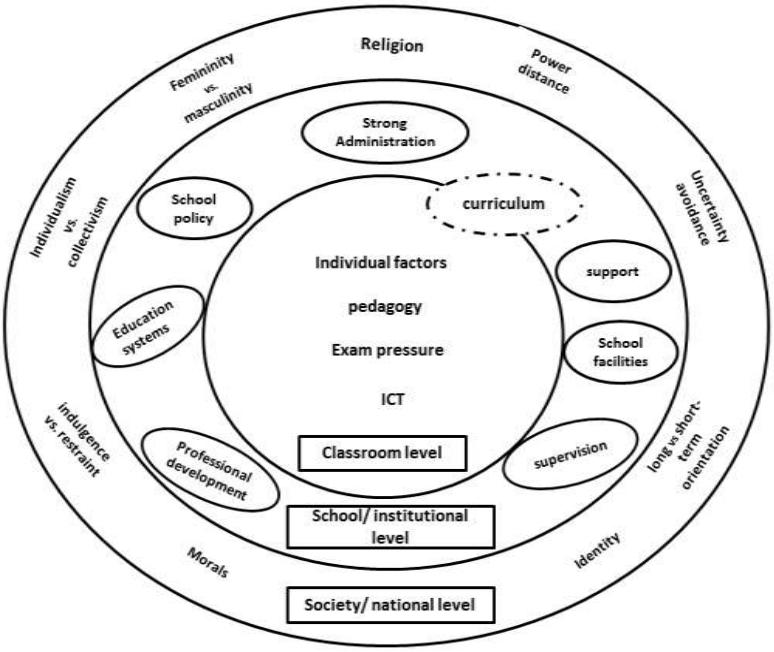


Figure 3-3 An Ecological perspective framework

In the above figure, three environmental levels have been used to cover all aspects or factors that might have some influence on using ICT in the classroom. The first level is the environment of the classroom which contains students, teachers, peers, the use of ICT and teachers' concern or feeling towards using ICT. The second level is the school or institutional environment that covers many aspects such as the headmaster, the school policy, as part of the education system, school facilities, and the curriculum. The third level is the national level outside home and school and includes the religion, moral and culture values In the national level, however, the main two factors that can be found at any level are the cultural factors and beliefs.

However, this framework has two limitations. First, the national level relates to many factors and it might be difficult to cover all these factors in the current

study. Therefore, these factors should be investigated using a model that covers all the national factors. Hence, Hofstede's model of national culture has been adopted and will be discussed in section 3.4. The second limitation of this model is that the question "How do students and language teachers use ICT in their schools?" cannot be answered clearly using the ecological perspective alone because it does not investigate the relationship between teachers' concern, teachers' levels of use in ICT and how these concerns affect the teachers' levels. Therefore, this study incorporates certain features of the concerns-based adoption model (CBAM) which will be used as a lens to provide insights into the questions related to the classroom environment, as explained in the section below.

3.3 Concern Based Adoption Model (CBAM)

The most accurate description of teachers' level of use in ICT or their level of integration of ICT is the Concerns-Based Adoption Model (CBAM) (Hord, 1987). While this model was developed by a team of researchers at Texas University in the 1970s, the second version of the model can be helpful to measure the implementation of a new practice in a school (Hord, 1987). In order to cover the effects of teachers' feelings on their daily use of ICT, the CBAM can help to illustrate the teachers' levels of use of ICT. This model aims to measure, describe and explain the process of change experienced by teachers to implement new educational materials, and how the process is affected by the user in changing roles (Anderson, 1997). Therefore, this model focuses on the processes of change using three dimensions: (1) Levels of Use (LoU), (2) Stages of Concern (SoC) and (3) Innovation Configuration (IC). Figure 3-4 below illustrates these dimensions.

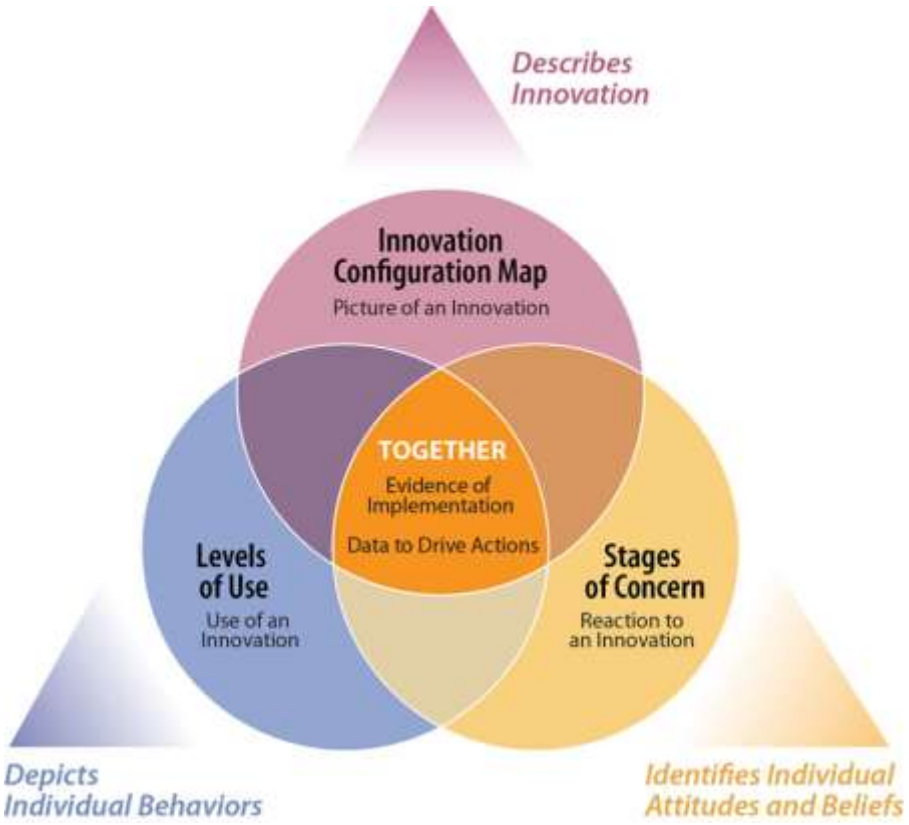


Figure 3-4 CBAM model (http://www.sedl.org/cbam/).

The LoU shows how users (teachers) are acting with change and, therefore, focuses on behaviours while the second dimension, SoC, focuses on the affective aspects of change such as feelings, perceptions, attitudes and reactions. The third dimension, however, IC, focuses on what the change looks like. Therefore, LoU focuses on the behaviours and SoC on the feelings of the individual, but IC does not focus on the individual at all (Hall, Dirksen, & George, 2013).

LoU is a behavioural phenomenon and focuses on what the individual teacher is doing or not doing; this level has been defined as:

> *Levels of Use are distinct states that represent observably different types of behaviour and patterns of innovation use as exhibited by individuals and groups. These Levels characterize a user's development in acquiring new skills and varying use of the innovation. Each Level encompasses a range of behaviours. (Hall et al., 2013, p. 6)*

This framework suggests eight levels of use. LoU 0, or non-use, is the level where the user has little or no knowledge of the innovation and is doing nothing to become involved. Then, LoU 1 is the orientation level where the person has acquired information about the innovation and is exploring the value of using it. Next, LoU II is called the preparation level and refers to the person preparing for his/her first use of the innovation. After that, LoU III refers to the mechanical use level where the user focuses on the short-term with little time for reflection, and in which the change is made to meet the user's needs rather than the client's needs. The next level is LoU IVA which is the routine level whereby the use of the innovation is stabilised but with little preparation made to improve using the innovation or its consequences. Then, LoU IVB is the refinement level as the user varies the use of the innovation to increase its impact on the client. From this level, the teacher changes to become more student-centred (Anderson, 1997). At LoU V, the Integration level, the user co-ordinates his/her efforts to use ICT with the activity of colleagues to achieve a collective effort for the benefit of the client. The next level, LoU VI, called the renewal level, is reached when the user re-evaluates the quality of use of the innovation and explores new goals for the system (Hall et al., 2013). A graphic representation of this framework is presented in Figure 3-5.

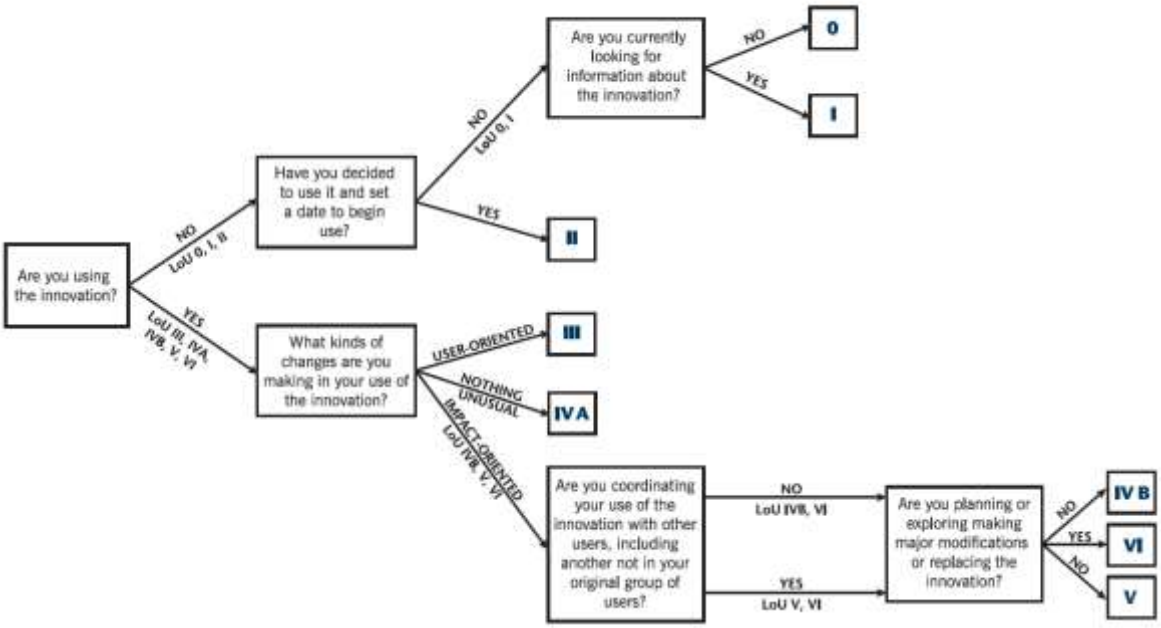


Figure 3-5 Levels of Use (Hall et al., 2013, p. 18)

In the first three levels of use, users do not actually use ICT and those who are at the levels of non-use, orientation and preparation do not start to use ICT. With regards the Mechanical and Routine use, users utilise ICT without any development of their usage. At the highest three levels, refinement, integration and renewal, users, however, aim to improve their current use of ICT by collaboration with colleagues or exploring new goals for their use of ICT. These three major categories of levels of use, therefore, seem to provide adequate information to relate to the effects of culture on teachers' use of ICT.

Table 3-1: Levels of Use of the Innovation (Hord, 1987).

Level of use ICT in the current study	Levels of Use of the Innovation (Hord, 1987).	Behavioural indicators of level
Non-use	0. Non-use	The user has no interest, is taking no action
	0I. Orientation	The user is taking the initiative to learn more about the innovation.
	II. preparation	The user has definite plans to being using the innovation
Routine use	III. mechanical	The user is making changes to be better organize use of the innovation
	IVA. Routine	The user is making few or no changes and has an established pattern of use
Integration use	IVB. Refinement	The user is making changes to increase outcomes.
	V. integration	The user is making deliberate effort to coordinate with other in using the innovation.
	VI. renewal	The user is seeking more effective alternatives to the established use of the innovation

The above table shows eight levels of use (LoU) of ICT. The current study has merged these levels into three levels of use: (1) non-use, (2) routine use and (3) integration use.

According to (Hall et al., 2013), the best way to assess the LoU is through a qualitative methodology because the LoU is a behavioural feature. Therefore, the best way to document behaviour is by observations and interviews. The current research, therefore, aims to use the interview and observation to explore the level of teachers' usage.

The second dimension of CBAM is the Stage of Concerns (SoC). This dimension focuses on the feelings of the user. These stages of concern are

helpful in identifying the kind of concern the teacher feels towards using ICT. These concerns relate to the factors affecting teachers' use of ICT. Stages of concerns have different stages. At Stage 0, *awareness*, the teacher has little knowledge or interest concerning the change (using ICT) while at Stage 1, *informational*, the teacher is interested to learn more about using ICT. At stage 2, however, the *personal stage*, the teacher has strong worries about his/her ability to implement ICT and about the personal cost of getting involved. Stage 3, *management*, is reached when the teacher is considered an expert at implementation and is concerned about increasing new behaviours related to putting the change into practice. At Stage 4, *consequences*, the teacher focuses on the impact of the change (using ICT) on students in the classroom while at Stage 5, *collaboration*, he/she is interested in working with colleagues to increase the benefits of the implementation of ICT for the students. At Stage 6, *refocusing*, the teacher thinks about making modifications to his/her use of ICT or replacing it with something else (Anderson, 1997).

Table 3-2 Stages of concern (Loucks-Horsley, 1996)

Type of concern (in this study)	**Stage of concern**	**Expression of concern**
Self-concern	0. Awareness	I am not concerned about it.
	1. Informational	I would like to know more about it.
	2. Personal	How will using it affect me.
Task-concern	3. Management	I seem to be spending all my time getting material ready
Impact concern	4. Consequence	How is my use affecting learners?
	5. Collaboration	How can I relate what I am doing to what other are doing?
	6. Refocusing	I have some ideas about something that would work even better.

The above table shows seven stages of concerns which could also be combined to form larger categories, namely, self-concerns (awareness, informational, personal), task concerns (management), and impact concerns (consequence, collaboration, renewal) (Anderson, 1997; Hall et al., 2013).

In this research, CBAM is used to investigate the classroom level only because the actual use of ICT by teachers occurs in the classroom. Hence, the categories of the CBAM are used to identify the teachers' usage of ICT, that is, their levels of use. This model will also help the research to identify the kind of concerns (Stage of Concern SoC) for teachers, regarding how they can improve their usage, what is the next level they could achieve, and how their concerns progress from self-concerns to task concerns and to impact concerns. Therefore, the CBAM can help this research to identify teachers' concerns and their level of use of ICT. For example, if a teacher reports some factors that affect his/her use of ICT, the CBAM can help to categorise these factors into self, task or impact concerns. Based on these concerns, teachers could then be divided into many types based on their levels of use. Based on the characteristics of the CBAM model, I argue that this model can help answer the sub-question: How do languages' teachers use ICT in their schools? Therefore, this model will only be used to explore the teachers' concerns and their level of ICT use while the third level of culture is, that is, the *national culture* is described in the next section.

3.4 National Culture Level

While the ecological perspective is used to investigate the school environment. I suggested focussing on an internal level, the classroom, which will be investigated through the CBAM. The present research also needs to adopt a

framework that can consider the national level. According to Salinas et al. (2017) the national cultural factors are too diverse to be measured through the teacher's work only. In the current study, it seems difficult to investigate all the national factors that surround teachers without using a theoretical model. Therefore, many models have suggested national cultural dimensions, such as Tompenaars' (1993) model in business, Schwartz's model (1992), and Hofstede's model (1980, 2010).

In the current research, Hofstede's model has been followed for several reasons. Firstly, there are some similarities between the dimensions and the cultural values of the national models. The second reason is that Hofstede's model is more general and can therefore be applied to education, while the other models have mainly been applied in business organisations, not in non-profit organisation such as schools (Leidner & Kayworth, 2006). The third reason is that Hofstede's model has already been applied to the Saudi culture and the data have been published online and UpToDate which makes these data is available to read Therefore, this research could use the specific results relating to the Saudi culture to explore their effects on using ICT in schools.

Hofstede's model assumes three kinds of differences between countries and groups: identity (language, religion), values, and institutions (rules, laws). Although the three groups are rooted in history, only values are invisible while identity and institution rule are visible (Hofstede & Hofstede, 2010). This shows the difficulty of considering the national culture, even though it has effects on teachers. Hofstede also suggests four cultural dimensions, based on empirical data collected through a large-scale survey conducted amongst IBM employees in 1980. Minkov (2007) later added two dimensions, making six dimensions in total: (1) power distance, (2) individualism vs collectivism, (3) masculinity vs

femininity (4) uncertainty avoidance (5) long term vs short term orientation and (6) indulgence vs restraint. His work aimed to describe social phenomena and compare cultures (Williamson, 2002). All these dimensions describe characteristics of the whole society not of individuals (Hofstede & Hofstede, 2010). These dimensions are described further in section 4.3.1.

3.5 Summary

In sum, this study's theoretical framework has been used to guide the data collection, fill the gap in literature and cover in depth the scope of the research focusing on individuals (teachers and students, ICT use, curriculum, culture, and the relationship between all these aspects. The main aim of using this theoretical framework is to provide a systematics structure for the research. As the socio-cultural theory considers learning as a social and cultural phenomenon and not only an individual one, it relates to the main concept around which the current research is centred. Therefore, the socio-cultural theory acts as an umbrella framework encompassing multiple models including the ecological perspective; Hofstede's model and the CBAM.

The ecological perspective suggests different levels of environment (Johnson, 2010) covering the main aspects of school life including the human, physical, curriculum, and policy levels. It also considers the teacher as the key factor in the integration of ICT. In addition, it assumes that ICT is a strange tool that enters the school and provokes a great number of changes to the environment (Zhao & Frank, 2003). Such changes notably include how teachers and students' perceptions and feelings about ICT use in the classroom and how this affects the relationship between ICT and teachers and students. To describe these feelings, it useful to adopt the CBAM as it can help in answering the

question relating to how teachers use ICT based on their concerns. Likewise, Hofstede's model covers the national culture of all the participants in the current research. Hence, this model can help to explore the effects of teachers' and students' beliefs on their behaviour. Finally, from the characteristics of the ecological perspective, Hofstede's model and the CBAM, the outline of the literature review can be drawn, as explained and discussed in the following chapter.

4 Chapter Four: Literature Review

This chapter critically reviews and analyses the literature pertaining to the purpose and the aims of the research. Through reviewing relevant prior studies, research questions are then raised with the aim of addressing the knowledge gap in the literature. Thus, the areas of relevance to this study include the implementation of ICT within the curriculum and how this is related to the school environment. Three levels of culture have been suggested to investigate the ICT implementation: the national, the school and the classroom culture.

Hofstede's national dimension is investigated to cover the national culture while school factors are dealt with in relation to the effects of using ICT such as headteachers' roles and school policy. The classroom as the environment where the actual use of ICT occurs is investigated in order to gain a deeper understanding of the individuals' roles. As teachers are considered as key factors of change, the thesis critically reviews the literature on teachers' acceptance of ICT, their roles, their beliefs, their levels of use of ICT, and their feelings about using ICT. Literature on students' actual use of ICT in the school is also covered in this chapter. Moreover, factors that affect ICT usage in school are discussed from an ecological perspective focusing on similarities and differences among these factors at the international level. Finally, this chapter concludes to address the gap of the study and the research questions.

4.1 Information and Communication Technology

The term *Information and Communication Technology* (ICT) refers to any communication and technological tool which can be used to search for information or communicate with others (P. Christensson, 2010; Meelissen,

2007). With respect to its definition, Christensson, 2010, for instance, uses the definition of the term ICT as it:

> *… relates to those technologies that are used for accessing, gathering, manipulating and presenting or communicating information. The technologies could include hardware (e.g. computers and other devices); software applications; and connectivity (e.g. access to the Internet, local networking infrastructure, videoconferencing). What is most significant about ICT is the increasing convergence of computer-based, multimedia and communications technologies and the rapid rate of change that characterises both the technologies and their use (p.3).*

The terms ICT and technology have been widely used in the literature and often interchangeably. According to Livingstone (2012) the term ICT is a problematic term for research in education technology because it includes many different types of technology, some of which refers to a specific use at school, such as interactive whiteboards, and others that refer to formal and informal uses such as edugames. Nonetheless, in the Australian curriculum, for example, a slight difference is made between ICT and digital technologies, as shown in the table below.

Table 4-1: the differences between ICT and digital technologies in the Australian curriculum.

ICT	**Digital Technologies**
Develop skills in operating ICT to communicate.	Develop knowledge of the underlying concepts of information system, data, and computer science.
Incorporates digital citizenship when considering the social impact of using technologies.	Encourages students to design digital solutions to solve problems.
Is explicitly planned and taught in all subject areas.	Must be assessed at least once every two years

Therefore, ICT supports students to be effective users of technologies, while digital technologies build on and extend ICT, moving students from technology consumers to creators (Vivian & Falkner, 2015). Although the Australian curriculum used these terms in differently, in the present research, both the terms, ICT and technology, have been used interchangeably and have the same meaning.

The original meaning of the word ‘technology’ refers to “the techniques used in the material world such as weaving or pottery” (Wegerif, 2015P.429).This means it is a method or way to use the material. Based on this definition, many tools would be involved such as written language because it is considered an artefact. However, in this study, the meaning of ‘Technology’ in school refers to new digital tools and new digital media (Wegerif, 2015). This eliminates tools such as whiteboards and exercise books because they are considered naturalized tools. The main subject in this study is using ICT (digital tools), which refers in this study to implementation and integration of ICT.

Furthermore, the term Information System (IS) can be found in the literature to designate the area of ICT which focuses on the interaction between humans and computers, on the one hand, and interaction design on the other hand. The human-computer interaction is concerned with understanding how individuals and groups use technology during their work or activities. This means that ICT deals with processes which introduce a system into an organisation and the activities of managers and other staff (Kaptelinin & Nardi, 2006).

In term of the relationship between the teachers and ICT, especially the language teachers who are the participants in the current study. Li (2014) states that there are two key areas of focus in the literature pertaining to the relationship between language teachers and technology: (1) teachers' beliefs

and attitudes towards technology and (2) the technology uptake. Although these two areas are relevant to the current study's goals, the former has commonly been researched quantitatively, focusing on attitudes. In contrast, the current study aims to examine the factors affecting the use of ICT, looking at teachers' beliefs as the main factor that affects the use of ICT. Li (2014) states the studies about the uptaken technology should focus on how the teachers use technology and what the purpose of use it. The current study follows Li's suggestion and focuses on the use of ICT by investigating how teachers use technology and their purpose in using it.

4.1.1 The use of ICT in school

The use of ICT in the school has many levels of adoption. The integration of ICT is considered as a high level of use of technology and many schools do not reach this level. According to Tondeur et al. (2009), this is because this level is not only about using ICT, as it includes also evaluation and assessment of ICT. This level has been referred to by (Alharbi & Drew, 2014) as *using ICT as an environment*.

The studies of the usage of ICT have a different approach. According to Tearle (2002), studies on the usage of ICT in schools should focus on two key areas: (1) the introduction of ICT into teaching and (2) the management of change and educational reform. ICT can potentially change the whole learning environment system and the change occurs whether it is planned or unplanned.

Schools need to use computers, not merely as tools, but as catalysts for changing their social environment (Dawes, 1999) and this level of usage the ICT changes the environment. For example, using an interactive whiteboard (IWB) instead of a blackboard does not mean that ICT implementation has been

achieved if there is not change on the process of teaching. The use of the IWB should proceed alongside other ICT tools with the teaching aims to be a factor in educational change; therefore, successful ICT implementation in education means that ICT is used “effectively and efficiently in all dimensions of the processes” (Yalın, Karadeniz, & Şahin, 2007, p. 4036). Consequently, the implementation of ICT is not a product but a process. Mumtaz (2000) argues that teachers should teach students the process of learning rather than its product; therefore, the implementation of ICT is a means of providing ways to practise the use of ICT for educational purposes rather than a tool to show how technology can be used in general. In other words, to benefit from using ICT in the classroom, pedagogy should be redesigned to draw the aims of using ICT.

Becta (2004) reported that literature in the topic of effective use ICT are very general terms of increasing the use of ICT: therefore, research should try to categorise the kinds of ICT use. For example, when teachers reach the level of ICT use whereby it becomes an environment of learning rather than only tools, they could be considered their usage as the integration level. However, Hew and Brush (2007) argue that there is no clear definition of ICT integration in school. For example, certain researchers have examined technology integration in terms of types of computer use by teachers in the classroom, while others have looked at technology integration in terms of how teachers use technology to carry out familiar activities more reliably and productively and how such use may be re-shaping these activities. A third group of researchers consider technology integration with reference to how teachers use technology to develop students’ thinking skills. Nonetheless, the common ground between all these three conceptions is the focus on using ICT for instructional purposes

(Hew and Brush, 2007); thus, the purpose of integration pertains to the implementation of ICT in the classroom.

Likewise, Almannie (2015) has pointed out that school administrators and the planning of ICT implementation in schools are factors that may hinder the integration of technology in schools. This suggests that teachers are not the only ones who decide independently to use ICT without any effect on various school aspects. Therefore, the whole school context is an important consideration in the use of ICT, including whether or not the school is ready to change its plans (Tearle, 2003).

Furthermore, Binothman (2015) argues that effective implementation of ICT entails using ICT as a knowledge construction tool rather than just as an instructional tool (Alharbi & Drew, 2014) and this cannot be effective unless a change in view towards using ICT occurs. Using ICT in learning has three levels: A) using ICT as a tutor; B) using ICT as a teaching tool; and C) using ICT as an environment for learning (Alharbi & Drew, 2014). However, all of these levels will be considered as ways of using ICT in schools.

The key factor in the implementation of ICT is the desire for change and the this involved with the improvement of practice, usually the headteacher (Tearle, 2002). This means that teachers may sometimes be forced to make changes even though this may go against their goals. This could arise where the headteacher has an approach to implementing ICT which does not necessarily fit the culture of their school.

According to Robbins (2000), an organisation achieves successful change when it plans the change itself as a result of recognising the need for the change. The goals of planning change are: (1) to improve the organisation's

ability to adapt to changes in the environment and (2) to change the behaviour of its employees. This will lead to changes occurring in the whole organisational culture, in this case, the school. According to CBAM research see section (3.3), the degree of implementation of classroom change is significantly correlated to the principal's change management style (Hall et al., 2013). Anderson (1997) states that the prospects for change in schools are conditioned by the culture of change that refers to the principal's and teachers' attitudes towards the change, as this affects the level of support from administration and colleagues. The result of this change will be reflected in the school's culture of change, leading to facilitation of the implementation of innovation with regards using ICT. Thus, the whole school should adopt the change to gain the most effective results from using ICT.

Nevertheless, such a change through implementation or integration the ICT inside the school may encounter numerous barriers, some of which relate to the school and teachers, while others come from outside the school. In the next section, these barriers and factors will be investigated.

4.1.2 Factors affecting the Use of ICT

Although they may have slightly different meanings, various terms are used interchangeably in the literature to express the idea of factors that affect the use of ICT, including barriers, difficulties and strategies. The term *barrier* has been defined as "any condition that makes it difficult to make progress or to achieve an objective" (Schoepp, 2005) which, in this case, could be a reason for the failure of implementation of ICT in education. Several categories of the barrier are addressed in the literature as a result of different views (Bingimlas, 2009). For example, according to Ertmer et al. (2007), factors that hinder ICT application in schools fall into two main categories: internal and external.

First, internal barriers are associated with the people inside an organisation such as headmasters' and teachers' roles, views and attitudes. External factors relate to the factors that influence the integration of ICT in school (Tezci, 2011), such as "technology availability, accessibility of ICT equipment, time to plan for instruction, technical and administrative support, school curriculum, school climate and culture, faculty teaching load and management routine, and pressure to prepare students for national entrance exams" (Fu, 2013, p. 117) . However, the relationships between these factors are complex (Al Mulhim, 2014; Bingimlas, 2009) and there is a need to see these factors from other angles and clarify those that act as barriers in the three levels of environments. For example, inside the classroom, such as the internal barriers of teachers, technology availability, and time.

Albugami and Ahmed (2015b) conducted a study in KSA secondary schools where the Ministry of Education had previously invested £2 billion to finance the advancement of selected public Saudi schools in 2007. They used semi-structured interviews with two ICT directors, four headmasters, four teachers and four students and found that the barriers hindering successful implementation of ICT in the schools were: the lack of space, resources and maintenance, the lack of ICT skills among school personnel along with poor ICT training, and the lack of clear ICT policies. They also reported that ICT is an important tool in improving performance, collaboration, learning experience and learning outcomes (see Figure 4-1). Although, they reported positive attitudes towards using ICT in education, they highlighted that most teachers and headmasters tended to restrict their use of the internet due to moral and religious reasons.

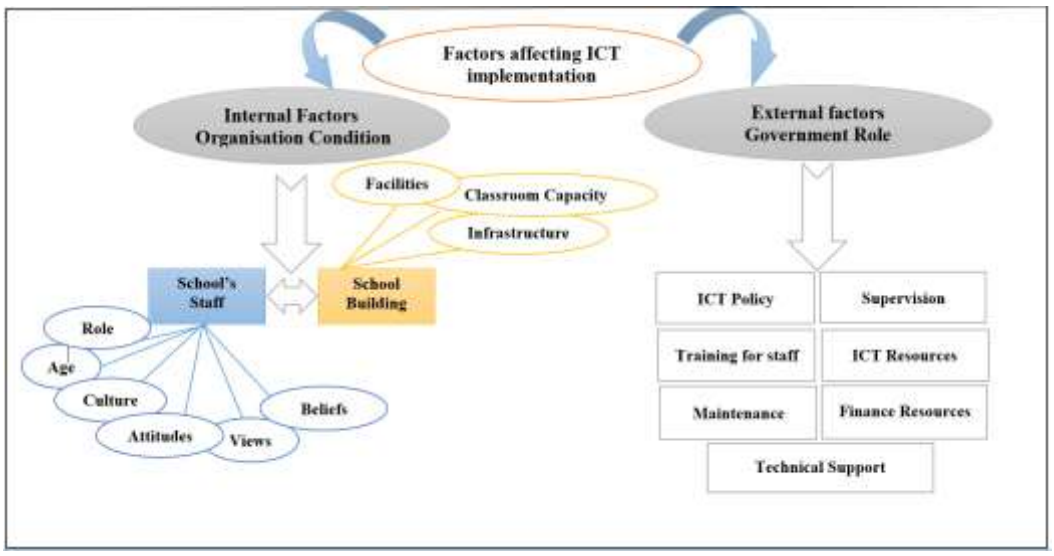


Figure 4-1 Factors affecting ICT implementation (Albugami & Ahmed, 2015a, p. 48)

Moreover, Albugami and Ahmed (2015b) divided the implementation of ICT into organisational factors and government role. This category seems to be valuable but all these factors from the school level of culture. Another weakness of their categorisation is that they reported the moral and religious factors but did not decide to what category do these factors belong. They also reported the moral and religious factors without providing additional information about these factors such as how they affect ICT use, how teachers deal with them, or how could their effects be mitigated. Therefore, the present research will cover this gap using ecological approach.

A recent study in the Saudi context by Binothman (2015) found that the implementation of 'the use of ICT' in the school system can be influenced by five kinds of factors: (1) financial infrastructure, (2) pedagogical factors (3) motivation, (4) teachers' professional development and (5) parental involvement. Therefore, these factors relate to many elements of school. Indeed, while the financial and professional development might relate to the school environment, motivation and pedagogical factors are more related to

individuals. Lastly, the parental role was reported as a factor affecting the school system outside the school level. To investigate these factors which do not relate to the school level, a new level is required.

Hew and Brush (2007) found a total of 123 barriers from their review of past empirical studies and classified them into six main categories: (1) resources, (2) knowledge and skills, (3) institutions, (4) attitudes and beliefs, (5) assessment, and (6) subject culture (see Figure 4-2).

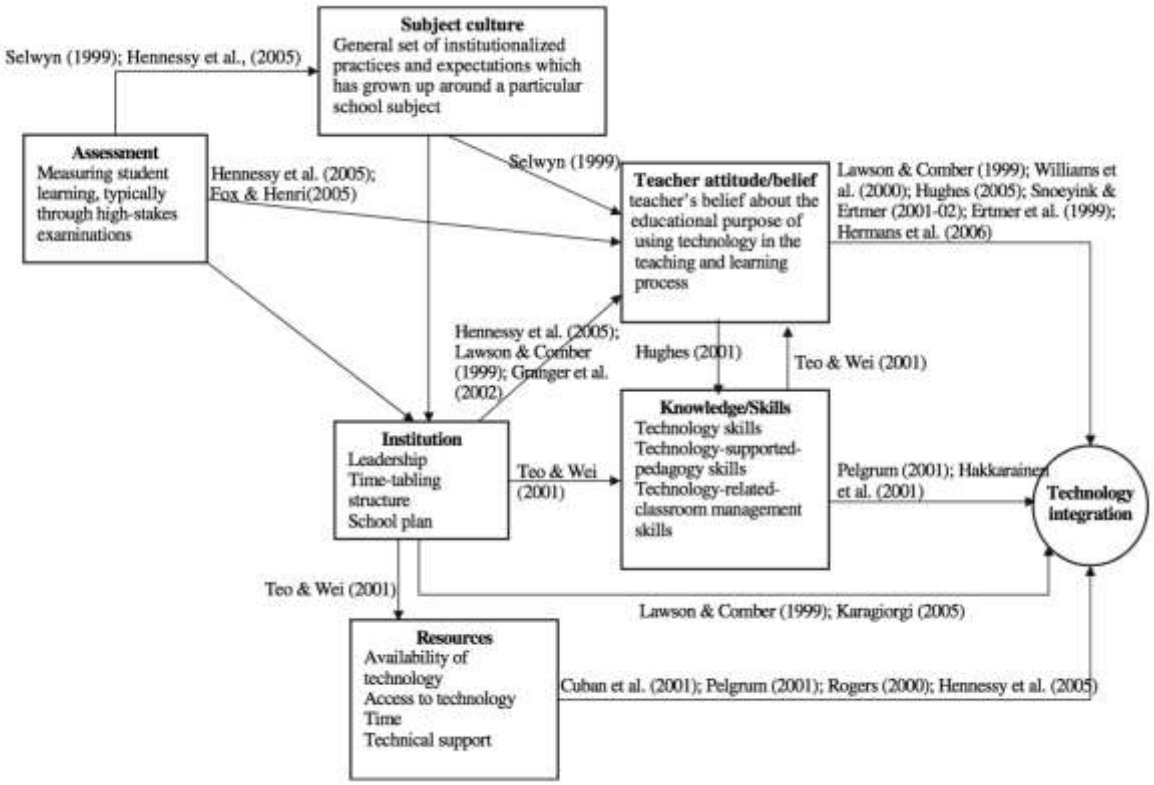


Figure 4-2 Hew and Brush's barriers categories (2007 p.231)

These factors exist within the school environment and the classroom. For example, institutional factors, resources and assessment relate to the school environment while teachers' attitude, skills, knowledge are related to the teacher himself/herself who is a key factor of the classroom environment. The factors at the national level are absent in these categories.

In a different categorisation of barriers to ICT use, Tearle (2003) reported that Fabry and Higgs (1997) had previously categorised the main barriers to the implementation of ICT in the classroom and listed them in order of importance: resistance to change, teachers' attitudes, training, time, access and cost. Tearle (2003) started from the classroom level to the institutional level and found that individuals factors are more important than school factors. This could be explained by the fact that resistance to change and teachers' attitudes directly affect teachers while training, access and cost are indirect effects of teachers' use.

Although the factors found above relate to the KSA and elsewhere, they resemble those found two decades ago by the MIT project which reported some work in the UK. The MIT reported fourteen factors from the six above main areas, as highlighted in Table 4-2 below.

Table 4-2 ICT factors (report by MIT 1995)

Main area	**Specific factor**
Management	Head teacher
	IT co-ordinator
	Library resource management/IT policy
Staff development	Staff development
Curriculum administration	Integration of curriculum and administration data
	Teaching and learning styles
	Student IT skills
Resources	Technical support
	Funding
	Physical resources
External links	School/community links
Evaluation	Record keeping
	Evaluation and assessment

Hew and Brush (2007) noticed a similarity between the factors found in earlier research and in present-day research, arguing that studies ought to be conducted to elucidate how past technology has been integrated, such as instructional television, in order to help today's researchers and educators. They compared Chu and Schramm's (1967) findings from research on instructional television and other studies conducted in 2007 and found similarities between them. For example, a sizeable and urgent problem was the need for teaching large groups in remote areas where the only technology that could be used was instructional television. From this experience they concluded: "perhaps the way that barriers of integrating computing devices for instructional purposes can be overcome is not by examining more strategies but through the occurrence of events that exclude or discourage use of other media" (p.244). According to this view, teachers need to be aware of the usage of ICT as an "event" and how to deal with barriers to using ICT in order to choose which usage is adapted to each class.

From another angle, Tearle (2003) described how factors in the ICT process interact between internal and external parties related to the whole school. She considered the school as a whole unit (see Figure 4-3) and emphasised on the roles of strong leadership, well-motivated staff, culture and ethos, external links and influences, and internal processes. She explained the characteristics of the ICT implementation process as featuring the following key elements: ownership and responsibility, staged over time, support and training, quality of people, resources and planning, and management. Tearle (2003), therefore, considered these factors as human ones and the current research stresses that such factors are related to the culture of the school or to the national culture.

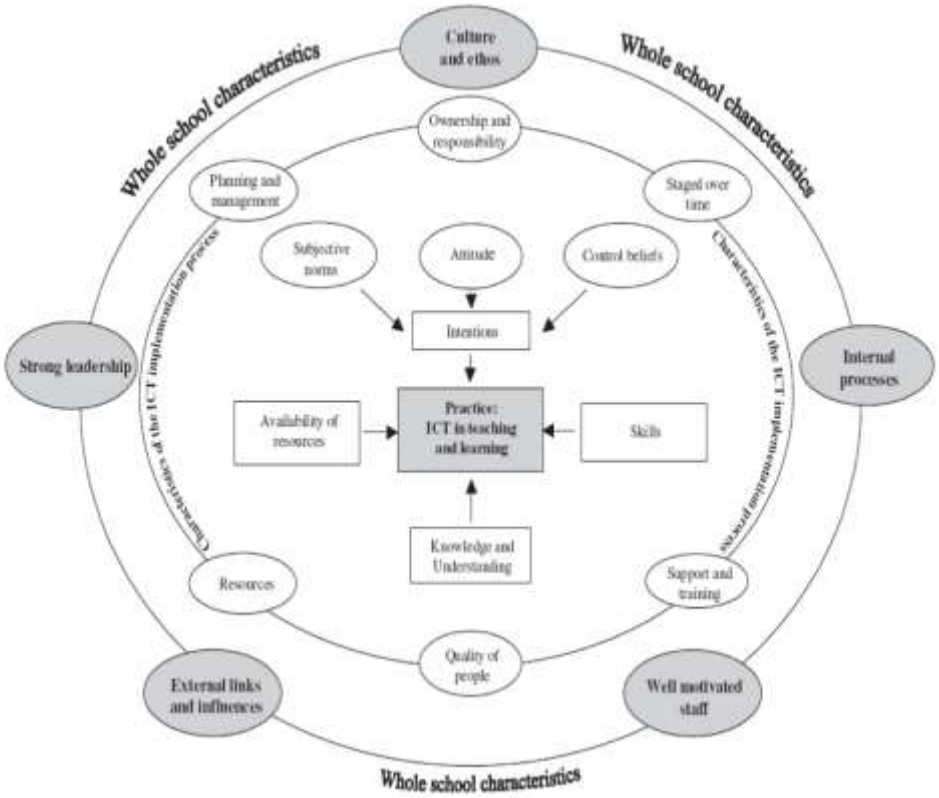


Figure 4-3 Whole school characteristics (Tearle, 2003, p. 580).

The main issue is that these factors relate to human activity and, at the same time, to the explosion of knowledge and the rapid pace of technological change. Hence, this complex issue can be simplified by categorising the factors into two main areas: (1) factors related to the individual user (e.g. attitude, motivation, resistance to change) and (2) factors related to the whole school environment (e.g. school management, training and support, resources, school culture).

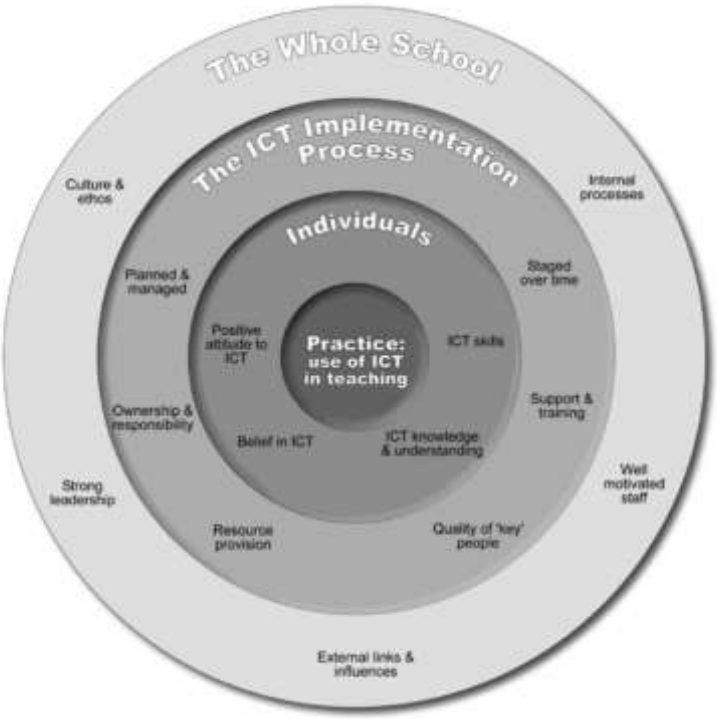


Figure 4-4 Model of influences on ICT implementation (Tearle, 2004)*

Al Mulhim (2014) summarised the finding of fifty studies, most of which were conducted in Saudi Arabia, highlighting two levels: (1) the teacher level and (2) the school level. The teacher level, she concludes, relates to the barriers that hinder teachers from using ICT in their teaching; she reported three main factors: lack of access to ICT, lack of training, and lack of time. The other barriers that relate to the school level were identified as “a key obstacle that impedes teachers from using it in teaching” such as “lack of access to technology, lack of effective training, lack of technical support, the high cost of hardware and software, and so on” (p.487). However, some of these factors are lessening in that the prices of ICT products are falling day by day. The majority of classes in schools have a wide range of ICT products, such as smart interactive whiteboards, computers, and data show devices. Furthermore, nowadays most teachers use a smartphone in their daily lives and also use

online programmes to record students' results. Therefore, teachers' wishes should be investigated when looking at reasons for the lack of their desire to use ICT in the classroom.

Although, some research reports factors at two level, the school environment and the classroom level (Al Mulhim, 2014; Albugami & Ahmed, 2015b; Hew & Brush, 2007; Tearle*, 2004), the culture of the school has not been investigated in relation to the national culture because the moral and the national culture relate to invisible values (Hofstede & Hofstede, 2010). However, the national culture level has been found to have effects on the use of e-learning (Alamri, Cristea, & Al-Zaidi, 2014a). Therefore, the national cultural level needs to be further investigated and integrated with other levels of culture include the school and the classroom, in order to draw the whole picture of cultural factors that affect teachers' use of ICT.

The current research needs to consider that "overcoming any barrier to the integration of IT in education is not to succeed, rather it is to face a more interesting and challenging barrier" (Passey et al.,1997, p. 66). Based on this view, I argue that these more interesting barriers refer to the reasons for the barriers in the sociocultural environment. Therefore, the current study will explore the sociocultural factors that are the reason behind these barriers and their effects on teachers use of ICT at three levels. Hence, I argue that the three levels illustrate the socio-cultural factors with more clarity; therefore, it will be easier to deal with these factors and reduce their effects the use of ICT. Nonetheless, before exploring these three levels, it is necessary to critically discuss the notion of culture.

4.2 Culture

The concept of culture has been defined using about 164 definitions in the literature (Leidner & Kayworth, 2006), among which is the idea of culture as referring to “ideologies, coherent sets of beliefs, basic assumptions, shared sets of core values, important understandings, and the collective will” (p.359). It has also been suggested that the notion of culture includes artefacts such as norms and practices (Hofstede, 1998); however, a definition by Schein (1996) seems to be more comprehensive as he states that culture is “a set of basic tacit assumptions about how the world is and ought to be, that a group of people share and that determines their perceptions , thoughts, feelings and their overt behaviour” (p.11). This definition involves both the more observable aspects of culture and the less observable ones.

The above definition by Schein (1996) suggests three types or models of culture. First, the idea of basic assumptions reveals that cultural aspects represent the belief, cognitive and interpretive dimension that people use in their relationships with others and in dealing with events and activities; this level is difficult to observe (Leidner & Kayworth, 2006). The second level relates to values derived from beliefs that explain the reasons for the ways people behave. The third level represents the manifestation through artefacts, such as art and technology, which is easier to observe because it is usually visible or audible.

Furthermore, culture, as defined by Hofstede and Hofstede (2010), “is the collective programming of one category of people [different] from another” (p.6). Culture is a set of rules, ideas, thoughts and views about life constituting unseen or unspoken rules underlying people’s lives.

The most relevant level to the current study is the values, because they can be considered as a set of social norms that describe the ways people communicate in order to view the rules of social interaction (Hofstede & Hofstede, 2010). Therefore, the study of cultural values is useful to explain behaviours "with respect to how social groups interact with and apply IT in organisational context" (Leidner & Kayworth, 2006, p. 359).

However, the concept of culture is biased by the assumptions of a society that may not be relevant in every society. For example, people obtain cultural values in their early life through social interactions and education and, at the same time, these values are influenced by certain aspects such as language and religion (Reinecke, Schenkel, & Bernstein, 2010).

4.2.1 The Relationship between the use of ICT and Culture

Leidner and Kayworth (2006) reviewed 82 studies on culture and identified six recurrent themes: (1) culture and information systems development, (2) culture, IT adoption and diffusion, (3) culture, IT use and outcomes, (4) culture, IT management and strategy, (5) IT's influence on culture, and (6) IT culture. The most relevant themes to the current study are the themes that could help provide answers to the question: "What is the influence of culture on ICT use and results?" (Walsh & Kefi, 2008, p. 3). Therefore, the third theme labelled *culture, IT use and outcome*s seems to suit the approach of the current study.

A good example of the relationship between the use of ICT and culture has been reported by Reinecke et al. (2010) who found that there are interactive relationships between technology (user interface preferences) and the users' culture. They also explained that the reason behind the absence of holistic user interfaces is that it is not clear how to adapt the interface to the nature of

different cultural backgrounds. For example, certain interfaces suitable for left-to-right languages are not adapted to people who use right-to-left languages like Arabic. From this example, it is obvious that technology affects the culture in the same way that it is influenced by culture, which therefore suggests that the relationship between these two elements is complex.

The reason for this complexity can be explained by the level of culture; for example, language is an aspect of the national culture that does not directly relate to the school level. Therefore, to try to find a solution for this factor it would not help to address the school level. In other words, schools or teachers should not be blamed for not dealing with factors that come from another level, such as the national level. Therefore, the national level should be studied to investigate how certain cultural factors influence the use of ICT.

In another hand, Most ICT tools have been invented in Western countries and relate to that particular culture. Users from different cultures utilise these products based on their culture which might differ from the culture of these tools. The current study was conducted in the Saudi culture which is very different from Western culture (Hill, Loch, Straub, & El-Sheshai, 2008). The differences between users' culture and ICT tool culture make some issue for using these ICT tools in teaching and learning.

Likewise, "knowledge about IT cultural archetypes can be a valuable aid to managers and other participants who are charged with making effective use of IT in their organisations" (Kaarst-Brown & Robey, 1999, p. 199). Therefore, the school culture also (as an organisation) in this current study needs to be investigated. In the following sections, the national culture level is explained first, followed by the school culture level and the classroom level.

4.3 Levels of Culture

The current study assumes three levels of culture based on Leidner & Kayworth's (2006) views: the national or cross-cultural, the organisational and the sub-unit. The current study focuses on the national culture level, the school culture as a whole organisation, and the classroom culture as a sub-unit culture of the school level. Before discussing the level of culture, it is important to describe the relationship between culture and values.

4.3.1 Culture and values

As mentioned earlier, one of the key aspects of this study is the notion of values. Through these values, the cultural differences between countries can be observed. Hofstede's model identified several differences between countries in terms of four characteristics: (1) social inequality in relations with authority, (2) the relationship between the individual and the group (3) the social and emotional implications of masculinity and femininity, (4) the control of aggression of emotions based on dealing with uncertainty (Hofstede & Hofstede, 2010).

4.3.2 National level

The culture of the national level has been reported in the literature as a main factor affecting the use of ICT. For example, a study by Albirini (2004) in the Syrian context found that 83.44% of 326 EFL teacher participants said they needed computers that were adapted to the Arab culture. This suggests the importance of the context and the national culture in the computer use environment. Siakas and Mitalas (2004) claim that in the teaching and learning process, teachers carry with them the values of their countries that are shared

by the majority of the society and that have an influence on the structure of an institution such as the education system.

4.3.2.1 National Dimensions of culture

As mentioned earlier (see section 3.4), Hofstede's model is based on six dimensions: power distance, individualism vs collectivism, masculinity vs femininity, uncertainty avoidance, long term vs short term orientation, and indulgence vs restraint. All these dimensions are considered characteristics of the whole society not of individuals (Hofstede & Hofstede, 2010). Power distance has been defined as "the extent to which the less powerful members of institutions and organisations within a country expect and accept that power is distributed unequally" (Hofstede & Hofstede, 2010). In other words, the category *power distance* relates to how power is distributed from top to bottom of an organisation or how the employee (the teacher in this case) accepts the power of those at a higher level (supervisors, leaders or the MOE). The power distance values can also affect students and what they expect of the power of their teacher. Based on the effect of this dimension on societies, Hofstede divides societies into two kinds based on the society's score in this dimension: large power distance and small power distance.

In the context of school, Hofstede proposes many features of power distance that affect the nature of the relationship between teachers and students, as in Table 4-3.

Table 4-3: Comparison of small and large Power Distance societies in education (Hofstede & Hofstede, 2010)

Small Power Distance	**Large Power Distance**
Students treat teachers as equals.	Students give teacher respect, even outside class.
Teachers expect initiatives from student in class.	Teacher take all initiatives in class.
Teachers are experts who transfer impersonal truths.	Teachers are gurus who transfer personal wisdom.
Quality of learning depends on two-way communication and excellence of student.	Quality of learning depends on excellence of teacher.
Education policy focuses on secondary school.	Education policy focus on university.

The second dimension is individualism versus collectivism, which has been defined as follows:

> *"Individualism pertains to societies in which the ties between individuals are loose: everyone is expected to look after him- or herself and his or her immediate family. Collectivism, as its opposite, pertains to societies in which people from birth onward are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty" (Hofstede & Hofstede, 2010).*

Hofstede also points out that there is a relation between power distance and individualism/collectivism in that a collectivist society tends to have a large power distance. He also identifies work goals that are characteristic of the two types of societies: in individualist societies goals tend to emphasise personal time, freedom, and challenge, while in the collectivist society goals emphasise

training, physical condition, and using skills on the job. Hence, he suggests the following key differences between individualist and collectivist societies in educational institutions (see Table 4-4).

Table 4-4 Comparison between Individualist and Collectivist societies in education (Hofstede & Hofstede, 2010)

Individualist	**Collectivist**
Students are expected to speak up in class individually.	Students speak up in class only when sanctioned by the group.
The purpose of education is learning how to learn.	The purpose of education is learning how to do.
Children learn to think in term of “I”.	Children learn to think in term of “We”.
Diplomas increase economic worth and/or self-respect.	Diplomas provide entry to higher-status groups.
Occupational mobility is higher.	Occupational mobility is lower.
The internet and e-mail hold strong appeal and are frequently used to link individuals.	The internet and e-mail are less attractive and less frequently used.

The third cultural dimension of societies is *femininity versus masculinity*, which refers to characteristics associated with the importance of earnings, recognition, advancement, and challenge for the masculine pole while, on the feminine pole, work goals tend towards having a good relationship with supervisors, cooperation and job security. Therefore, society is called *masculine* when emotional gender roles are clearly distinct: men are supposed to be assertive, tough, and focused on material success, whereas women are supposed to be more modest, tender, and concerned with the quality of life. A society is

described as *feminine* when emotional gender roles overlap: both men and women are supposed to be modest, tender, and concerned with the quality of life. (Hofstede & Hofstede, 2010). Based in this, Hofstede suggests key differences between masculine and feminine societies in education and school, as shown in Table 4-5.

Table 4-5 Comparison between Masculine and Feminine societies in education (Hofstede & Hofstede, 2010)

Masculine	**Feminine**
Best student is the norm; praise for excellent students.	Average student is the norm; praise for weak students.
Competition in class; trying to excel.	Jealousy of those who try to excel.
Failing in school is a disaster.	Failing in school is a minor incident.
Job choice is based on career opportunities.	Job choice is based on intrinsic interest.
Aggression by children is accepted.	Children are socialized to be nonaggressive.
Brilliance in teachers is admired.	Friendliness in teachers is appreciated.
The Internet is used for fact gathering.	The Internet is used for rapport building.

The fourth dimension, *uncertainty-avoidance, has been* defined as “the extent to which the members of a culture feel threatened by ambiguous or unknown situations” (Hofstede & Hofstede, 2010). This dimension is about the society’s nervous feeling towards the future but does not measure the single citizen’s feeling nor does it mean risk avoidance. In this respect, Hofstede suggests key

differences between weak and strong uncertainty societies in education and school, as in Table 4-6.

Table 4-6 Comparison between weak and strong Uncertainty Avoidance societies in education (Hofstede & Hofstede, 2010)

Weak uncertainty avoidance	**Strong uncertainty avoidance**
Students are more comfortable with open-ended learning situations and concerned with good discussions.	Students are more comfortable in structured learning situations and concerned with the right answers.
Teachers may say, “I don’t know.”	Teachers are supposed to have all the answers.
Results are attributed to a person’s own ability.	Results are attributed to circumstances or luck.
Teachers involve parents.	Teachers inform parents.
There is rapid acceptance of new features such as mobile phones, e-mail, and the Internet.	There is a hesitancy toward new products and technologies.

The fifth dimension, *long versus short-term orientation*, relates to how people focus their choice, on the future, the present or the past. As Hofstede does not report many observations on the effect of this dimension on education, it will be ignored in the current study.

The sixth dimension is *indulgence versus restraint* and refers to whether gratification is immediate or delayed. It affects how humans cope with their desire to enjoy life. Likewise, as Hofstede does not describe the connection between this dimension and education, it has not been included in this study. The other reason for ignoring this dimension is that Hofstede, in his measurement of countries, attributes to the Saudi society middle scores, as illustrated by Figure 4-5.

In conclusion, four of the dimensions are considered to be the most related to education while two dimensions (*long versus short-term orientation* and *indulgence versus restraint*) have not been included to this study because they were not found in the current data which seemed not to affect the participants of this study when they use of ICT.

I argue that Hofstede's dimensions will help this study to explore the characteristics of the Saudi national culture and, therefore, help to illuminate how Saudi teachers and students feel about using ICT. The second point relevant to this study is that cultural factors are numerous and difficult to report. Therefore, following a systematic model such as Hofstede dimensions can help to clarify certain issues and to deal with them in an adequate manner. For example, if a teacher fails to use collaborative learning, it might help him/her to learn this might be explained by the masculine culture of the students who like to work in competition rather than in cooperation.

4.3.2.2 National cultural dimensions of Saudi Arabia

Hofstede, in his later work, measured Saudi scores in each cultural dimension. According to Figure 4-5, the Saudi society scores highly on *power distance, collectivism, masculinity,* and *uncertainty avoidance*. The scores of the Saudi society – in terms of numbers – are not very relevant to this study. The aim of using this model is to use international characteristics of social culture to divide cultural issues into known groups. In consequence, it will be easier to analyse the cultural issues that occur inside the classroom. Another aim of using this model is that the reader from another culture would be able to compare the factors that influence the use of ICT in the Saudi culture with those in his/her own culture.

A few studies have explored Hofstede's dimensions in the Saudi context. For example,Alamri et al. (2014a) identified the cultural factors that influence the acceptance of e-learning and how these factors influence higher education students. This quantitative study used an online questionnaire administered among 175 participants and concluded that Saudi Arabian users' cultural characteristics were similar to Hofstede's results for the Arab world in 1980. The study also found the factors of *Individualism vs Collectivism* and the dimension of *Uncertainty Avoidance* to have a significant influence on the students' perceptions of education. They recommended being aware of the strong of influence of Hofstede's dimensions on e-learning in Saudi Arabia (Alamri et al., 2014a).

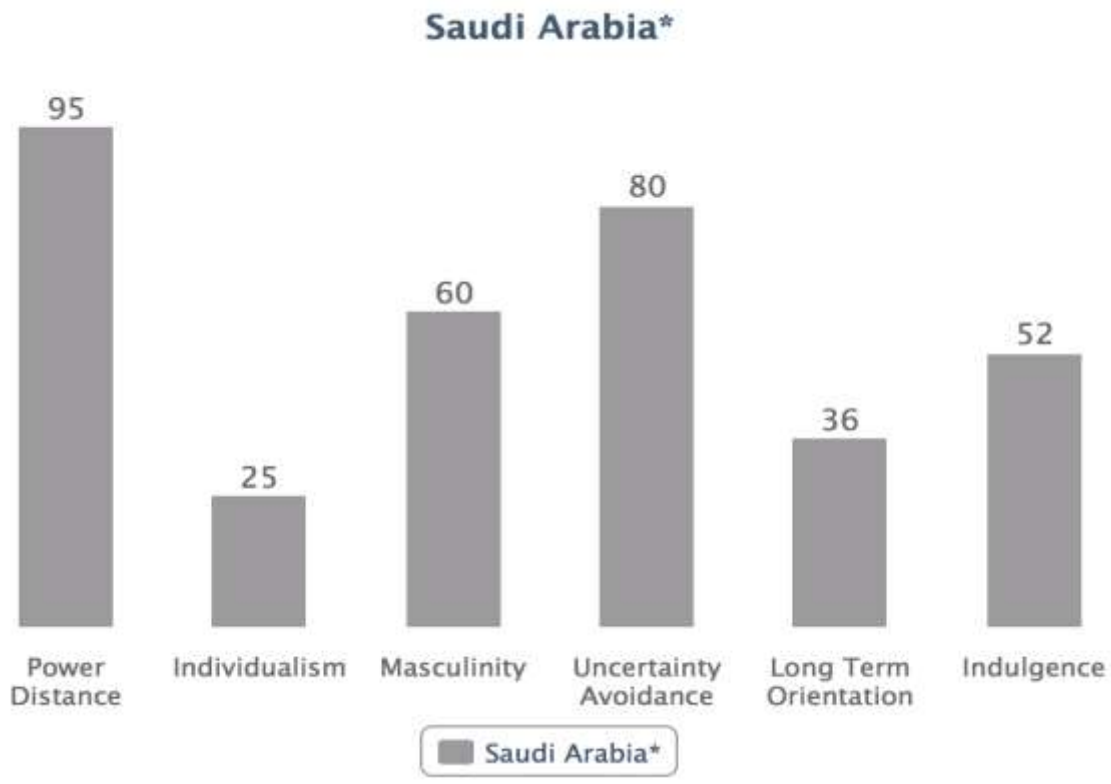


Figure 4-5 National cultural dimensions of the KSA (https://www.hofstede-insights.com/country-comparison/saudi-arabia/)

However, McSweeney (2002) criticised Hofstede's model. He did not consider this model to be a plausible systematic factor in behaviour. He claimed that there are three distinct components or levels of culture: national, organisational and occupational. Because Hofstede's model was based on the IBM organisation, it is, in fact, showing the culture of the organisation not the national culture. In other words, Hofstede's data come from just one company and therefore it could only fit one company's culture, not the national culture. Another criticism McSweeney argued is that, although the number of responses of IBM data was large, the number of responses per country was small. The third criticism was that the survey was conducted on the workplace (IBM), and these are not the same results that would be gained from non-workplace.

Nevertheless, Williamson (2002) states that McSweeney's rejection arises because of the difference between Hofstede's paradigm and McSweeney's paradigm. McSweeney thought that Hofstede's model assumed a uniform national culture, and the national culture does not fit with positivist epistemology. So, the validity of Hofstede's model was refuted. McSweeney argued some assumptions from a different paradigm, pointing out the danger that "readers may reject the functionalist model of national culture,…they reject the phenomenon of national culture" (Williamson, 2002, p.1375). In other words, for Williamson both Hofstede and McSweeney have some truth, but both of them see culture from different angles and beliefs.

Finally, while it is true that national culture is important, it is not the only way to discover individual learning identities, because learner identity is affected by past and present experiences. Therefore, both the national culture and the

learning environment ‘school’ shape the experience of the learner (Signorini, Wiesemes, & Murphy, 2009).

However, in the current research, as the characteristics of a society’s culture are many and varied, it is difficult to count and describe these characteristics without using the national category. Therefore, this research needs to use a national model (Hofstede’s model) to explore the characteristics of national culture (Saudi culture), and then to find the effects of these characteristics on Saudi teachers’ use of ICT.

The reason for using Hofstede’s model is to describe the social phenomenon. It does not aim to make a comparison with other cultures. Therefore, the scores of Hofstede’s model for Saudi culture do not form the aim of using this model. Rather, it was used in order to find the specific characteristics that could explain the phenomenon of Saudi teachers’ use of ICT.

In conclusion, Hofstede’s model is used to draw the national culture of Saudi Arabia to find the impact of the dimensions of this model on participant use ICT in the classroom. These dimensions will be considered, in this present study, as socio-cultural factors for the national level. The aims of investigating are to illustrate how these factors effect using ICT.

4.3.3 Organisational ‘school’ level

The second level of culture which will be used in the current research is the school level. In this level, the relationship between the staff, the administration, the teachers, supervisors and students is a key factor for success. The bulk of the literature focuses on how the factors of this level affect the use ICT looking at the integration of the ICT process inside the classroom at the school level. However, I suggest dividing the organisational level into two levels: the school

level and the classroom level because the processes of using ICT occur inside the classroom, not in the whole school. The individual teacher who teaches students alone inside the classroom has the choice to use ICT or not, while outside the classroom, students might get the help of specialised staff to use ICT such as the LRC specialist. Therefore, the current research needs to explore the specific environment that gives every single language teacher the opportunity to use ICT.

In the school, the relationships between administrative staff, teachers, students and IT technicians is a direct predictor of technology's success or failure because it depends on community communication for effective implementation (Shaabi, 2010), most particularly between teachers themselves (Liu, 2006). All stakeholders, such as teachers, principals, supervisors, students and parents, should be considered in the study of adoption of ICT (Vanderlinde et al., 2014) because the lack of distinction among those stakeholder explains why the results of some study seems to be reverse each other (Salinas et al., 2017). Hence, this point should be considered prior the data collection of this study.

The failure of ICT integration in schools is a result of the fact that teachers do not share their practical experience of ICT sufficiently (Lim & Khine, 2006). The effect of the school environment within which ICT is used has been found to be more important for ICT success than the technology itself (Abalhassan, 2002) and weak collaboration between teachers themselves and between teachers and administrators may also hinder the whole process of ICT use (Liu, 2006; Ibrahim, 2010). Collaboration never happens in a setting in which there is little chance to work together or where teachers prefer to work alone (Anderson, 1997; Hall et al., 2013; Hord, 1987). Many factors at school level were reported

by literature such as school leadership, training, and exam pressure which will be discussed in the next section.

4.3.3.1 School leadership

The visibility of the school leadership which takes into account teachers' views, a culture of sharing in the school, and professional development, were found to be strong factors influencing the successful integration of ICT in education (Tezci, 2011). In addition, Inan and Lowther (2007) found that overall support, which they defined as "teachers' perception of administrative, peer and community support for their technology integration in their classroom instruction" (p. 142), influenced ICT integration directly and indirectly through its influence on internal communication. Furthermore, Tearle (2003) found that good interpersonal skills of ICT co-ordinators and their focus and commitment to the task were reported to be important by almost all the teachers she interviewed. She also found that the following factors were important to successful ICT implementation in the school:

- *"Strong leadership with high expectations of the school, staff and students;*
- *The whole school viewed as being "excellent" in many aspects, not just ICT;*
- *Positive ethos and collaborative culture which promoted learning;*
- *Balance between the extrinsic and intrinsic motivation of individual staff members;*
- *Well-motivated and caring staff." (p.573)*

Therefore, all school staff can guide schools to implement ICT successfully through changing the school culture into a more collaborative environment.

According to Demetriadis et al. (2003), users of ICT belong to a technology culture, which suggests that, when using ICT, users do not belong to the school culture because ICT tools are developing outside education settings. Therefore, when ICT enters schools, a great number of teachers find it difficult to use it without being members of the ICT culture. This point is significant insofar as, if teachers still feel that ICT is considered as an additional tool of the school environment, they may feel that using ICT is not necessary. If one considers that ICT has been introduced into the school culture, it is essential to examine what the school culture boundaries are. In this regard, Demetriadis et al. (2003) attempted to define these boundaries by giving the school members (teachers) the opportunity to decide what they would apply based on their practice and relationship with ICT and what changes they thought they could achieve. The main members of school being the teachers, the current study, therefore, needs to focus on their role.

The importance of using ICT in school is a subject of relative agreement among educators, and teachers are aware of its importance; however, a large number of teachers find they do not use ICT in the classroom because of their cultural perceptions (Albirini, 2006). This means that individual feelings and beliefs play a major role in using ICT.

4.3.3.2 Language teacher development

Teacher training could be considered a national culture because the development plans and the training place are usually outside school. However, when considering training as part of teachers' continuous professional

development (CPD), it could be considered as a school factor which relates to the place of training. Furthermore, the school, as an organisational level, is part of the large organisation which is the MOE; therefore, the organisational policy and process are considered as organisational factors. Nowadays, Saudi schools conduct many strategies of teacher development. According to Mann (2005) the characteristics of language teachers development are:

- Is a bottom-up process and can be contrasted with top-down staff development programs.
- Is independent of the organization but often more successful with support.
- Is continuing process can never finish.
- Is wider than professional development and includes personal, moral, and value dimensions.
- Can be encouraged and integrated in both training and education programmes. (p, 105).

Teacher training in the Saudi education system is organised by the training department in the Ministry of Education while certain courses are prepared in collaboration with universities (MOE, 2005). Some courses are held in universities, are taught by university teachers and are part of the in-service teacher training. These courses usually last a whole term or one academic year and teachers who participate can earn a diploma which entitles them to a higher salary. Although the aim of these courses is usually to highlight the importance of both theory and practical experiences, it seems that they do not teach how to link theory to classroom practice, which may explain why a limited number of Saudi teachers attend these courses (Alzaydi et al., 2011). Another issue is that the relation between school teachers and university education departments can

be problematic (Aubusson, 2003) as school and university cultures are generally very different. For example, “education research tends to be more highly valued by university academics than schoolteachers” (Aubusson, 2003, p.183). Moreover, other training courses are held in training departments in education administrations and these courses are short and address specific topics and usually last a few days or one week. Usually, trainers are teachers with specific skills who have previously attended courses in the MOE and transfer these skills to other teachers, especially in the area of new technologies and curriculum changes.

According to Scrimshaw (2004), the issue of teacher training is very complex because several components need to be considered to ensure its effectiveness, including time of training, pedagogical training, skills training and ICT use in initial teacher training.

Furthermore, the literature has suggested that “teachers do not need training at all; they require conditions to be established which will enable them to continue with their education”. (Dawes, 1999, p. 249). Zhao et al. (2006), for instance, states that formal training does not have any significant effect on teachers using ICT, but it could be in the future. This supports the view of the present study that the school environment and culture should help teachers to use ICT, and it is not just down to training or any other factors.

4.3.3.3 Exam pressure

Another important factor that has been found to affect the use of ICT by the language teachers is the exam pressure on teachers and students. In her study, Li (2014) found that almost all her participants were concerned about exam pressure. This concern can be considered as a school factor because it usually

relates to teachers and students inside the classroom or to teachers and the headteacher. Exam pressure was reported in the literature as an important factor that influence the way teachers use ICT because they may feel less confident about the effectiveness of using ICT to improve test results (Li, 2014). However, for Li, exam pressure is a national level factors or a macro level factor as the testing system in China generally affects teachers' use of ICT. I argue that it is true that exam pressure plays a significant role in shaping teachers' use of ICT; however, teachers deal differently with this factor depending on their beliefs about exams and about how they deal with students.

4.3.4 Classroom Culture Level

At the classroom level, many factors could directly affect the use of ICT, such as how teachers accept the use of ICT, teachers' role, teachers' feelings, teachers' beliefs, teachers' level of ICT literacy, and the students' role in using ICT. Some literature considers this level as an individual level (Kreijns, Vermeulen, Kirschner, Buuren, & Acker, 2013); however, the students' role is rarely discussed especially in the Saudi context. Therefore, in the current research, the classroom culture level will contain refers to all the individual behaviours of teachers and students and the relationship between them. A further aspect addressed in the literature is that teachers' attitudes towards ICT constitute key factors to the successful use of ICT. However, a positive attitude towards ICT does not mean that teachers will use ICT in their teaching (Zhao & Frank, 2003). Therefore, teachers' attitudes will not be studied here as a separate issue through, for instance a large-scale survey, but they will be investigated implicitly through interviews.

The importance of using ICT in school is a subject of relative agreement among educators, and teachers are aware of its importance; however, a large number

of teachers find they do not use ICT in the classroom because of their cultural perceptions (Albirini, 2006). This means that individual feelings and beliefs play a major role in using ICT. Teachers are considered a key factor in the educational process and in the organisation of ICT in the classroom (Sang et al., 2010) as they play a crucial role in promoting or hindering its use (Oyaid, 2009). Therefore, unless teachers believe that ICT can improve the learning process, it will not be used effectively (Sangrà & González, 2011).

4.3.4.1 Teachers' Beliefs

The notion of teachers' beliefs can lead to confusion in terms of its definition which may be the result of the difficulty in distinguishing between the notions of teachers' beliefs and teachers' knowledge (Ertmer, 2005; Pajares, 1992). According to Ertmer (2005), knowledge refers to factual understanding; therefore, after gaining new knowledge, people have the opportunity to accept or reject it. For example, when teachers use the interactive whiteboard (IWB) in the classroom, this does not mean they believe this new technology offers them an effective pedagogic tool unless they also have positive beliefs based on their previous experiences and social life. However, several issues have been reported in the literature; for example, Pajares (1992) mentioned that a variety of terms have been used to deal with the same concept of beliefs, such as

> *"attitudes, values, judgments, axioms, opinions, ideology, perceptions, conceptions, conceptual systems, preconceptions, dispositions, implicit theories, explicit theories, personal theories, internal mental processes, action strategies, rules of practice, practical principles, perspectives, repertories of understanding" (p.309).*

Another issue was highlighted by Mansour (2010) who highlighted the relationship between teachers' beliefs and their knowledge of science, technology and society, stating: "while knowledge often changes, beliefs are

static" (p.515). He argued that teachers' beliefs have personal knowledge consequences, hence being the main factor driving teachers' decisions in the classroom.

Beliefs about teaching and learning have been defined in the earlier literature by Rokeach (1968) as "having represented within it, in some organised psychological but not necessarily logical form, each and every one of a person's countless beliefs about physical and social reality" (p. 2). This suggests that it is difficult to investigate beliefs as they are not necessarily in a logical shape. It also seems that internal feelings might determine why some people themselves cannot describe why they hold certain beliefs. Moreover, as beliefs are formed "through a process of enculturation and social construction; they can be formed by chance, an intense experience, or a succession of events" (Ertmer, 2005, p. 30) and often result from complex cultural processes and from interactions between people in social life. Chen (2008) argued that the relation between teachers' beliefs and their practices helps to illustrate how technology decisions are made because, when teachers attempt to use technology effectively, they refer to their existing beliefs and experiences. These existing beliefs could, therefore, influence beliefs about technology uses and its related practices.

However, according to Alshmrany and Wilkinson (2014), a great number of teachers who have the competence and confidence to use ICT in their teaching use it rarely because of time limitations. Ibrahim (2010) states that "effective ICT integration requires a critical level of planning, commitment, and cultural adaptation" (p.210). This means that integrating ICT needs to be comprehensive, starting from education planning to usage in the classroom, through teachers' beliefs and cultural impacts, so that everyone in the education system has to do something to encourage its success.

4.3.4.2 Teachers' Beliefs and Practices

Teachers' beliefs have more influence than knowledge on teachers' practice (Pajares, 1992) as the daily decisions they make are mainly based on their beliefs (Ottenbreit-Leftwich, Glazewski, Newby, & Ertmer, 2010). The relation between teachers' beliefs and their practice is so obvious that we cannot change one without considering the other, although it is not clear which one follows or precedes the other (Ertmer, 2005). While changing beliefs is difficult for teachers, certain researchers report that "teaching is not effective without the appropriate use of ICT resources to facilitate student learning" (Ertmer & Ottenbreit-Leftwich, 2010, p. 255). Therefore, teachers need to change their teaching. Chen (2008) suggested that teachers must believe that technology can help to achieve effective high-level goals, that technology will not interrupt their lessons, and that they have the ability and resources to use technology. Therefore, teachers' beliefs influence teachers' practices, as certain beliefs are the reason for resistance to changes in using technology. In addition, researchers should be aware of different factors from the context that may affect teachers' beliefs and technology use, especially regarding the relationship between such factors (Chen, 2008).

Differences between teachers' beliefs and teachers' practice could be based on their lack of theoretical understanding (Chen, 2008). In other words, teachers would not be able to apply ICT integration in the classroom if they do not hold student-centred beliefs (Ottenbreit-Leftwich, Glazewski, Newby, & Ertmer, 2010). Therefore, to support teachers to change, they need to be given evidence of how their students would benefit from such a change. This change in teachers' beliefs would encourage students to obtain a positive role in the education system.

The model that describes why teachers rarely implement the same practice in the same way is called Innovation Configurations (IC). It is the third dimension of the Concern Based Adoption Model (CBAM) discussed earlier (3.3). IC describes the innovation of ICT in the practice of different teachers, because different teachers will use the same materials in different ways. IC can be investigated through surveys, interviews or observations, which measure how teachers implement a change such as “using ICT” (Anderson, 1997). I will describe the implementation of the change by teachers after investigating the teachers’ role.

4.3.4.3 Teachers’ Role and ICT

It seems that teachers’ acceptance of new technologies is a matter of debate. Indeed, while some teachers might reject the use of ICT, others have effectively integrated this technology into their classroom processes. The role of the teacher seems therefore key in this issue, and this role should be adapted to enable them to cope with this positive innovation. Research on integrated learning systems in schools points out that the teachers’ role is crucial to its success. For instance, Mumtaz (2000) argues that teachers should teach students the process of learning rather than its product. This means teachers should teach students how they can use ICT as a process rather than the result of their use. This is because students need to learn the methods that enable them to use ICT in other situations. This supports the view that students should be taught the skills more than the information. In order to put the new technology skills at the centre of the curriculum, teachers need to implement a variety of new teaching approaches such as cooperative activities inside the classroom involving computers. Another issue that might face teachers is that they need to deal with large amounts of resources in order to meet their

students' requirements (Beauchamp, 2008). Therefore, to address this issue, teachers need to feel confident in their level of ICT skills and may need to improve their qualifications and skills in this area (Ward & Parr, 2010).

Ottenbreit-Leftwich et al. (2010) argue that teachers should contribute to the discussion on the question of which uses of technology are more valuable for teaching and learning so that they are prepared to use technology within an agenda of education reform. That is because the literature suggests that student-centred approaches is the aim of most effective program in professional development and teacher training. For example, 'Active learning' project in Saudi school (see section 2.10).

4.3.4.4 Teachers' use of ICT

In the current study, using ICT means how can teachers implement and integrate ICT effectively in their classrooms. As ICT implementation is made of a set of processes (Hall et al., 2013), a model needs to be used to measure teachers' usage of ICT. Consequently, the current study's model will help to describe the levels of ICT use. Levels of Use (LoU) focus on the teachers' behaviour and the CBAM suggests eight levels of use (see 3.3 Concern Based Adoption Model (CBAM) As Hall et al. (2013) state, it is not necessary for teachers to reach every single level in the progress of use. I argue that it is not necessary to find all the levels of use when exploring the current use of ICT in school as it would be difficult to find all these levels through this research as this study only involves eighteen participants. These levels of use may result from the teachers' feelings towards using ICT or, as called in the CBAM, teachers' concerns.

In their study conducted among 325 pre-service teachers in Saudi Arabia, Robertson and Al-Zahrani (2012) found that two concepts were key in this digital age: *pedagogical change* and *self-efficacy*. They also found that their participants had higher perceptions of their self-efficacy as they increased their computer experience. In order to achieve change in teachers' pedagogy, training courses were needed to improve their skills. Recently, in the KSA, the MOE have launched the "active learning" project that aims to give the students the skills of learning by developing teachers level of knowledge and skills, in order to improve the pedagogical strategies and make them more student-centred. This project is planned to last for five years from 2016 to 2020 and contains six levels: (1) the established level, that established the structure and the policy of the project, (2) the willingness level, which trains teachers and school staff to apply the project, (3) the building ability, to improve professional development methods and develop the ability of teachers, students, school staff, and parents, (4) the actual launch from school, (5) promoting learning via the continuous development of professional practices to develop the learners' roles and (6) the evaluation and development level (Plan of 'Active learning, 2016). The active project is a national project that aims to develop the role of learners through improving the teachers' ability. As ICT tools are fundamental tools for this project, training courses for teachers have been put in place to develop their skills and pedagogical strategies. Several training courses aim to develop the use of ICT effectively to transform the learner into an active learner.

4.3.4.5 Teachers' feelings towards using ICT

As mentioned earlier in (section 3.3), the second dimension of the CBAM, the Stage of Concern (SoC), is used to describe the feelings and attitudes of teachers about a change in their practice. According to Zhao, teachers' attitude

and feeling toward using technology is a key factor associated with their use. However, positive feelings do not necessarily mean that the teacher will use ICT.

4.3.4.6 Students' Roles

Some schools manage to create active learners and give them a voice to integrate their ideas about ICT in the classroom. Students' voice has been defined as:

> *Listening to and valuing the views that students express regarding their learning experiences; communicating student views to people who are in a position to influence change; treating students as equal partners in the evaluation of teaching and learning, thus empowering them to take a more active role in shaping or changing their education. (Seale, 2009, p. 696)*

Seale (2009) suggested this definition based on a great number of sources which variously defined students' voice as "asking questions to which we want to know the answers", "students' report of evaluation work" and "students' engagement in activities that teachers use". She reports that the definition of students' voice is based on the belief that the students' voice is a powerful aspect that should; however, this definition seems to see students' voice as salient in evaluation and feedback in education strategies or school policies, whereas students' voice in the current study focuses on exploring students' views through listening to them. Students are asked to be active learners and such a goal can be achieved if they are granted a participatory role. Therefore, "children themselves take a significant role in structuring instruction and influencing the nature and direction of scaffolding" (Hennessy, Deaney, & Ruthven, 2005, p. 267). Scaffolding means that it is critical to help learners to engage in activities in the zone of proximal development (ZPD) which has been discussed within the topic of sociocultural theory.

Students become more active when pedagogical changes provide time and opportunity for discussion, reasoning and interpretation (Hennessy et al., 2005). Students can create a supportive school culture and encourage change towards a more active pedagogical approach in their teachers. Teachers need to focus on the process of learning rather than on the learning product by "helping learners locate, extract, filter, edit, interpret and summarize appropriate information to develop an awareness of where information has come from" (Hennessy et al., 2005, p. 267). This new role of teachers can also change the role of students; for example, Geer and Sweeney (2012) found in their study that primary school students suggested to their teachers how they could make their learning experiences richer.

As mentioned earlier, the Saudi MOE has launched the active learning project that aims to transform the students into active learners and therefore change their role in the learning process (see section 4.3.4.3). Although students have an important role in the education system, they "are rarely involved in the democratic decision-making processes of bringing about reform" (Geer & Sweeney, 2012, p. 295) and increasing evidence has supported the validity of students' voice as a strategy for school reform. The two most common purposes of students' voice projects in universities and schools are *quality enhancement* and *assurance* and *professional development* (Seale, 2009). In this regard, Geer and Sweeney (2012) studied the inclusion of students' voice as a valid means of identifying 21st Century pedagogical approaches to learning in Australia. Employing a survey administered among 460 students from year one to year seven in addition to focus groups with students, they focused on what a modern learning environment might look like and concluded that

students expect to use a variety of technologies in their school learning as they use in their everyday life.

In addition, students have more than one voice related to their experiences, opinions and modes of expression (Hargreaves et al., 2010) that might be supported by the new technologies which are giving them a voice in the online environment. A great number of students have the opportunity to engage with other people using the current social media. Hence, their voices are affected by various factors such as their background and their society's culture. Thus, the current study seeks to investigate the factors that affect the use of ICT in the classroom considering the students as belonging to the classroom level.

4.4 Saudi studies on the use of ICT in education

Previous studies in the Saudi context related to the use of ICT could be divided into four groups: (1) studies exploring the integration of ICT in schools (Al-Gahtani, 2003; Alenezi, 2015; Bingimlas, 2009; Binothman, 2015; Oyaid, 2009), (2) studies exploring the barriers to ICT use (Al-Oteawi, 2002; Al Mulhim, 2014; Almusalam, 2001) and the sociocultural factors affecting its use (Alamri et al., 2014a; Aljeeran, 2016), (3) studies focusing on teachers' perspectives and attitudes towards using ICT (Abalhassan, 2002; Al-Oteawi, 2002; Alblaihed, 2016; Alenezi, 2015) and finally, (4) studies investigating the policy of ICT use (Al-Oteawi, 2002; Alenezi, 2015; Aljaber, 2018; M. Hakami, 2015). The following table briefly presents the relevant studies conducted in Saudi Arabia, the type of study, its subjects, and the context of the study.

Table 4-7: Saudi studies on the use of ICT in education.

No	Name of study and researcher	Type of study	focus	context
1	Towards greater integration of ICT Into the teaching and learning Process (Binothman, 2015)	PhD thesis	Integration e-learning	Secondary school Tatweer
2	Influences of the Mandated Presence of ICT in Saudi Arabia Secondary School (Alenezi, 2015)	Paper in international Journal of information	Integration ICT in mathematics, science, and Arabic	Teachers of Secondary school Tatweer
3	The barriers to the use of ICT in teaching in Saudi Arabia: A review of literature (Al Mulhim, 2014)	journal paper	the barriers to ICT use	Literature review
4	Barriers to successful integration of ICT in teaching and learning environment (Bingimlas, 2009)	Paper in Eurasia Journal	integration of ICT In science	Primary school in Riyadh
5	Saudi Arabian Science and Mathematics Pre-service Teachers' Perceptions and Practices of the Integration of Technology in the Classroom (Alblaihed, 2016)	PhD thesis	integration of ICT In science and Mathematics	Science and Mathematics Pre-service Teachers
6	Saudi Arabian cultural factors and personalised e-learning (Alamri, Cristea, & Al-Zaidi, 2014b)	conference paper	acceptance of eLearning. Hofstede's Cultural factors	higher education students
7	Success factors for ICT implementation in Saudi secondary schools: From the perspective of ICT directors, head teachers, teachers and students (Albugami & Ahmed, 2015b)	journal paper	Hofstede's Cultural factors	secondary schools
8	Information technology (IT) in Saudi Arabia: Culture and the acceptance and use of IT (Al-Gahtani et al., 2007)	journal paper	Hofstede's Cultural factors	Workers in Saudi government
9	Secondary Student's Perceptions of Information and Communication Technology and Their Usage of It Inside and Outside of School in Riyadh City, Saudi Arabia (Oyaid, 2010).	journal paper	Students' attitudes	Secondary schools
10	Investigating Student Attitudes towards Using Technology as a Learning Aid at a Saudi University (Aldayel 2017)	conference paper	Universities students attitude	higher education students
11	The Role of Socio-Cultural Factors in Faculty Members' Acceptance of Moodle at GUST (Aljeeran, 2016)	PhD thesis	Implementation of e-learning	higher education teachers
12	Education policy in Saudi Arabia and its relation to secondary school teachers' ICT use, perceptions, and views of the future of ICT in education (Oyaid, 2009).	PhD thesis	Education policy	Secondary schools
13	Implementation of ICT policy in secondary schools in Saudi Arabia (Mofarreh & Ibrahim, 2016)	PhD thesis	ICT policy	secondary schools
14	E-learning policy in Saudi Arabia: Challenges and successes (Aljaber, 2018)	journal paper	E-learning policy	Saudi universities

The current study focuses on the socio-cultural factors that affect the implementation of ICT in schools and differs from previous studies that emphasised on the national culture level (Al-Gahtani et al., 2007; Alamri et al., 2014a; Albugami & Ahmed, 2015b). This study also differs from previous studies that focused on the school culture level (Alenezi, 2015; Binothman, 2015). Therefore, the current study focuses on the holistic culture at different levels.

The context of the current study is the intermediate schools while most studies in the Saudi context were conducted within universities or secondary schools and few in primary schools. The purpose of choosing the intermediate school is because the age of the students is between twelve to fifteen which means they were deemed able to explain their thoughts and ideas easier than primary school students. Likewise, students, at this educational stage, study ICT which means that they are all familiar with using computers. This is explained in more detail in Chapter Five.

4.5 Gap of the Study

Nistor, Lerche, Weinberger, Ceobanu & Heymann (2014) report that little attention has been paid to the cultural factors that affect the adoption of technology. It is worth noting here that Salinas et al. (2017) states that little is known about the effect of culture on the adoption of ICT in education outside Western countries.

Several researchers have recommended exploring the effects of school culture on the use of ICT (Albirini, 2004; Loch, Straub, & Kamel, 2003), especially in combination with self-confidence and knowledge level (Tezci, 2011). Tezci also recommended conducting qualitative studies to investigate why teachers in the

same school perceive school culture differently claiming that, through research on school culture, a clear understanding may be achieved of the ICT integration process in many countries. Tezci (2011)'s recommendations relate to research at the school level, while I argue that this difference will also be seen in the national level, which therefore needs a systematic investigation.

The investigation of isolated factors that affect the use of ICT is not the aim of the current research; rather, this study seeks to discover how the cultural environments affects teachers' and students' use of ICT. According to a holistic theoretical approach is needed to study the cultural factors and ICT. Based on these recommendations, this study seeks to conduct an in-depth investigation of the relationships between teachers, students and other school members and how they help each other based on the national culture, school culture and classroom culture; how the culture of these levels affects the education process and ICT usage; how teachers' identities affect their use of ICT for non-educational purposes and finally how language teachers use ICT in the classroom.

On the other hand, the literature on the topic of ICT use is very general in terms of increasing of ICT use, and research should attempt to categorise the kinds of ICT use and make it valuable (Becta, 2004) and effective (Alharbi & Drew, 2014) and should be focused on what the purpose of use ICT (Li, 2014).

The above aims and questions require an investigation of teachers' and students' views, which the above studies have not covered, especially in the Saudi context. The absence of literature in this area determines the gap that this study seeks to cover by formulating and answering the following research questions:

1. What are the socio-cultural factors that influence students' and language teachers' usage of ICT in their schools?
2. How do students and language teachers use ICT in their schools?
3. How does culture affect students' and language teachers' usage of ICT?
4. What are the intermediate school students' and language teachers' views about ICT in teaching and learning?

To be answered, these questions need a holistic or integrated theoretical framework which can guide this research. The theoretical framework was discussed earlier in Chapter Three (Section 3.2.1).

4.6 Summary

In sum, the three levels of cultural factors that affect the use of ICT can be investigated from an ecological perspective: the national level, the institutional or the school level, and the classroom level. Slight differences between every level have been mentioned in the literature. For example, the classroom level factors have usually been considered as individual factors while in this study argues that the individual level is a cultural factor that existed inside the classroom. In this research, the classroom level is considered as a smaller environment inside the large school environment, which therefore means that these two environments are separate. The national culture consists of four dimensions that describe the whole Saudi culture and may affect the teachers' behaviour around using ICT. The school cultural factors include the processes and the relationships between teachers and administrators while the classroom cultural level includes the processes of change inside the classroom. The relationship between the three levels need to be investigated in depth in order to draw the theoretical connections between these factors.

Although the literature discusses that the barriers to using ICT affect each other (Al Mulhim, 2014; Fu, 2013), it seems that these factors have been studied in isolation from one another and from the whole school, as reported by Zhao and Frank (2003). Furthermore, many of the factors reported in the earlier literature (ICT factors, MIT 1995, 1995) are still effective today. Thus, the question as to why most of these factors are still effective is related to the nature of technology or to the human use of this technology. This seems to be the reasons behind these factors needing more investigation in the society, school and classroom environment and this might be known from studying the culture levels.

The current study requires a theoretical framework to structure it and to form the foundation of the investigation of the relationship between the uses of ICT and the socio-cultural factors in the Saudi classroom. Hence, the socio-cultural theory was adopted as an umbrella theory covering all aspect of the current study. In addition, the ecological perspective was believed to be suitable to cover the three levels of culture while Hofstede's dimensions can help to generate rich data to describe the national level. The CBAM, however, was thought to be helpful to describe the relationship between the language teachers' feeling towards ICT and their use of ICT inside the classroom. In the literature, many studies have focused on the school environment and reported many factors that affect using ICT; one of the important factors that affects school pertains to socio-cultural issues, as pointed in a great number of studies (Al Mulhim, 2014; Alamri et al., 2014b; Albirini, 2004; Demetriadis et al., 2003; Fu, 2013; Shaabi, 2010). However, none of these studies has detailed these socio-cultural factors, and how to deal with them to decrease the potential negative effects on teachers' using ICT. These studies also consider the socio-cultural factors as not amenable to change. However, I argue that socio-cultural

factors are difficult to change but it does not mean that they are impossible to change. For example, the school cultural factors can change in less than a year when the headteacher is changed. Furthermore, in order to investigate these socio-cultural factors, it is essential to study the environment influenced by such factors in order to answer the main question of the current research: What are the socio-cultural factors that influence students' and teachers' usage of ICT in their schools?

The school seems to be the place of this issues of using ICT and, therefore, the whole human background in the school needs to be investigated to illustrate how such factors may affect the usage of technology in the school (Zhao & Frank, 2003). More specifically, it is necessary to focus on the ICT usage of teachers (Liu, 2006) and the positive school culture (Tearle, 2003) which impacts on the successful use of technology in the classroom. Therefore, the current research suggested the classroom culture as a specific environment to investigate students' and teachers' pedagogical approaches and teachers' use of ICT.

The subject of teachers' relationship with technology has been addressed in the literature from many angles. For instance, research has focused on their acceptance of ICT (Sangrà & González, 2011; Venkatesh et al., 2003), their lack of training (Aubusson, 2003; Alshmrany & Wilkinson, 2014) and on the fact that teachers might have an incorrect understanding of the idea of planning in using ICT, which could, therefore, influence their beliefs (Chen, 2008) to become more student-centred beliefs (Ertmer, 2005). The CBAM provides the current study certain relevant features of teachers' level of use (LoU) which could also help to understand teachers' ICT use based on their stage of concern. This will help to answer the questions: "how teachers use ICT in their

schools?" and "how do cultural factors affect the use of ICT?". Answers to these research questions will inform us about the level of teachers' integration of ICT.

Although several studies have recommended listening to students' voice (Fu, 2013), especially in the KSA context (Alamri et al., 2014b; Albugami & Ahmed, 2015b), it is common that past studies have involved students' voice in relation to using technology in the classroom (Geer & Sweeney, 2012). Also, most of the studies on students' voice have used quantitative methods and, as far as I am aware, no qualitative studies that involve intermediate students' use of technology in the Saudi context have been conducted. Therefore, the current study will be conducted to investigate both teachers' and students' perceptions about their use of ICT in their schools in addition to students' views about using ICT in learning? Such questions require adopting a particular methodological approach and employing specific methods in order to collect meaningful data that could help answer these questions. Hence, the participants of this study were chosen based on Salinas et al. (2017) views that the reason of verses on the finding of literature is that some of these studies do not pay attention for the whole stakeholders 'teachers, principles, supervisors' when they collection the data. This study seeks to cover the perceptions of all those stakeholders.

Table 4-8: Summary of Literature chapter

Research question:	Literature	Theory	Methodology	Method
What are the socio-cultural factors that influence students' and teachers' usage of ICT in their schools?	Factors affecting the Use of ICT	ecological perspective, Hofstede's model	Case study	Interviews, Observations, focus groups
How do students and language teachers use ICT in their schools?	ICT Implementation in school + Teachers' acceptance of ICT + Students' Roles	CBAM	Case study	Observation
What are the intermediate school students' and teachers' views about using ICT in teaching and learning?	Teachers' beliefs + Teachers' Beliefs and Practices + Students' Roles	ecological perspective, Hofstede's model	Case study	Interviews
How does culture affect students' and language teachers' usage of ICT?	Theoretical framework	ecological perspective	Case study	Interviews, Observations, focus groups

This table (4.8) summarises this literature chapter by showing the research questions, the section names related to each question, the theories or models that cover this question, the methodology suitable for addressing the research questions and, lastly, the kind of methods that could offer the data to answer the research question.

5 Chapter Five: Research Methodology

5.1 Introduction

In the previous chapter, the literature review suggested a gap that could be filled by the current research. In order to address this knowledge gap it is essential to carefully plan and choose the appropriate methods of data collection in order to answer the research questions; this plan is in fact the methodology (Stake, 1995). Hence, this chapter presents the processes followed in order to select the appropriate methods of data collection. The research questions and objectives will also be briefly discussed in addition to the theoretical framework of the study. Furthermore, the paradigmatic and philosophical assumptions of the study are addressed, with particular respect to its ontological and epistemological underpinnings in relation to the question of the socio-cultural factors that influence students' and language teachers' usage of ICT in their schools, and how these factors affect teachers' use of ICT.

. The methodology of the current study will be investigated focusing on the case study approach and the data collection methods employed in this research. The methods used to collect the data, namely, semi-structured interviews, focus groups and classroom observations are highlighted. The strategies for the selection of the participants and analysis of the data are also presented in this chapter. Finally, the trustworthiness of this study is discussed, and the chapter concludes by highlighting the ethical issues considered throughout the research.

A review of the literature suggested the need to fill the gap related to the effects of socio-cultural factors on participants' usage of ICT (see section 4.4).

Therefore, the level of use of ICT by teachers will be divided based on the influence on these factors. In order to achieve its aims, the study sought to answer the following research questions:

1. What are the socio-cultural factors that influence students' and language teachers' usage of ICT in their schools?
2. How do students and language teachers use ICT in their schools?
3. How does culture affect students and language teacher usage of ICT?
4. What are the intermediate school students' and language teachers' views about using ICT in teaching and learning?

According to (Yin, 2013), *how* and *why* questions are preferred when the focus is on real life phenomena and "the investigator has little control over events" (Stake, 1995). However, in this research, the above questions are *what* and *how* questions. Yin argues that *what* questions can be used in exploratory research while *how* and *why* questions relate to case study research. The first research question formulated by this study (What are the socio-cultural factors that influence students' and language teachers' usage of ICT in their schools?) involves *how* and *why* because it requires breadth and depth and cannot be answered simply by listing socio-cultural factors. Rather, the answer needs to encompass how these factors affect and why they affect ICT usage. Therefore, Yin's statement above mainly applies to brief, specific questions, such as interview questions, which do not require rich information.

5.2 Philosophical Assumptions

As the present study adopted a theoretical framework (section 3 page 34) that aimed to identify the factors affecting teachers' use of ICT, this investigation of the social phenomena needed to carefully consider the Saudi context, in line

with the goals of qualitative research. According to Stake (1995), “qualitative research is useful for understanding a range of societal issues that arise from particular cultural contexts” (p.214), which directly relates to the characteristics of interpretive research adopted in this research.

The interpretivist paradigm, among other philosophical stances, is one of the traditions that helps researchers determine their strategies and how to conduct their research based on fundamental ontological, epistemological and methodological philosophies (Stake, 1995). According to Crotty (1998), interpretivism is a philosophical stance which seeks to gain an in-depth understanding of the social reality. For Pring (2000), interpretivism emphasises on the importance of people’s views through qualitative methods, such as semi-structured interviews and observations. The aims of interpretivist research are “to explore perspectives and shared meanings and to develop insights into situations, e.g. schools, classrooms”, which suggests that the “data will generally be qualitative and based on fieldwork, notes and transcripts of conversation/interviews” (Wellington, 2000. p.16). Moreover, since “events and behaviour evolve over time and are richly affected by context, they are situated activities”, interpretive researchers believe that “the social world can only be understood from the point of view of the individuals who are part of the ongoing action being investigated” (Cohen, 2013, p.19). Moreover, Wellington (2015) stated that the interpretive paradigm “is sensitive to context, uses various methods to get inside the ways others see the world, and is more concerned with achieving an empathic understanding than with testing laws of human behaviour” (p. 80). Therefore, based on the above premises, this paradigm seems compatible with the current study which seeks to explore and

understand how teachers and students see their usage of ICT inside their school environment and how this usage is impacted by socio-cultural factors.

Moreover, as the investigation of the phenomenon in its context is one of the aims of this study, it is based on what is called *social constructivism* which "emphasizes the importance of culture and context in understanding what occurs in society and constructing knowledge based on this understanding" (Kim, 2001, p. 7). Therefore, constructivism values the idea of interaction between students and teachers, which contributes to the creation of an environment in which students and teachers participate in the learning process (Tracy, 2012). Hence, since this study aims to understand the construction of knowledge in context, it is important to define the assumptions of social constructivism in terms of the nature of reality, knowledge and learning (Guba, 1990). Consequently, the ontological and epistemological underpinnings of this study in relation to constructivism are discussed below.

5.2.1 Ontology

The current study aims to explore the socio-cultural factors that influence students' and language teachers' usage of ICT in their schools, from their own viewpoints. Hence, this study considers the social reality as co-constructed between language teachers and their students within their cultural environment. This, therefore, constitutes a fundamental ontological principle of this research. Ontology has been defined by Neuman (2002) as "the study of being; it is concerned with 'what is', with the nature of existence, with the structure of reality as such" (p.10). Likewise, Kim (2001) states that "if a real world is assumed, then what can be known about it is 'how things really are' and 'how things really work" (p.108). Ontologically, the present study adopts a relativist position, which is a fundamental philosophical assumption of the interpretivist

approach, and sees reality as multiple, constructed from different views, hence rejecting the notion of a single truth (Alharbi & Drew, 2014).

Reality is viewed as constructed through activity and does not exist as such prior to its social construction. Also, individuals create meaningful knowledge through social interaction within their environment (Kim, 2001). The current research ontology is in line with the view of Packer and Goicoechea (2000) who highlight six key themes that underlie the ontology of the socio-cultural theory: "(1) the person is constructed (2) in a social context (3) formed through practical activity (4) and formed in relationships of desire and recognition (5) that can split the person and (6) motivate the search for identity" (p.228). This ontological stance differs from the philosophy of realism, which is a fundamental premise of the positivist approach rooted in the belief of reality as independent of the researcher's mind (Guba & Lincoln, 1994).

5.2.2 Epistemology

Epistemology has been defined by Guba and Lincoln (1994, p. 108) as the answer to the question "What is the nature of the relationship between the knower (the inquirer) and the known (or knowable)?", while Crotty (2009) defines epistemology as "a way of understanding and explaining how we know what we know" (p.3). Since the current study adopts an interpretive stance, it is assumed that "the researcher may come up with surprising findings, or at least findings that appear surprising if a largely external stance is taken—that is, a position from outside the particular social context being studied" (Bryman, 2016, p.31). This means that the researcher interacts with the "nature of knowledge" (Pring, 2004). However, constructivism is slightly different in that it is epistemologically rooted in the assumption that "people create meaning through

their interactions with each other and the objects in the environment" (Kim, 2001, p.7).

Likewise, researchers agree on the influence of culture on the development of epistemological beliefs (Chan, 2006) which have been determined through different dimensions. For instance, Schommer-Aikins (2002) suggested five dimensions of epistemological beliefs which describe by Sulimma, (2009):

> *"(1) Structure of knowledge: ranging from knowledge has simple structure and consists of isolated bits and pieces to knowledge as highly integrated concepts; (2) stability of knowledge: ranging from knowledge is absolute and never changing to knowledge is continually changing; (3) Source of knowledge: ranging from knowledge is handed down by authority to knowledge is derived from empirical evidence and reasoning; (4) Control of knowledge acquisition: ranging from the ability to learn is fixed at birth to the ability to learn is improvable over time and experience; (5) Speed of knowledge acquisition: ranging from learning occurs quickly or not at all to learn occurs gradually" (Sulimma, 2009, p. 76).*

However, these dimensions might be found in the Western culture but they might not relate to non-Western cultures (Chan, 2006).

The epistemology of this study is grounded in constructivism, assuming that language teachers and students create meaning using ICT in the classroom. In addition, based on the theoretical framework, meaning is believed to be constructed from the participants' interpretations of various socio-cultural factors. Hence, meaning is created through the interaction between the teachers and their colleagues, between the teachers and their students, between the students themselves, and through the activity of using ICT in the classroom. Socio-cultural factors already affect the school environment and individuals, which clearly shows that "reality is a social construct" (Kim, 2001, p.6). The above ontological and epistemological positions constitute the

theoretical and philosophical premises for the methodological approach adopted throughout the research process in line with constructivist principles.

5.3 Methodology

As the framework of the study was designed to cover all research questions, the case study methodology was deemed appropriate (see Figure 3-3 page 53). The process of developing the framework occurred in the cases. Because the aim the case strategy is to explore the effect of culture on the use of ICT, this leads the research to the construction of new theory (Kim, 2001). Therefore, a new theoretical framework which will be explained in the Discussion Chapter has been developed in order to cover all the issues related to the research questions. For instance, the third question "How do students and language teachers use ICT in their schools?" required to integrate the CBAM (see Figure 3.3) from an ecological perspective because this perspective does not address the level of use which can determine how teachers are using ICT.

The term *methodology* has been defined by Packer and Goicoechea (2000) as "the strategy, plan of action, process, or design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcomes" (p.3). It as an activity involving the process of planning choosing and justifying the methods to be used throughout the research process. (Pring, 2004). Three types of design can be generally adopted by researchers depending on the nature of their research: qualitative, quantitative and mix methods design. The case study methodology has been widely used in qualitative research while the survey methodology is suitable for quantitative studies (Creswell, 2007). As the aim of this study is to explore language teachers' perspectives about their use of ICT, this research is exploratory in

nature and the engagement between the participants and their social world can be understood through qualitative methods (Tracy, 2012).

The current study adopts a case study methodology although it could be argued that it could be considered as an ethnographic study due to its focus on culture, as is usually the sphere of ethnography. However, this research only focuses on the school culture for a short period of time as I stayed in each school between two and four weeks, during a period of three months. To ensure that the chosen methodology was appropriate, I contacted Dr Bob Jeffrey, an expert in ethnographic methodology, who expressed his concerns about the *what*-type of questions of this research and explained:

> *A central aspect of ethnography is not "what" is there in the context but "how" people in that situation, experience the factors and "how" they manage them. Ethnography is about "how" not "what" or "why" …If your main focus is "what" factors, you are looking for the specific elements of socio-cultural factors, and the study is not an ethnographic one (Bob Jeffrey, personal communication, March 8, 2017).*

Even though the first question of the current study is "what are the socio-cultural factors that influence students' and languages teachers' usage of ICT in their schools?", the focus is on identifying the socio-cultural factors and how they influence students and language teachers when they use ICT. The current research also investigates what the teachers do to avoid the effects of socio-cultural factors. Thus, its ontological and epistemological nature is fundamentally demanded because the knowledge of ICT use is created by teachers and students based on their interpretations of the socio-cultural factors. Therefore, if further research were to be conducted, an ethnographic methodology could be used to answer *how*-type of questions.

5.4 Case Study

The current research aims to understand participants' views towards their use of ICT and the socio-cultural influences on that usage. The socio-cultural approach was adopted as an umbrella theory to cover all research aspects, in addition to the ecological perspective and the CBAM, to inform this multi-case study research methodology.

The case study approach was deemed appropriate because, as explained by (Yin, 2013), it is an "empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomena and context are not clearly evident" (p. 13). This definition seems to be compatible with the current research aims, as it is not clearly evident that socio-cultural factors could be limitation factors that affect the use of ICT in the classroom.

In the current research, multi cases are used not for the purpose of generalisation but to understand in depth the socio-cultural factors affecting different cases. This aim is consistent with a fundamental aspect of the case study in that it aims at particularisation not generalisation (Pring, 2004). Studying a particular case in-depth does not mean that all cases can be similar; rather, the case study focuses on the uniqueness of the case and "implies knowledge of others that the case is different from" (Hartley, 2004).

Furthermore, according to (Yin, 2013) three types of case study can be used in research: historical-organisational, observational and life history. In contrast, Bryman (2013) categorises the case study into five types: the critical case, the extreme or unique case, the representative or typical case (also called the exemplifying case), the revelatory case and the longitudinal case. He also

criticised the common belief that a research study should use only one type of case study and reviewed a great number of studies conducted using more than one type, thereby concluding that Yin's division is not accurate. Nonetheless, the current study employs an observational case study methodology, as categorised by (Yin, 2013), which seems to be the most appropriate because I needed methods that could help to observe teachers and students inside the school environment.

Although the case study provides in-depth explanations and allows the use of several research methods, it also has drawbacks. For example, "it becomes impossible to distinguish the case study as a special research design, because almost any kind of research can be construed as a case study" such as "case study of Great Britain!" (Bryman, 2013, p.69). This is particularly true if the sample used is really the whole of Great Britain, for example, if a study aims to investigate a new kind of autism which is very rare in the world and a researcher would use the people with autism in Great Britain as a case study. Pring (2004) points to another weakness of the case study, that it sometimes produces soft data. This view might be true for certain quantitative studies where the emphasis is on the process rather than on the generated new data.

The case study methodology generally comprises several stages. Crotty (1998), for instance, highlights four stages of the case study research: case data, case record, case study, and seeking of generalisation. It is worth noting here, however, that Yin (2013) argues that generalisation is a weakness of the case study, especially in small-scale studies. Pring (2004) criticises the term *generalisation* and suggests that the notion of "extrapolation" is more appropriate to the case study. However, the current study does not aim to generalise the research outcomes.

For the purpose of this multi-case study, four local schools were selected in the city of Arrass, Saudi Arabia. The choice of multi-cases rather than a single case is due to the assumption that the four different schools have four different school cultures, despite the fact that the main socio-cultural factors in these schools may be similar, such as certain national factors or the education policy. The environment in each school is different in that the leadership impacts the whole school environment in addition to the fact that the relationship between teachers, students and staff differ. This usually impacts on the whole school system, thereby affecting the use of ICT in the school. The second reason for adopting a multi-case methodology is that the aim of the study is to investigate how socio-cultural factors affect teachers' use of ICT and how teachers could be classified based on the influence of these socio-cultural factors. This aim guided the study to suggest a new model, which was only thought to be possible through a multi-case study (Wellington, 2015).

In conclusion, the multi-case study was adopted as a methodology in order to understand in-depth the effects of socio-cultural factors on the use of ICT in school. This methodology involved the use of interviews in addition to participants' observation.

5.5 Data Collection Methods

The theoretical framework of the current study informed the current research and its exploratory nature and its multi-case study methodological approach. The interpretive approach and the case study methodology of this research aimed to explore what and how socio-cultural factors affect teachers' and students' ICT usage. In order to explore these factors, numerous questions were asked to teachers and students about what they know, believe and do

about these factors. Such questions were investigated through interviews and focus groups and in order to document what they had reported in interviews; classroom observations were also conducted.

As mention earlier, the current research is consistent with Pring (2004) views that that interpretivism emphasises on the importance of people's perceptions and generally employs qualitative methods, such as semi-structured interviews and observations. Interviews and observations are two of the six methods that can be used in a case study to collect data and answer research questions (Neuman, 2002). These six methods are "documentation, archival records, interviews, direct observation, participant-observation, and physical artefacts" (Yin, 2009, p.85) and are commonly employed in case studies.

The aims of this study and its research methodology encouraged the use of specific methods that helped generate appropriate data to answer the research questions. The for reason selecting these three methods is that "the combination of multiple methods, empirical materials, perspectives, and observers in a single study is best understood then, as a strategy that adds rigour, breadth, and depth to any investigation" (Stake, 1995). Therefore, interviews and focus groups seemed to fit the current approach because they could provide information about the teachers' and students' views regarding the socio-cultural factors, while observations could document the learning experience itself (Stake, 1995, p. 8). Table 5-1 below shows the research questions and the methods employed answer these questions.

Table 5-1: Research questions and methods.

Research questions	**method used to help answer the question**
What are the socio-cultural factors that influence students' and language teachers' usage of ICT in their schools?	Semi-structure interviews, Focus groups
How do students and language teachers use ICT in their schools?	Classroom observations
What are the intermediate school students' and language teachers' views about using ICT in teaching and learning?	Semi-structure interviews, Focus groups
How does culture affect students and language teacher usage of ICT?	Semi-structure interviews, Focus groups, Classroom observations

5.5.1 Semi-structured interviews

This study sought to explore the perspectives of participants towards their use of ICT. Therefore, the interview questions focused on what participants know, what they do, and what they feel or think. In other words, interviews were conducted to find out information about facts, behaviours, beliefs and attitudes of the interviewees (Wellington, 2015). Interviews are very widely used in social research, and there are many different kinds. For the purpose of this research, semi-structured interviews were employed to explore issues that affect

teachers' usage of ICT which have not been reported in the literature. At the same time, I arranged questions around an important theme to narrow the focus of interview questions. For example, when I asked teachers about the training as a kind of professional development, some of them reported the issues of classroom observation between teachers as another type of professional development. Moreover, I sought to focus on several specific ideas while giving opportunities to the participants to explain themselves and add unexpected ideas.

Structured interviews were not used in this research because they usually consist of questions prepared with a fixed wording, which usually fits with experimental research. Unstructured interviews were not used either, because in this type of interview, the interviewer usually has a general idea of the subject and lets the conversation cover this subject in an informal way (Wellington, 2015). Therefore, these two types of interviews were not deemed suitable to the aims of the current study.

The interview is considered the most appropriate method for qualitative research due to its flexibility and the possibility of observing the interviewee's behaviour (A. Cohen, 2003). Because the study is considered interpretive and aims to obtain surprising findings (Bryman, 2016), and since the epistemology of this study assumes that language teachers and students create the meaning of ICT use, based on these assumptions, the semi-structured interview is suitable for the nature of this study. In addition, because of the advantages of the semi-structured interview, this method was employed in this research. For example, it allowed me to get more control over the conversation with a semi-structured interview than with an unstructured one but, at the same time, it gave the interviewee more freedom than in a structured interview. In a semi-

structured interview, as the questions are predetermined, the interviewer has the opportunity to change the order of questions and explain questions based upon what seems most suitable. Hence. the main role of the interviewer is to ensure the successful engagement with participants to gain rich data.

Thus, I met every teacher and engaged in a conversation before agreeing on a proper time for the interview. Each interview was recorded, and respondents were asked for in-depth details. Then, as soon as possible, after the interview, the recording was transcribed together with notes on the unspoken behaviour that occurred during the interview. Interviews were conducted in Arabic with four teachers from each school and lasted between thirty to forty-five minutes. Three headteachers were also interviewed in order to clarify the school environment and culture and the relations between staff, students and technology. Three supervisors were also interviewed to investigate their role in supporting teachers to use ICT. The purpose of interviewing the school leader and supervisors was to clarify the consequences that surround the teacher in order to understand teachers' reactions toward the policy of using ICT.

The number of interview questions was initially over forty, so as to cover as many issues as possible in relation to the research questions (See Appendix 5.1). However, this was found to be too dense, so the number of questions was reduced. According to Yin (2013), the number of open-ended interview questions should not be above fifteen. As I found that one question could last over two minutes without probes, I divided the questions into themes, some of which contained four questions. Several themes were derived from the theoretical framework and from the literature review including *Pedagogy*, *Belief*, *Actual usage of ICT*, *Knowledge*, *Experience and skills*, *Satisfaction*, *Religious and moral factors*, *School culture*, *Availability and Access, Policies,*

Relationships, and finally *Challenges*. The main interview questions covered these twelve themes highlighted in Table 5-2 below.

Table 5-2: Themes of interview questions

Classroom culture	Organizational culture	National culture
pedagogy	School environment	Religious factors
Teachers' belief	Availability and Access	Moral factor
knowledge	Policy	
Experience and skills	Relationship with staff	
Relationship with students	Challenge	
Challenge use		

The above themes addressed during the interviews were divided based on three levels of culture: classroom culture, organizational 'school' culture, and national culture. These themes were obtained from the literature as factors that affect the use ICT.

Hence, if the interviewee covered the main idea of the theme, I did not question him further. For example, when an interviewee told me that something had happened, which triggered his interest in using ICT, I did not follow up with the question: "do you like to use ICT?" because he had already told me about his interest (See Appendix 5).

5.5.2 Focus group

For this research, four focus groups were conducted with students instead of individual interviews. The participating students were between twelve to fifteen years old. I preferred to conduct focus groups with students as I was concerned about the fact that, due to their age, students might have been shy or

embarrassed to talk on their own and freely express their views. For instance, I asked the group SC4-ST about their views towards teachers using ICT in the class and the group agreed on the benefits of using ICT. However, as one student explained that he does not like to study Maths using a computer, three of five in the group suddenly changed their mind and started criticising the use of ICT to study on a daily basis.

Four focus groups were conducted with five students in each group; one focus group was conducted in each school. Students were selected based on their different abilities in using ICT in order to gain varied viewpoints so that the information would be rich and cover a wide range of opinions. The discussions were conducted in Arabic, the participants' first language, audio recorded, and field notes were taken during the discussions. The discussions were transcribed immediately after each focus group.

In qualitative research, focus groups are often used to gain detailed information on attitudes and opinions (Cohen, et al., 2007) and provide an opportunity for many opinions to be directly and explicitly discussed (Ritchie, Lewis, Nicholls, & Ormston, 2013). The focus group method was used in this study to allow interaction between interviewees with different sorts of experiences and to reveal information which could be investigated further in a one-to-one interview.

In the beginning of the focus group, I introduced myself, presented my research and the purpose of conducting the focus group. I told students they could freely express their opinions insisting on the fact that there were no right or wrong answers. I reminded them that everyone had a right to say what he wanted to say. I gave them time to ask me questions about myself and my research. They asked questions such as, "What degree are you studying for? Where is your university? Why do you study in English and ask us questions in Arabic?". After

answering these questions, I once again sought their permission to record the discussion explaining to them that I needed to record their opinions for my research.

The focus groups were interesting for students. For example, as we were in the school library (LRC) to conduct the focus group, a teacher asked for two students who were in the focus as they had an assessment. These two students came back to the LRC after their assessment, but the focus group had ended. They came to find me and requested to complete the interview because they had ideas they wanted to share with me. Their views contributed to the richness of the data collected.

However, I also faced certain difficulties with the focus groups. The age of the students was the first challenge before conducting the focus group interviews. I tried to choose students from different levels (year 7, 8, 9). Their ages were between thirteen and fifteen, I am aware that 'suggestibility' might affect their view, so, I tried to be unbiased by only guiding the discussion without interrupting their view or suggesting any new ideas. As these students were of different ages, culturally, the youngest student who was in year 7, usually respected his older colleagues. This meant that he tended to agree and follow what the older students said. For example:

> *Researcher: What is the best device used for learning?*
> *Student from year 7 Abdul: laptop is best device to write in Microsoft word.*
>
> *Student from year 9 Moh: IPad is better because I can use it instead of using school books.*

Student Abdul (again): Yes I agree with Moh, the IPad is better. (Sc3-St:25)

The student (Abdul) changed his mind because the other said something different. I tried to minimise this suggestibility by sometimes addressing a new question to the youngest student first, so, they would explain their view without any effect from their older colleagues.

It was difficult to arrange the dialogue between the five or six students because they would often interrupt each other. Therefore, at the start of every focus group, I explained its aims and rules, such as, how everyone has to wait until the other finishes his view. At the beginning of the interview, some students interrupted their colleague; I told him to wait till his colleague had finished. After one or two mistakes, every student would be patient and follow this rule. Most of them asked questions to their colleague after he explained his view. I usually turned the question to another student by asking him "so, (student name) what is your opinion about this?" I used the student's name because, when I transcribed the focus groups, I knew who was talking. After listening to the first focus group (Sc1-St) without saying the student's name, I found it is difficult to know which student said this idea because I was not familiar with their voices.

Another issue during the students' focus group was that some students misunderstood the question, so I tried to explain the question in another way. Sometimes, other students may help and correct each other.

I tried to arrange a time suitable for these students so that their teachers would accept their participation. This was the most difficult point; arranging one time suit all participants because they were chosen from different levels (years 7, 8 and 9) and from different classes. For example, when the focus group was

conducted in school 2, a student knocked on the door to ask me for two of the participants because their teacher had asked them to come back to the classroom because there was an examination. I accepted that and asked them to leave the discussion. After an hour, I was surprised that the two students asked me to complete the discussion (even though it had finished), probably because they were interested to talk and finding their voice was important. I accepted that and I gave them half an hour to describe their opinions outside the focus groups.

The last challenge was that some students would talk more than their colleagues. I tried to stop them politely by turning the question to one of the others. To confirm the way ICT is actually used in the classroom, and to link it to what the participants reported, the study conducted classroom observations, as explained in the following section.

5.5.3 Observations

As culture relates to unspoken rules (Crotty, 1998), the rules inside the classroom needed to be observed. Participants reported many ideas, rules, and challenges that they faced inside the classroom. I sought teachers' permissions to observe their class because while interviews can provide information about teachers' and students' attitudes and understandings, observations were the only method that could document the learning experience itself (Denzin & Lincoln, 1994); hence, I needed to observe the actual learning inside the classroom. The observation is one of the major research methods which allows researchers to observe actual behaviour in a naturalistic setting, in contrast to interviews and questionnaires which rely on what the respondents tell the researcher (L. Cohen, Manion, & Morrison, 2002, 2018). For example, none of the participants told me about the issue of the effects of reducing the classroom

light when using a projector, which affects the students sitting at the back. Therefore, observations can be more accurate than other methods as they provide actual evidence to verify the participants' accounts. Therefore, I observed the teachers who took part in the study, which allowed me to document what they had reported. I conducted the observations after the interviews to ensure what the issues were reported before they could be observed.

Observation was used in this research to yield more valid data than other methods. It was used to confirm what had been told in the interview, which is called a reality check. This was achieved by observing the events, behaviours and routine (L. Cohen et al., 2018).

Field notes were designed to observe three main aspects: the interaction inside the classroom, the use of technology, and the behaviour towards using technology (as shown in Appendix eight). As soon as possible and before doing another observation, when I finished the first one, I read the field note that I wrote during the observation, adding some comments, looking back to the research questions to ensure that these field note related to the research questions, and listening to what had been said during the observation. Lastly, the observation was given new name and kept in a secure place on my computer.

Three main methods were conducted to collect data. These were, first, semi-structured interviews with six Arabic teachers, five English teachers, three school leaders, and three supervisors; second, classroom observation in the three schools; third, focus groups with four groups of five to six students each. Focus group participants were chosen after the observations and were nominated by the LRC specialist and their teachers.

Observation was used as the second method, to verify what had been told during the teachers' interview. At least two observations were made for most participants, that is, eight out of the eleven teachers who had agreed to be observed. The first observation was to break the ice between me and the students. I observed that most students felt free to talk with their teacher and colleagues after approximately twenty minutes. In the second observation, students needed five minutes to be more natural. The second set of observations were audio-recorded instead of filmed, because teachers refused to be filmed. The second observations were usually conducted in my second week of attendance at the school. The students saw me during their breaks and with their teachers in the Learning Resources Centre at their school (see Appendix).

The observations helped the researcher to select students to join the focus group. For example, during observation (Obs-Sc2E-NA), there was a student (Abdullah) who had good English. I gave him a consent form to participate in the focus group.

Observation helped to ascertain the kinds of teaching methods that were used in the classroom. It also informed the research, particularly whether the role of the students was an active or passive one.

Observation contributed to this research by enabling coding in the following points: classroom management, need for support, lack of resources, exam pressure, study environment, colleague collaboration, student motivation, and time management during the class. These data codes will be discussed in Chapter 6.

Observations have numerous advantages; for example, they can reveal information about context and provide information about natural behaviour, especially with participants who cannot or do not want to speak about themselves. Also, they are useful to triangulate data obtained from other methods, which is a very important aspect of this study, as observations were used to verify the participants' accounts about themselves, as expressed in the interviews. In addition, one of the questions of this study is "How do students and teachers use ICT in their schools?". Hence, only through observations could I discover what teachers and students do in their learning environment as usage is a practical matter which can best be known through observing teachers and students in the classroom. The observation is also suited to see how social processes change over time (Bielefeldt, 2012). According to Robson (2002), the main advantages of the observation are that the objective of the research, (in this study the influences on the usage of ICT) can be studied in the natural setting (the classroom), and it provides a clear understanding of the topic under investigation.

Therefore, observations allow the alignment with instructional context and evaluation goals. Observational techniques are valuable tools when the research aims to: "(1) evaluate school programmes effectively, (2) assess the performance of teachers, (3) provide feedback of professional development to teachers and (4) conduct research on classroom practice" (Schulz-Zander, 2008, p.7). As third research question is: "How do students and language teachers' use ICT in their schools?" and because this study investigated the performance of teachers when using ICT and their classroom practices in the school environment, observations were a suitable method for this research.

The Centre for Development Information and Evaluation, cited in Robson (2002) conducting observations in seven stages to ensure the quality of the data collection and analysis processes (see Table 5-3).

Table 5-3: steps of observation

Observation stages	Research steps
Determine the unit of instruction being studied	Observation over the entire class period to focus on the computer screen and the user speech regarding the use of ICT
Select or develop an observation form	Checkbox form used to focus on activities and minimise writing
Specify a sample	Four Saudi intermediate schools and classrooms
Decide on timing	The first term in 2016/2017
Conduct the field observation	In schools and classes, try to make observation forms clearer, more straightforward and close-ended.
Complete forms	During the observation time and immediately after the observation
Analyse the data	Data coded in reference to specific categories related to research questions

Nevertheless, the observation also comprises several disadvantages. The most significant concern about conducting participant observations is that the investigator might not work as an external observer and might change his/her role to obtain suitable data, and participants may also change their behaviour if they are being observed. Another drawback is that analysing observational videos is time-consuming and as described by L. Cohen et al. (2002) “it exacts its price” (p. 412). However, I could not film the classroom because teachers refused and also to avoid having students changing their behaviour if they knew

they were being filmed. Hence, I only recorded the voices. I needed to observe each case at least three times, once each week. However, I observed the same class twice; each class lasted forty minutes and had about twenty-five students. Since numerous activities were going on in the classroom, this was a complex task, but it yielded rich information.

Field notes were also taken during the observation and written up immediately after the class (See Appendix eight). Field notes are the core data log for analysis in observational research (Robson, 2002) and for this research, I followed the guidelines suggested by L. Cohen et al. (2002). The field notes were divided into four sections. The first section was about the initial information about the teachers, the subject, the lesson and the classroom environment and the number of students. The second section was to record information about the communication between teachers and students. The third related to the use of ICT and the last section was about how teachers and students refer to ICT outside the classroom.

The first observation was to establish a relationship with the students and increase their confidence in my presence. This was not recorded because I attended their class as a stranger and, although I stayed in the corner of the classroom, my presence may have affected their behaviour. The second time was more relaxed, and this session was recorded, while the third time was probably more accurate in presenting the classroom activities in a naturalistic way. None of the teachers accepted the use of a camera in the class, so I only used a voice recorder. In addition, the teachers only accepted two visits and kindly refused the third observation. During the observation, two teachers (SC1AOM- SC2ENA) appeared somehow nervous and asked me if I had any

questions for the students. I found that their teaching method differs than the daily teaching which makes them to excuse to be observed the second time.

5.5.4 Pilot study

I carried out a pilot study for two reasons. First, to verify the interview questions and second, to obtain feedback from participants about the time of interview and what should be highlighted in the questions regarding the factors that affect teachers when they use ICT. I conducted an interview with an English teacher and an LRC specialist a month before starting the main data collection. The first interview was with an English teacher studying at University and who had taught English for more than ten years. The interview lasted fifty-five minutes. He suggested adding several questions on professional development, not just on training. This suggestion was very helpful in investigating the relationship between teachers, and the effects of this relationship on visiting the class. The second interview trial was conducted with an LRC specialist and lasted fifty minutes. He suggested conducting the interviews during the school day because it would be easier for me to meet the teachers inside the school. He also suggested visiting his headteacher and his language teacher colleagues a week before starting data collection. I found this advice helpful because it gave the interviewees and me more time to think about the project.

Based on the interview trials, I noted that I could reduce the number of questions to less than twenty and still cover all the research questions. I also found that it would be easier for interviewees to send them the questions the day before conducting the interview.

5.5.5 Participants

As the aim of the current study was to explore and investigate the socio-cultural factors and their effect on using ICT, it can be considered as a qualitative study. In qualitative research, the selection of a representative random sample is not appropriate because that is a feature of quantitative research which aims to generalization. However, in the current research, I chose specific intermediate schools among the “Tatweer Schools” in Arrass city, as explained earlier in Chapter Two. Purposive sampling, which is one of the most commonly employed strategies in qualitative research (Wellington, 2000; Yin, 2009), was used in this qualitative research. Purposive sampling means that “the researcher specifies the characteristics of the population of interest and locates individuals with those characteristics” (Boyce & Neale, 2006, p. 104). This sampling method was useful in this qualitative research because which aimed to obtain information with high credibility, from a smaller number of participants (Wellington, 2000) among the four selected schools.

The study focused on the effects of socio-cultural factors on the use of ICT by teachers and students. Therefore, language teachers (Arabic and English) were chosen because they use the same facilities and almost the same tools, while other subjects such as Science or Maths, for example, might use an IWB to draw diagrams. Hence, it was assumed that the culture of the subjects was different with languages subjects. I focused on Arabic and English teachers, firstly because I am an Arabic language teacher and secondly because of my personal experience in learning English as a foreign language.

The schools were carefully chosen in an urban area because the factors that affect the use of ICT are more similar, such as the facilities of the school, the socio-economic level of the families who live there, and the level of parents’

education; all these factors were considered when choosing the case school for this study. Four intermediate schools, with students aged between twelve to fifteen, were chosen as the case schools where I gained access to observe and interview teachers, students and school leaders. Based on Creswell's view, the number of cases should not be above four or five (Creswell, 2007, p. 76) as more cases would be more appropriate for a study intending to generalise findings, which was not the case here. I excluded one school from my research for several reasons. Only one English teacher in that school agreed to be observed and interviewed, and the school had a different age group system with students from years 1 to 9 (students aged between six to fifteen). Also, the issues that concerned the teachers were different from those that this research focuses on. For example, they created new classes for students who had difficulty in reading and writing. This school (SC4) also had a new school leader who reported that he did not know enough about the topic under study because he had been outside the country for several years. Furthermore, I could not meet any Arabic teachers. Therefore, I thought the data would lack relevant content and I excluded all data about that school, except for some remarks made by an English teacher (SC4E-NW) and a focus group (ST-SC4) which I retained in order to support some ideas found in other schools. As a result, only the data from three schools were used (SC1, SC2, SC3); these schools had similar situations and facilities, which facilitated the comparison between them based on the culture of each school.

As part of the intermediate schools' curriculum, students had two ICT lessons per week. In the first year, students are taught the Windows operating system, and, during their second year, they learn to use Word, PowerPoint, and Excel. In the third year, students learn some computer languages and every school is

equipped with a computer lab where every student has the opportunity to apply his/her computer knowledge. In these Tatweer Schools, students are obliged to use computers because half of their subject marks are attributed to computer skills. In addition, students are assessed summatively at least every term. Thus, every teacher and student have to deal with technology and the internet in teaching and learning, which means that they all have basic knowledge and skills in ICT.

The participants of this study were chosen from four urban intermediate boys' schools in Arrass city. The schools were carefully because they all have computer labs and adequate ICT facilities. Intermediate schools were chosen due to the age of the students who are between thirteen to fifteen. Students were thought to have a clearer understanding of ICT and its terminology than younger boys, who could be influenced by suggestibility. Five students from every school were interviewed in focus group, then observed in the classroom. I tried to choose students with different levels of ability in ICT based on their teachers' opinions, the LRC specialists' records, their own acceptance to be a participant and finally, based on my observations during the class.

My original intention was to interview four teachers from any subject but when I consulted academics and colleagues about my interview questions, it was recommended that I should focus on teachers of just one subject. This opinion was very pertinent because if I had chosen, for example, science teachers and Arabic language teachers I would be likely to find different levels of use because of the subject culture. Therefore, I made sure the interviewees were similar in terms of the ICT facilities, curriculum and level of school. Another benefit of choosing just two subjects is that it allowed the exploration of

similarities and differences in the perspectives of the students and their teachers towards using ICT in the two languages.

Two Arabic teachers and two English teachers from each of the four schools were carefully chosen based on the headteachers' recommendation, their technology experience, years of teaching experience, the LRC specialists' records, and their willingness to take part in the study. The reason for considering the LRC specialists' records is that they usually work with all teachers and students with ICT issues and, in my experience, they often have good relationships with the whole school community because they help with ICT problems and are the conveyors of new technology. In addition, the first school (SC1) was chosen because of its easy access and because the LRC specialist of that school is one of my colleagues who has often helped me with several issues, including arranging an interview with the school leader.

LRC specialists were the key to contacting all the participants, because I had worked with all these specialists for more than five years when I was an LRC specialist myself in one of these schools ten years ago. However, I did not work with any research participants in the same school, except for one Arabic teacher who, unfortunately, gave me too much data concerning his feelings and the school issues.

Table 5-4 number of participants.

School	Arabic teachers	English teachers	Students (focus group)	Leaders/Other staff	Observation
Pilot		1/ trustworthiness		1 LRC specialist/ trustworthiness	
Supervisors	2	1			
SC1	2/ trustworthiness	2/ trustworthiness	1*5	1	3
SC2	2	1	1*6		3
SC3	2/ trustworthiness		1*5	1/ trustworthiness	2
SC4		1/ trustworthiness	1*5	1	1
Total	**8**	**6**	**4 Groups**	**3**	**9**

Table 5-4 shows the numbers of participants from each school. The first column shows the cases (school 1, school 2, school 3, supervisors, and the interviewees in the pilot study). The second column describes the numbers of the participants (Arabic teachers). They were six Arabic teachers and two Arabic supervisors. The third column shows the number of participants (English teachers). They were five English teachers and one supervisor. The fourth column describes the numbers of students in four groups; they were five students for each focus group. The fifth column shows three school leaders and one of the learning resources centre specialists who was interviewed. The 'trustworthiness' shows that this participant had responded to the transcript of his interview as will be described later in section (5.7).

An LRC specialist also helped me choose six students for a focus group from different year groups (year 7, 8 and 9). The headteacher of School SC1 sent a consent form to the parents and I retained a hard copy of every form. I selected some students after I found that during the observation of their class, each of

them had something special which differentiated him from his colleagues. For example, two students from different schools were particularly good English so that other students often asked them questions. I found that their higher level of English was due to the fact that they often watch films in English.

I also went to School SC4 because one student from the focus group of the School SC1 told me he had designed presentations when he was in the School SC4 as the Arabic teacher there encouraged all students to integrate technology in his subject. Although I was not able to include School SC4 in this sample, as explained earlier, I was told by several students that this teacher had encouraged them to work collaboratively and design materials in the subject by using software such as PowerPoint, Word and Photoshop.

When a teacher agreed to take part in this research, I gave him the consent form to sign before we agreed on a convenient time, during his free time, inside or outside school. I then handed a copy of the interview questions or sent theme electronically before the interview so that each teacher knew the direction of the questions. However, I reminded all teachers that we were free to follow these questions or to go in any direction that the interview led us, as I was using a semi-structured interview.

The main limitation of this sample is that it only comprised male teachers and students. Indeed, because of the gender segregation in the Saudi education system, I could not interview or observe female teachers or students as I was not be permitted to enter the premises.

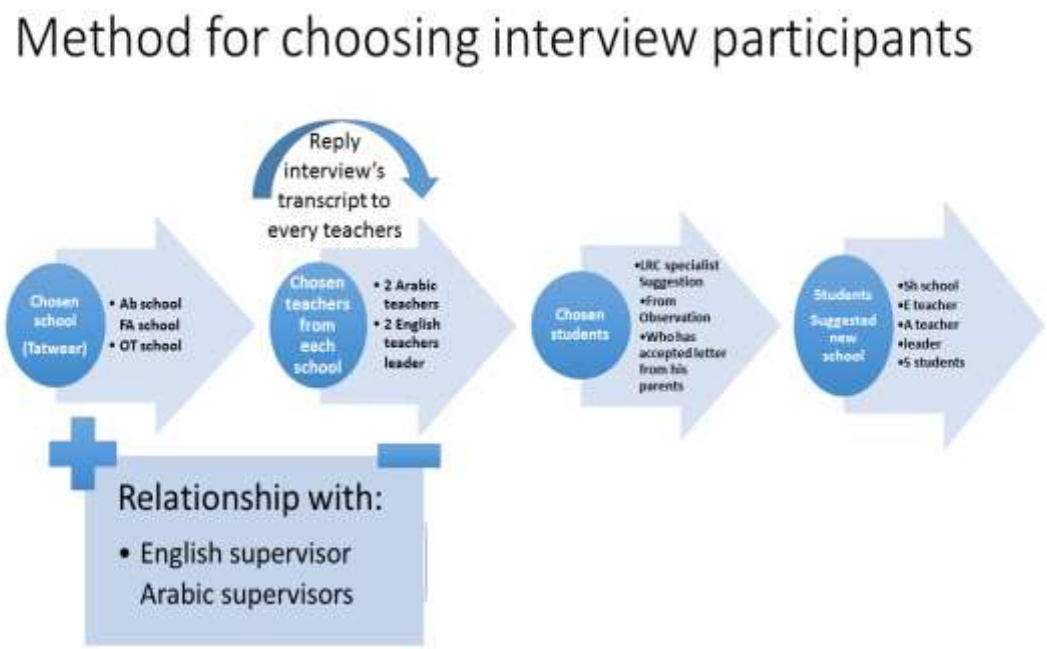


Figure 5-1: Method for choosing interview participants.

Figure 5-1 shows how the participants were chosen. First step, I chose three schools from the "Tatweer" project schools. Second, I selected two Arabic teachers, two English teachers, and a school leader from each school to be interviewed. The third step involved choosing students to participants in the focus groups; they were chosen based on three criteria: (1) the students were nominated by their teacher and LRC specialist, (2) the students were observed in the classroom and it was thought they could enrich the data, (3) the students who had their formal parents' consent. Finally, the fourth school was nominated by students as they had studied for many years in that school. The supervisors of both Arabic and English languages were chosen because many issues that participants had reported are related to the relationship with the supervisors, as described in the next chapter.

5.6 Data Analysis

As the current study adopted a qualitative approach, a large amount of data was collected which required a careful, systematic approach to analysis to help answer the research questions. Hence, the theoretical framework and the research questions guided the analysis of the data and thematic analysis was used following suggestions from Braun and Clarke (2006). This involved six steps: (1) familiarising myself with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes and finally, (6) producing the report.

First, to familiarise myself with the data, all interviews were immediately transcribed, and notes were added. This was extremely time consuming but consisted of the first level of analysis. I read all the interview transcripts several times until I could remember the main ideas of the interview. Secondly, I coded the data by using a sentence to reduce the great amount of data and investigate the meaning of the data. Every time I read, I generated more codes using a qualitative analysis software: MaxQDA. Both steps were followed during data collection and while the interviews were being conducting. This allowed to focus on certain issues that were not covered in the first two interviews such as, the role of the supervisor in the classroom observation between teachers. Thirdly, I tried not to use the research question as themes as I sought to generate new ideas (Bielefeldt, 2012). Similar codes were merged into a theme and I used both deductive and inductive approaches to analysis in order to generate the themes. For example, at the national level, I found several factors some related to the religion and others related to the morals which were difficult to arrange under one single theme. Hence, I used the features of Hofstede's dimensions as themes to arrange all the national factors, as explained in the next chapter.

The theoretical framework guides the codes and themes. As ecological perspective suggests three levels of culture, the national, organizational, and the classroom culture, I used this division to form initial themes as deductively and included every code into these themes. At the same time, the data were coded inductively to build new themes. I found this approach to be very useful as I could relate to all the research questions and generate new themes in a way that constituted a substantial contribution to the literature. However, certain codes could fall under more than one theme. For example, Arabic teacher (SC2A-NS) reported:

> *"Technology is useful and helps students. For example, when the teacher uses PowerPoint with pictures, it draws more attention of the students. But I see it distracts (the attention of) some students because the teacher will be busy near the computer, he could not see students in front of the class, especially when it is required to reduce the light. But it helps them (students) to understand. "(21).*

This quote was coded in three different ways: (1) teachers' views towards using ICT, (2) ICT distracts students' attention and (3) classroom management. The first and the third code relate to the self-concern theme (see section 6.5.1.1.3 page 181) while the second code relates to the task concern theme. Therefore, several quotes could be found under more than one theme.

The next step involved reviewing several times all the themes and the codes related to the themes. the thematic organisation was modified several times an in order to enhance the quality of the analysis, I asked a colleague to check the relationship between the code and the themes. Lastly, I reviewed these themes and codes with both supervisors. After that, the theme names were changed several times. For example, I changed the theme "factors" to "teacher's concerns" in order to create themes based on the teachers' concern. The sixth and final step of the analysis involved writing the report. The aim of this step

was to connect the data with the study questions and the literature. I tried to write the report bearing in mind the theoretical framework and covering the research questions. The aim of this step was to write the story around the data and ensure the validity of the analysis. The above six steps of the process of data analysis are discussed in detail in the data analysis chapter.

5.7 Trustworthiness

Trustworthiness has become an important concept in qualitative research that allows the researcher to describe the virtues of research in qualitative terms without the restrictions of the terms used in quantitative work. An important aspect of trustworthiness has been reported by Schulz-Zander, Pfeifer, and Voss (2008) who asked: “How can an inquirer persuade his or her audience that the research findings of an inquiry are worth paying attention to?” (p. 290). Therefore, establishing trustworthiness in qualitative research requires the use of criteria by which to interpret and judge the research findings.

The terms generalisation, validity, reliability and objectivity are usually used in quantitative research but may not be appropriate in the qualitative research paradigm. Therefore, qualitative research uses the alternative concepts of credibility, transferability and confirmability and dependability (Creswell, 2007, p. 76). Despite the diversity of terminology in the literature, the main aims of all these terms is to ensure the quality of the research whatever the terms used.

In this study, to ensure the quality of the findings, more than one method was used, which gave me the opportunity to see the phenomenon from different angles and generate more trustworthy data. Another strategy used was member checking to guarantee the dependability of the findings. This entailed giving the participants their interview transcripts which allowed them to verify that their

views had been correctly recorded; by this means I was able to reduce bias. However, this strategy has been criticised by Morse, Barrett, Mayan, Olson, and Spiers (2002) as follows:

> *Investigators who want to be responsive to the particular concerns of their participants may be forced to restrain their results to a more descriptive level in order to address participants' individual concerns. Therefore, member checks may actually invalidate the work of the researcher and keep the level of analysis inappropriately close to the data (p.16).*

To avoid this issue, I used member checking as an optional step, with the aim of giving my participants the opportunity to add views, describe ideas, and reflect on responses. I contacted participants after transcribing the interviews and sent the whole transcript to them after three months. The first Arabic teacher replied after deleting some "repetitions", as he said. Another Arabic teacher returned the transcript with a recommendation to delete the names he had reported. I assured him that the names would be changed to guarantee anonymity. Two other teachers told me they would return the transcript but did not do so.

5.8 Ethical Issues

The term *ethics* refers to the moral values and management of conduct which are held by a profession "though there is no logical reason why individuals should not have their own ethical code" (Wellington, 2000, p.54). In this study, the researcher followed the ethical guidelines of the Ethical Committee at Exeter University and BERA. A formal permission letter was obtained from the local Education Department in the KSA before entering the schools and conducting observations and interviews, as shown in Appendix 9. Another permission was gained from the regional administration to conduct this research in the intermediate school, as shown in Appendix 9.

I carefully followed Exeter University ethical guidelines. At the same time, I used five steps to avoid the ethical issues. First, the consent forms were signed to conduct the research. Second, the participants were fully informed about the study aims. Third, participants were informed that the data would be used only for research purposes. Fourth, the real names of participants would never be used but they would be given pseudonyms for anonymity. Fifth, every participant had right to withdraw from the interview without any excuse.

I asked teachers to nominate students whom they thought would be suitable for my research. Most parents of students gave consent for their children to be participants. However, the school leader (Sc1) refused to use my consent form; rather, he suggested using the school's official form. He explained that the parents should sign the school consents rather than my consent (with Exeter University logo). I accepted that when he agreed to give me a hard copy of each participants' consent. This change took three days out of the scheduled time.

With assistance from the Learning Resources Centre (LRS) specialist and based on my class observation, we chose six students from each school to be in the focus group. The venue for conducting the focus group was a challenge. I wanted to conduct the focus group in a place that would help the students to feel free to say what they thought; at the same time, this place should ensure their anonymity. The best choice was the LRC hall. The LRC was booked because it was a big hall in which students would feel more freedom; it had a glassdoor so that I could see who was coming from the outside. As the students sat in front of me, my face was towards the door and the door was behind the students so that if any other students or teachers accidently came to the LRC, they would not be able to see the students' faces. This would make the students feel more secure and ensure that they would not face any harm.

I explained to all participants that they were volunteers and that their statements would be kept confidential and that their information would only be used for research purposes such as seminars and conferences. Their full names were not asked in order to preserve their anonymity. To ensure the confidentiality of participants, every participant and each school was assigned a code. For example: the code “SC3: AGZ” means School 3, Arabic teacher A-GZ. All participants’ information was treated as highly confidential ensuring the anonymity of each participant. participants were also informed that the interview would be recorded. This undertaking was made verbally and given in writing at the beginning of each interview. However, for the first focus group, I found it difficult to recognise who was talking so during the following focus group, I was calling the first name of every student before directing the question to him. For example, I addressed each student that way: “Mohammed, could you tell me your opinion about …?”, then I turned to another student: “Abdullah, what do you think about …?”. This was helpful when writing the transcript as I could identify each speaker.

A consent form was also provided to teachers, students, parents, and headteachers prior to their participation. They were informed that they could withdraw, withdraw their children or withdraw their students from the study at any time without giving any excuse or reason. The nature of the interview was explained. There was no harm to me as a researcher or to the participants of the study and all necessary precautions were taken to eliminate the possibility of any potential harm. In addition, the headteacher explained the nature of the interview to all the students.

The interviews were digitally recorded, and notes were also taken during the interviews and observations. All recorded and written data were securely and

confidentially stored. Given that all interviews and observations were conducted in the schools, consent forms, notes, and personal codes were kept in secure and locked cupboards at home to which only I had access to. Data, recordings, transcripts, and analyses were kept in my laptop, secured by a username and password known only by me. The data were also securely stored on my computer drive at Exeter University. All data and records will be destroyed and deleted after five years. Participants' original identities will not be used or published in any academic publications such as seminars or conferences; I will only use their personal code. All these stages were carried out in accordance with the procedures and guidelines of the University of Exeter.

The information sheet was translated into Arabic, and participants were fully informed about the research, its aims and the roles of participants. All information needed was sent in advance to all participants and I made sure to clarify everything to the participants before they could decide to take part in the research. All consent forms were also translated into Arabic and sent to the participants to guarantee their voluntary participation in this research. The consent forms contained four parts: confidentiality, anonymity, information about the whole research, and the right of participants to withdraw at any time without disadvantage to them. All attached forms, including this form, were written in line with the ethical procedures followed at Exeter University.

6 Chapter Six: Data Analysis

6.1 Introduction

The previous chapter has presented the plan followed to collect the data using three types of research methods which are: teachers' interviews, classroom observations, and students' focus group. This chapter describes and analyses the data that help answer the research questions guided by the research theoretical framework. This chapter is divided into two main sections: the case description (Sections 6.2 and 6.3) and the thematic analysis (section 6.4). As this research uses a case study methodology, the first section describes each case (schools) in order to investigate their culture as every school has slight cultural differences (Gaffney, McCormack, Higgins, & Taylor, 2004). The chapter then goes on to show the school environment affecting teachers and their practices in using ICT. These factors are classified into three parts based on the teachers' concerns: (1) self-concerns, which means personal feelings towards the environment and how these affect the usage of ICT, (2) task-concerns related to the teachers' concerns towards their job, the ICT materials and how these concerns affect their use of ICT and (3) impact concerns which relate to consequences, collaboration and support. The use of ICT in the classroom will be described in order to identify the kind of use of ICT, the effect of this use on students' learning, and how the teachers use ICT in their classroom.

6.2 Case Descriptions

This section contains a description of the three case schools and the academic subjects (Arabic and English), and makes comparisons between the schools in

terms of school culture and their views on, and relationships with, ICT. This section aims to depict the school environments and investigate the circumstances in which the teachers work. Thus, every case school is described in terms of the views and relation with using ICT, the ICT resources of each school and the management of the school. Every school is described because it is assumed that there are different cultures within each school. According to Gaffney et al. (2004) the school culture is:

> *Culture describes how things are and acts as a screen or lens through which the world is viewed. In essence, it defines reality for those within a social organisation, gives them support and identity and creates a framework for occupational learning. Each school has a different reality or mindset of school life, often captured in the simple phrase, 'the way we do things around here' (p.37).*

The differences between the three schools are also highlighted in the next section.

6.2.1 First Case: School ONE (SC1)

School one (SC1) is an intermediate school that has 180 students distributed across nine classes, with three classes for each year group (Year 7, 8 and 9), including sixty-three students in Year 7, sixty in Year 8, and fifty-seven in Year 9.

The region where the school is located is populated with middle and lower-income families. In this area, some parents are illiterate, which has some effect on their children's learning. The building follows the MOE standards. The relations between teachers are good as they help each other, especially if they teach the same subject.

This school (SC1) has a vision that relates to technology and, at the entrance, the school vision is written on a sign:

> *"The school is committed to providing a distinguished education to the learners by applying modern technology in teaching and learning and investing their powers, facilities and resources to achieve their vision of sustainable professional development."*

This vision relates to two aspects relevant to this study. The first one is that the school considers applying technology in the education process as a way to gain a distinguished education. The second aspect of their vision is that they aim to achieve sustainable professional development. One of the aspects of professional development is *Active Learning* which is a new project of the MOE that all schools should follow in terms of collaborative learning and self-learning. One of the participants reported that the school vision is only to show off and referred to it as *"ink on papers because the measurement of success is students' results which do not* change" (LRC-S: 69). Teachers did not seem to care about their school's vision because of the lack of policy to help them apply technology in their lessons or advice as to which level of application they should use. Therefore, teachers saw this vision as ambiguous and could not apply it in a real school situation (LRC-S). The school leadership had more impact on the relationship with the participants, resulting in participants from this school having many concerns about their relationship with the leader.

Two Arabic teachers out of six, two English teachers, and the school leader were interviewed, while a focus group of five students (thirteen to fifteen years old, from year seven, eight, and nine) was conducted in order to investigate the sociocultural factors that influenced their using technology. Over three weeks, only one Arabic teacher agreed to have his class observed. Two observations of his teaching were conducted, one in the LRC and another in the classroom Table 6-1 below describes the data that was gained from the first school. The first column describes the interviewee, then the years of experience in schools.

The third column shows the level of own use reported by every interviewee. The fourth column points to the resources of ICT that are usually used. The last column describes if I could observe the classes.

Table 6-1 Participants and resources at the first school (SC1)

Interviewee	Years of experience	Level of own ICT use	ICT resources in classroom	Observation
School Leader	22	Early user	Internet Administration programs	None
Arabic teacher (A-SA)	24	Late user	Computer Projector PowerPoint Film	20 minutes Obs-SC1ASA1
Arabic teacher (A-OM)	21	Early user	Computer Projector PowerPoint Film	Two classes Obs- SC1AOM1 Obs- SC1AOM2
English teacher (E-BN)	10	Late user	Computer Projector PowerPoint Film Email English software	None
English teacher (E-NF)	9	Late user	None	None
LRC specialist (LRCS)	20	Advanced		During students' break
5 Students focus group				

6.2.2 Second case: School Two (SC 2)

School SC2 has been regarded as the best school in the district for many years. It has 230 students and twenty-two teachers; ninety students in the first stage (Year 7), seventy-seven students in the second stage (Year 8), and sixty-three students in the third stage (Year 9). The students are distributed across ten classes: four classes in Year 7, three in Year 8, and three in Year 9. The school

has five teachers of Arabic, two of whom do not use technology, and two teachers of English, including one that does not use technology. The region where the school is located is populated with mixed-income families.

School SC2 can be characterised by stressed relationships with others and without an effective use of technology. However, its strategic plan contains two issues related to this research. The first issue is the weakness of Year 8 students in English. They suggested addressing this issue by creating small quizzes, encouraging students by giving rewards, and integrating weak students with hard-working students into one group. The second issue is the weakness of teaching strategies in general. The school suggested that a goal for addressing this issue would be that 80% of teachers should gain IWB skills. The school also suggested training courses for using technology inside the classroom, as it is acknowledged that there were weaknesses in teachers' use of technology. To resolve this issue, the school thought that training courses would be the best solution. The English teacher would be the presenter of these courses (SC2 Annual Operational Plan 2016/17).

The school leader was new to this school, so the relationship with teachers was probably quite formal, and participants felt less impact from their leader. Two out of five Arabic teachers (SC2A-ALI, SC2A-NA) and one out of two English teachers (SC2E-NA) were interviewed for approximately one hour each. Two observations were conducted with Arabic teacher SC2A-ALI and English teacher SC2E-NA. Six student (aged between thirteen to fifteen years old) from year seven, eight, and nine took part in a focus group which lasted forty-five minutes each as shown in the table below.

Table 6-2 Participants and resources at the second school (SC2)

Interviewee	**Years of experience**	**Level of own ICT use**	**ICT resources in** classroom	**Observation**
School Leader	22	Early user	Internet Administration programs	
Arabic teacher (A-ALI)	28	Late user	Computer Projector PowerPoint Film	Two classes, Obs- SC2ALI1, 45 Minutes, Obs- SC2ALI2
Arabic teacher (A-NS)	9	Early user	None	None
English teacher (E-NA)	10	Late user	Computer Projector PowerPoint Film Email English software	One class, 45 minutes Obs-SC2ENA1
Focus group6students				

6.2.3 Third case: School Three (SC3)

The third school (SC3) is a confirmed success of the Tatweer system in the administrative region. The school has eighty-seven students in three classes in the first year; seventy-seven students in three classes in the second year and eighty-five students third in three classes in the third year. There are twenty-two teachers and seven administrative staff. The four Arabic teachers and two English teachers teach around twenty hours per week and the teachers seem to have a good relationship with the school leader and with each other's.

The neighbourhood where the school is located is considered one of the best in the city and is populated with middle- and upper-class families. Parents are very helpful and have a good relationship with the teachers. Many teachers have their children in the same school.

The school states that it aims to “provide an effective partnership with society through technology contact”. Thus, the school is equipped with a computer system that sends text messages to parents for misbehaviour or lateness. This school also uses technology for contacting parents about school activities in order to make parents aware of everything related to their sons’ education.

Although the education system in Saudi Arabia is a centralised one, the Tatweer project is a trial to give schools some independence in their plans, activities and budgets. According to the school’s leader (SC3), the secret of how they succeed is cooperation between teachers; he said:

> *“After I understood Tatweer and its aims by visiting large schools who applied Tatweer - in addition, the MOE gives schools their budget. I became persuaded about its goal which is that the school should be independent… now, it is the teachers who suggest the* school *plan and activity. So, every teacher has a right to suggest to (Quality Society) apply a suitable activity.” (SC3-Led: 13-14)*

When teachers have their voice in leading the school, they suggest many ideas. In this school, the teachers pinned a large sign at the school entrance about the activities during the year. Teachers are given the opportunity to conduct their own activities. Therefore, the school environment is very active, there are many activity groups of teachers and students, and students have a role in running their school. For example, the LRC specialist has to maintain the classroom equipment (computer, data projector, and the IWB) at the beginning of the term. He also has to provide the material for the subject and install them on every classroom computer (School 3 Annual Operational Plan 2016/17). Every year, they get middle administrators to run competitions and the students seem to feel proud of their school.

Many teachers told me the secret of their school success was the helpfulness of the school leader. He had been a teacher for more than ten years before he was promoted to a school leader position, and he dealt with his colleagues just as when he was a teacher with them. Almost every teacher liked to help him over school issues. So, the school had a limited impact on teachers' use of ICT, as shown in (Table 6-3).

The school has an electronic registration of students at the main gate, where every student has to pin his code on a computer. After the start of the first lesson, parents receive a text message if their son has failed to register on time.

Table 6.3: Participants and resources at the third school (SC3)

Interviewee	**Years of experience**	**Level of own ICT use**	**ICT resources in** classroom	**Observation**
School Leader	22	Late user	Internet Administration programs	
Arabic teacher (A-GZ)	24	Late user	Computer Projector PowerPoint Film	One class, Obs-SC3AGZ1
Arabic teacher (A-SB)	24	Late user	None	None
English teacher (E-NW)	18	Late user	Computer Projector PowerPoint Film Emails English software	Two classes, Obs-SC3ENW1, Obs-SC3ENW2
Focus group 5 students				

6.3 Summary of the Case Descriptions

The three schools are in the same city (Arrass) and they are all part of the "Tatweer project". There are slight differences in the cultures of these schools.

- Schools One and Two did not change to follow the process of Tatweer, while the third school did. In the first school, the leader reported that the change was in the lead teacher's role, in that he became a supervisor for his colleagues.
- In the second school, the teachers did not change their roles because their new lead teacher was inexperienced in the "Tatweer" system.
- In contrast, in the third school, the leader assigned every teacher some tasks, so they seem happy, and the school environment is very helpful. The reason for this is the way the leader deals with the teachers. This school leader has significant experience with the Tatweer system. This gave the school a good reputation in the whole region over the two years and also constitutes an evidence that a key factor of the change in the school is the leadership.

Therefore, the slight differences between the three schools were in the school culture. For example, teachers from the third school (SC3A-GZ, SC3A-SB, SC3E-NW) never reported that they were affected by collaboration with colleagues or administrative power. For example, SC3E-NW stated:

> *"This leader usually encourages teachers to use ICT. He sometimes goes around the classrooms to see the teachers from outside the classroom. We will do hard work when we find such an encouraging environment" (56).*

Therefore, almost all teachers in this school (SC3) worked hard because the school environment encouraged them; therefore, the school received a prize from the MOE for its excellence.

In terms of pedagogy, most teacher participants (8 out of 11) used teacher-centred methods, also called traditional methods. Only two English teachers (SC3E-NW, SC1E-NA) used groups in a student-centred approach as a form of "active learning" which is one of the MOE projects, as explained in Chapter Two. Only one Arabic teacher used both strategies, teacher-centred and student-centred. The two English teachers had a private room that was used for English only, equipped with round tables, while the Arabic teacher (SC1A-OM) used groups when he was in the LRC room. This means that the classroom environment was not designed for collaborative learning because the students' tables were designed for individual use. Therefore, the classroom environment played a major role in the teaching strategy.

When seeing this issue from the national level, Hofstede reported that the Saudi culture is a high-power distance (score 95) culture, and that such cultures are characterised by teacher-centred strategies (see section 4.3.2.2 page 88). The current study data agree with this view that most participants used teacher-centred strategies.

There was a slight difference between the three schools in terms of the relationship with each other and with students, support and the identified concern, that is, the 'school impact' in the current research, as described later in this chapter (see Table 6-3).

Table 6-3 Comparison between the three schools' impact on teachers

Teacher concern		School 1	School 2	School 3
Self-concerns	National level	4	4	3
	Classroom level	21	12	16
Task-concerns	National level	7	2	1
	School level	20	10	8
	Classroom level	17	13	12
Impact-concerns	National level	1		
	School level	34	19	10
	Classroom level	8	6	2

This table describes the differences between the impact and the task of the school on the participating teachers from each school, as discussed later in the thesis. While the task contains the labour and the materials, the effect of the task should be the same in the three schools because the three schools belong to the same 'Tatweer' system. They have the same materials and the same roles. Participating teachers reported their concerns towards their environment which might affect their task. It can be seen that School One had a higher number of task concerns, which may result from the impact of the school on the participants.

The 'impact concern' in this figure means the impact of relationships between the staff in the school. The impact concern at the school level was high in School SC1, which had an effect on teachers' practice and use of ICT. Nevertheless, School SC2 had an average impact on the school relationship, which might be because the school leader was in his first year of work with these participants. The impact of School SC3 was lower, showing how

participants were happy in their school; they were very active and did not have any concerns about the impact of the school on their use of ICT. Details concerning these factors are discussed in the following sections.

6.4 Thematic Analysis

In the previous section (6.2), the circumstances in which the teachers worked were presented in order to have a background knowledge on how the school environment might affect the learning process, and to compare the three cases in terms of the roles of the administration in improving the learning process. This explains why the participants of School SC3 did not report concerns about their relationships with the school leader in the school. However, these relationships had a major impact on the participants of school SC1, which will be described later.

This research followed Braun and Clarke (2006) approach to data analysis and consisted of the following six steps: (1) Familiarising myself with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes and (6) producing the report (Braun & Clarke, 2006, p. 87). See chapter 5.6 p.149.

6.4.1 Analytical approach of data

The analysis of the research data was done in two phases: analytic approach or deductive and grounded theory or inductive (Bryman, 2016). The first phase was the analytic approach to the data, which is defined as “analytic induction is an approach to the analysis of data in which the researcher seeks universal explanations of phenomena by pursuing the collection of data until no cases that are inconsistent with a hypothetical explanation (deviant or negative cases) of a phenomenon are found” (Bryman, 2016, p. 568). This phase was used in

analysing the factors that related to the national level. Because there were many sociocultural factors at the national level, it was difficult to account for these factors. The research followed Hofstede's elements; the factors were determined by Hofstede's model (as shown in Figure 6.1).

The second phase was the inductive analysis called grounded theory (Bryman, 2016). This phase was used in some steps. First, by breaking the data into parts and giving them names; this is called 'coding the data'. Second, generating several level of codes and sub-codes of the data. Third, the analysis started on the same day as the data collection in that every interview and observation were transcribed on the day they were conducted. This step helped to create new ideas and new interview questions. For example, when I noticed in the observation that the classroom was dark because the teacher reduced the light level when he used the projector, I added the interview question of how this darkness affected the teacher and students. The fourth step of the inductive analysis was constant comparison. This means that I composed the codes by finding the relationship between them and putting these codes under one category (as shown in Table 6.4).

The relationship between these categories is developing the new theory. For example, 'self-concern' and 'nonuser' are categories. The relation between the two emerges and shapes the new theory.

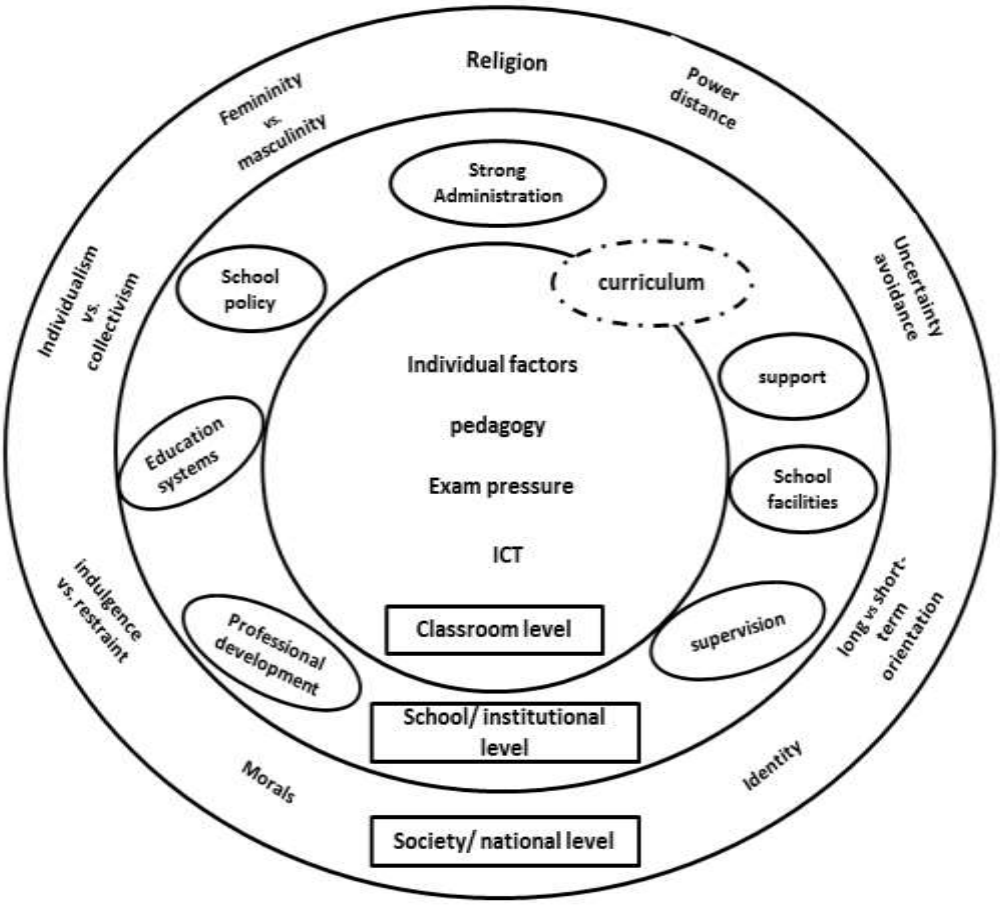


Figure 6-1: Theoretical framework (Codes from the literature)

This figure shows the theoretical framework of the study which contains the codes and factors from the literature. These codes were used as a guideline to analyse the data served as a prediction for the codes used in this study. Therefore, I started from the data inductively to create new codes for both the classroom level and the institutional level, and at the same time, I used the codes from the literature to the national level. This is because, as described earlier, the national level has many factors and it is difficult to cover all these factors without using a model such as Hofstede's model. The codes of this study are shown in Table 6.4.

Table 6-4: Themes and Codes from the data

Themes		Inductive codes		Deductive codes
		Classroom-level	**School level**	**National level**
Concerns	**Self-concerns**	Satisfaction, Attitudes, Responsibility, Classroom management, Self-Motivation		Respect high status (High power distance), Failure is a disaster (Masculine), ICT takes teacher's role (uncertainty), supposed to have all the answer (uncertainty)
	Task-concerns	Pedagogy, textbook, Time & effort, Prepare class environment	Exam pressure, Professional Development, ICT support, Resources	The purpose of education, To pass the exam (to do), collectivist culture, Optional use of ICT, (Large Power distance), Highly Structured education (strong uncertainty avoidance).
	Impact-concerns	Barriers to use ICT, Lack of follow-up, Change teacher's role	Support & encouragement, Students' motivation, Lack of trust, Colleagues collaboration	Changes to the curriculum, Femininity

The table above shows the codes applied to the data and the themes that emerged. The three main themes are: self-concerns, task-concerns, and impact concerns. The three levels of culture are: the national level, institutional level, and the classroom level, as sub themes. The codes of the national level were deductively applied. For example, "respect high status" is a value of Hofstede's dimension "high power distance", while the codes of the institutional level and the classroom level were applied inductively to the data.

The next step of the analysis involved using cross-case analysis in order to deepen my understanding and explanations. The case-oriented approach was used because this analysis fits with the limited number of cases, considers the case as whole entity, and looks at causes and effects within the case (Miles &

Huberman, 1994). I wrote the findings of all cases under themes and each theme had large amounts of data from each case. Lastly, I repeated these steps several times to analyse the data and arrange the themes. At the end of this analysis, I tried to summarise the findings that answered the research questions, as shown in the following Table 6-5:

Table 6-5: sections that refer to the research questions

Research questions	**Corresponding section**
What are the socio-cultural factors that influence students' and language teachers' usage of ICT in their schools?	6.5 Factors
What are the intermediate school students' and language teachers' views about using ICT in teaching and learning?	6.5.1.1.1 Participants' views and attitudes towards using ICT
How do students and language teachers use ICT in their schools?	6.6 Using ICT in the Classroom
How does culture affect students and language teacher usage of ICT	7.2 New Theoretical Model 7.3 The Type of Concern and the Level of Use

6.5 Factors influencing the use of ICT

This section addresses the first research question: What are the socio-cultural factors that influence students' and language teachers' usage of ICT in their schools? Three main themes emerged from the data analysis. Participants from every school reported some concerns. Hence, these concerns are considered in

the current study as factors that affect using ICT. In order to illustrate the whole picture of the data, the data from each school were compared because every participant reported certain concerns which did not make a clear picture until synthesized with the data from other participants. Therefore, the data were analysed based on the themes emerging from the three schools.

Participants from the three schools reported many concerns which could be divided based on the theoretical framework (see Figure 6-1 p.169) into three levels: the national level, the school level, and the classroom level. This division was based on a deductive approach, as described earlier (chapter 5). For example, the name of the codes related to the national level relate the cultural values of Hofstede's model.

In order to rearrange the data, I tried inductively to collect the similar concerns from every level (national, school, and classroom) in other categories. The first broad category contains the concerns related the teachers themselves, also called in the literature "individual factors" (Kreijns et al., 2013), "self-efficacy" (Robertson & Al-Zahrani, 2012), or "teacher level" (Bingimlas, 2009). For example, this includes the teachers' background and their views towards using ICT because teachers are considered as a key factor in the educational process and in the organisation of ICT in the classroom (Sang et al., 2010). I called this category "self-concern" and it is usually described by the pronoun 'I'. This 'I' relates to personal feelings towards the environment and how these affect the usage of ICT. These factors or concerns are feelings coming from the participant himself. For example, an Arabic teacher who does not use ICT in his teaching stated:

> *"I don't deny the positives of technology. I know that it saves time and effort. In my subject, only three lessons in the unit (it lasts three weeks)*

> *need traditional teaching, the rest are listening, reading comprehension, and writing; in all these, technology is useful…I don't have any problem with traditional teaching. The students' results are good. The supervisors visited me. No one asked me to change, so why should I change?" (SC3A-SB22-23).*

Although he agreed with the benefits of using ICT in his class, he did not mention any reason. He just did not have any desire to change and what made him a non-user is the self-concern.

The second category of concerns relates to the teachers' concerns towards their job, the ICT materials and how these concerns affect their teaching and use of ICT. This theme is called the labour and the task concern. These concerns relate to dealing with objects and the system. In the literature, these factors have different names such as factors that relate to the organisation condition (Albugami & Ahmed, 2015b) and to resources and institutional factors (Hew & Brush, 2007) and the school level (Bingimlas, 2009). The task concern might be described using the pronoun 'it' in participants' daily work. For example, an Arabic teacher expressed he would like to get more training courses to use ICT; he stated:

> *Unfortunately, there are no training courses. If the Ministry says we are in training age, see how many courses were held this year, because school leaders do not like their teachers to go out for training during the school day, because of covering their lessons. Why does not the MOE let the trainer come to school? He could train us during free time during school hours." (SC1A-OM: 92). …*

This quotation was coded as "lack of training", which relates to the task concern.

The Impact concern is the third theme in the factors that describe why teachers choose their practice and action towards using ICT. The impact concerns relate to consequences, collaboration and support, and is closely related to

relationships with others (administration staff, colleagues and students). It seems to be equivalent to the pronouns “we” or “they” which describe the relationships with others, especially in the school. For example, an English teacher decided that he could not use a film that lead by teacher female because the national culture does not allow this; he stated:

> *“I often like the explanation (on YouTube) but because the teacher who is explaining is a woman, if I show it in the classroom it may cause problems with parents. So, I leave it.” (SC3E-NW:40). …*

This impact factor is equivalent to the “we” as a nation or “they” as parents. Teacher SC3E-NW expressed concerns regarding the impact of using YouTube in case the video displays a woman on the relationship with students’ parents that parents supposed to refuse their children taught by these materials.

Before investigating these concerns, the second research question, “how can we study these socio-cultural factors?” should first be answered. The data show that the three concerns do not fit with only one of the cultural levels. Some concerns were found in the school culture while others came from the national culture. The theoretical framework of the current study suggests three levels of culture: (1) the national level, (1) the school level, and (3) the classroom level. Therefore, the themes have been divided into three levels as shown in Figure 6-2.

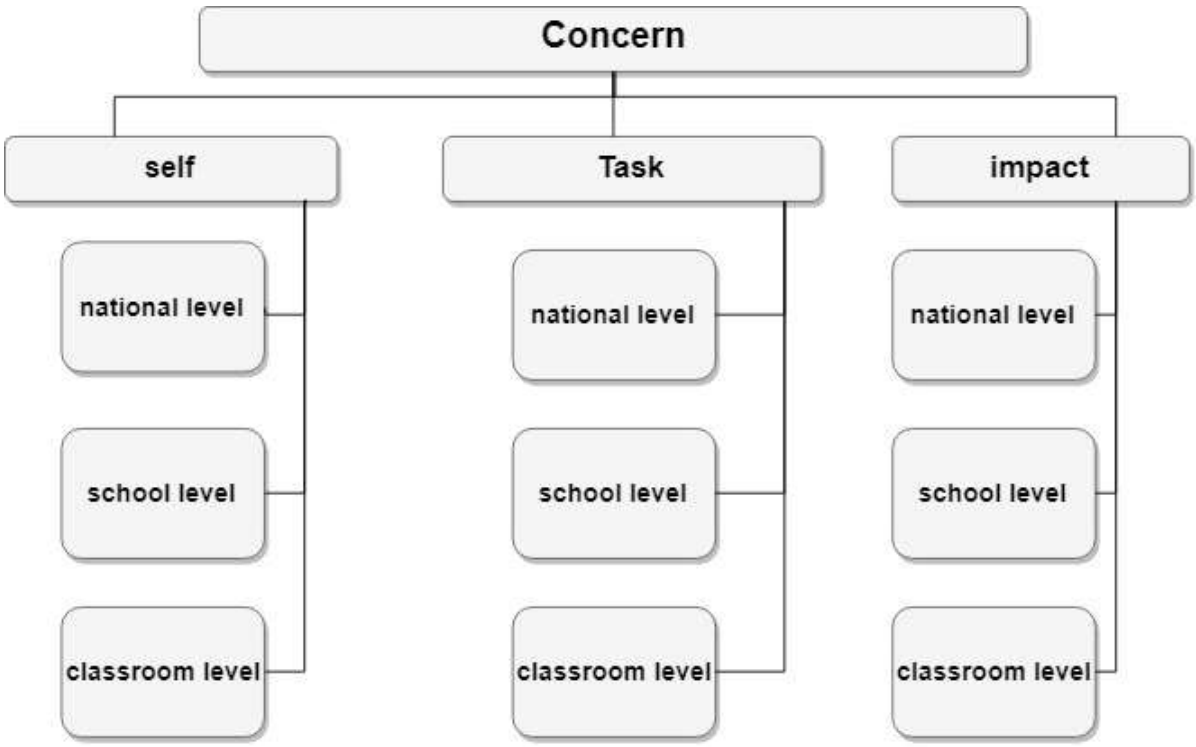


Figure 6-2: Themes and codes

However, some codes fitted with more than one category and theme. For example, “exam pressure” was coded under the theme “task concern in the school level”. This code relates also to “failure is a disaster” as a code under the theme “self-concern in the national level”. This result is not surprising as the factors from each level of culture tend to affect each other and it is difficult to isolate one single factor from the others, as explained later (see Table 6-19).

6.5.1 Self-concerns

As mentioned earlier, self-concerns are feelings coming from the person himself. ‘I’ here describes the participant when he speaks about himself. These factors were found in the national culture and the classroom culture but not the school culture. This might be because of the self-feeling of the teacher towards his daily life issues and how he deals with these issues. He saw the school as an environment of work which has many issues related to work or issues connected with relationships with the staff.

Table 6-6 Codes and quotations of self-concern related to classroom culture

Code	Sub-code	Participants	Quotation
Satisfaction	Dissatisfaction	SC1A-SA, SC2A-ALI	*"Teacher who does not use technology is usually bored or nearly retired because of the curriculum based on using technology." (SC1A-SA:57)*
	salary, occupation, achievement	SC2A-Ali, SC3A-GZSC1E-NF, SC3E-NW	*"The teacher's job is good, but I have seen many colleagues who have become bored because of lack of appreciation… lack of authority and financial rights. Many of their powers have been withdrawn." (SC3E-NW: 6)*
Classroom Management		SC3E-NW	*"The teacher has not been given power. I do not mean punishment, but I mean the subject marks and the pass and failure. To give the subject its prestige so students do not underestimate it." (SC3E-NW:7-8)*
	Fear of failure	SC1A-SA, SC1E-NF	*"I don't like to teach students the easiest subject where the student doesn't pay attention to the teacher because the student can expect his result in advance. The failure is very seldom in this subject." (A-SA:6)*
Attitudes	All participants have a positive attitude towards ICT	SC2A-NS, SC3A-SB	*"It is very helpful and useful for students. If the lesson used pictures in PowerPoint, this will draw students' attention more." (SC2A-NS: 21)* *"I don't deny the positives of technology. I know that it saves time and effort." (SC3A-SB:22)*
Responsibility		SC2A-Ali	*"The teacher is chosen to teach students; he has to shoulder his responsibility, no one has the right to intervene in what teaching methods he follows, if there isn't a big issue." (A-ALI, 45)*
Self-motivation	No desire to use ICT	SC2A-NS, SC1A-SA, SC3A-SB, 1 A Supervisor, E Supervisor	*"Some teachers know how to use ICT, but they don't want to use it because they consider using it as an extra burden to their work." (A-SA:37-38)* *"I don't deny the positives of technology. I know that it saves time and effort. In my subject, only three lessons of the unit (the final three weeks) need traditional teaching, the rest are listening, comprehension reading, and writing, in all this technology is useful…I don't have any problem with traditional teaching. The students' knowledge results are good. The supervisors visited me. No one asked me to change, so why should I change?" (SC3A-SB22-23)*

6.5.1.1 Classroom

The classroom environment contains what the teacher is concerned about when he uses ICT and how he thinks about ICT. The self-concern in the classroom culture highlights what the teacher feels towards the classroom environment, such as how the teacher feels towards his job, towards using ICT in teaching, how he sees his role in the classroom, and how he deals with his students. The five sub-themes of self-concerns in the classroom culture were: attitudes and views, satisfaction, responsibility, managing student behaviour, and self-motivation. These codes were found from the interview with teachers. The above table summarises the sub-themes (self-concerns in the classroom); the first column shows the codes, the second column shows the sub-code and the third column shows the participant who reported this concern. The last column shows an example from the data and how it fits to the codes.

The next table (Table 6-7) shows the codes of the self-concerns in the classroom. The symbol (☑) means that teachers reported the code regardless of how many times it was reported. The sum column shows the number of teachers who reported each code. More information is provided in Appendix Three.

Table 6-7: Number of participant-reported codes of self-concern in the classroom.

Self-concern 1-Classroom	Teachers participants											SUM
	E-pil	SC3 ENW	SC3 ASB	SC3 AGZ	SC2 ENI	SC2 ANS	SC2 Ali	SC1 AOM	SC1 ASA	SC1 EBN	SC1 ENF	
Classroom management	☑	☑	☑			☑		☑	☑		☑	7
T. satisfied		☑		☑			☑		☑		☑	5
Self- motivation			☑			☑			☑		☑	4
View & attitude	☑	☑	☑	☑	☑	☑			☑	☑	☑	9
T. responsibility				☑			☑	☑	☑			4

6.5.1.1.1 Participants' views and attitudes towards using ICT

Nine participants out of eleven from the three schools agreed on the benefits of using ICT in teaching, and the two participants (SC1A-OM, SC2A-Ali) who did not report their view usually use ICT. Participants reported many advantages of using ICT. For example, it reduces teaching time, hides some teachers' shortcomings, helps students to be active, is more interesting for students, and lets students listen to native English speakers.

Arabic teacher *SC1*A-SA stated:

> *"using ICT saves lesson time because writing on the whiteboard lasts 7-8 minutes, while now it is just seconds, because the students (sometimes) prepare the software before the teacher arrived in the classroom" (62).*

Furthermore, English teacher *SC1*E-BN, when integrating ICT with English, reported:

> *"I create a new channel on YouTube. I put some video lessons on with the text and exercises, so the student is able to read the lesson and watch it for several minutes during the play time" (71).*

Students seemed to be interested in studying from their teacher's channel on YouTube because they were studying during their play time. Teacher SC1E-BN was happy with his students' action. Thus, his view towards using ICT was positive.

Nevertheless, the teachers who were found not to use ICT also had a positive attitude towards its benefits. Arabic teacher (SC2A-NS), who did not use ICT for teaching, stated: *"It is very helpful and useful for students. If the lesson uses these pictures in PowerPoint, this will draw students' attention more"* (SC2A-NS: 21). I consider this quotation as a 'Teacher's view' under the Self-concern, rather than the code 'ICT support' under the Task-concern because the teacher who reported that (SC2A-NS) does not use ICT, therefore, his report was considered as a view.

Another Arabic teacher, who also does not use ICT, informed me that:

> *"I don't deny the positives of technology. I know that it saves time and effort. In my subject, (most lessons) are listening, reading comprehension and writing; in all these areas using technology is useful" (SC3A-SB: 22).*

The third participant who did not use ICT, English teacher (SC1E-NF), explained:

> *"I know when I use e-book it would be easy for me, that I would click the mouse and the answer would appear, then I would ask students to write it down. But this does not help me because the level of the students is very poor" (12).*

He agreed on the benefit of using ICT in his teaching, but he had other concerns about the use of technology in helping students to succeed.

In order to answer the third research question "What are the intermediate school students' and language teachers' views about using ICT in teaching and learning?", it can be said that teachers have slightly different views towards the

benefits because of the differences between the two subjects (Arabic and English). Therefore, the participants' views were divided into two sections for each topic.

6.5.1.1.2 Participants' views of using ICT in English

Although all participants had a positive attitude towards the benefits of using ICT in teaching, not all teachers were found to apply ICT, due to other concerns. Therefore, a positive attitude was not enough to push these teachers to use ICT, notwithstanding that it would help their students learn new English vocabulary: "by listening to native speaker from the film, this helps students to know many accents in language which helps to understand the real language" (E-PIL:15). Another English teacher from a different school described his view towards the benefit of using technology in teaching English:

> *"When I use films, the interaction between students become excellent... Most new computer applications are in English. Students' contact with the technology, for example, I don't have to explain the meaning of "follow, post, sign up" because the majority know them and use them already. So, I feel the technology has helped me to explain many terms." (SC3E-NW:35)*

Both teachers and students in School 3 benefitted from using computer applications. Students were familiar with new terms because they used them in their daily life. The English teacher also did not need to explain certain vocabulary because the language of the devices and applications is English. Therefore, the need for using technology and applications encourages students to use new English terms; consequently, this helps them to know more words.

During the observation of an English lesson, the teacher asked a student with very good proficiency about some vocabulary that no students could guess the meaning: I wrote in the observation note which is "How can this student get this

high level of English?" (Obs-SC2E). I interviewed this student in the focus group and asked them:

> *Interviewer: How long have you studied English at home?*
>
> *YZ: I do not study much at home, but I know many words through the subtitles on films in some TV channels.*
>
> *Abdul: I watch English series to improve my language.*
>
> *Msh: I watch animated movies a lot, and because they are in Japanese, I read the subtitles in Arabic. This helps me a lot in Arabic reading. (SC2: St:87-90)*

According to these students, they improve their English by watching English films. Films help the student (Msh) to improve both his English and his Arabic. The Student listens to conversations in English and, at the same time, he can read the subtitle in Arabic. Technology helps him in learn two skills from different languages 'Arabic and English'. While he is reading in Arabic, he gains reading skills and Arabic spelling, and at the same time he is listening to English and watching the action in the film.

6.5.1.1.3 Participants' views of using ICT in Arabic

Arabic lessons are supported by presentations designed by Microsoft PowerPoint. The Arabic teacher SC2A-NS, who had concerns about using technology, said:

> *"Technology is useful and helps students. For example, when the teacher uses PowerPoint with pictures, it draws more attention of the students. But I see it distracts (the attention of) some students because the teacher will be busy near the computer, he could not see students in front of the class, especially when it is required to reduce the light. But it helps them (students) to understand. "(21)*

Although his attitude towards technology was very positive, he did not use it, for two reasons. First, because the teacher may lose control of the students and

second, because he feels it might distract students' attention. Because using technology necessitates the teacher to be near the computer, students will talk with each other and distract others instead of paying attention to what is presented on the board. However, all language teachers liked technology and some of them (SC2A-Ali, E-NA) depended on it to teach their students.

In contrast, student participants had other views towards studying Arabic using technology. They had concerns about studying using ICT in the classroom.

> Researcher: *Which do you prefer, Arabic teacher using technology or without technology?*
>
> MS: *I prefer both, that information arrives faster (by technology), but we don't rely on it because probably it crashed.*
>
> MQ: *The best is the blackboard (traditional) because many times technology crashes, then it wastes time.*
>
> SHA: *Teacher explanation is better, because many of the answers on the software are wrong and it needs to be corrected.*
>
> (SC2-ST:11-15)

These students gave two reasons for not always enjoying studying with technology. First, they mentioned technical issues and a waste of class time and second, the fact that the quality of presentations was often poor.

6.5.1.1.4 Satisfaction

The second code of the self-concern in the classroom level is "satisfaction" which describes the concern of some participants towards the teacher's job and how this feeling affects their using ICT. The curriculum has changed so that it is more amenable to the use of ICT and it requires teachers to use technology. According to SC1A-SA, some older teachers, especially those nearing retirement, resist this change, probably because it requires more effort of them; he stated: "*the teacher who does not use technology is usually bored or nearly retired because of the curriculum is based on using technology."* (SC1A-SA:57)

Although satisfaction is important in encouraging teachers to do well and use ICT, Arabic teacher (SC2A-ALI) was taking early retirement at the end of the year because he did not like the rapid changes in the curriculum and the education system. However, he was satisfied with his salary and his communication with students. He used presentations for every lesson. He was just dissatisfied with the changes in education and he criticized the MOE for the Arabic materials. Therefore, satisfaction is very important for teacher commitment, but this does not mean that teachers do not use ICT because this depends on the kind of ICT use, as discussed later in section 6.6.1 p.228.

Participants' concerns were also based on the feeling that some of their powers were being withdrawn, leading to a lack of appreciation and a lack of authority. Teachers look for appreciation because they feel that they are doing an important job and that their efforts should be respected by others. Teachers also suffer from the lack of authority over their students' behaviour. For example, SC3E-NW reported the following view on behalf his colleagues:

> *"The teacher's job is good, but I have seen many colleagues who have become bored because of lack of appreciation, lack of authority and financial rights. Many of their powers have been withdrawn." (SC3E-NW: 6)*

SC3E-NW was satisfied with his occupation, but some of his colleagues were becoming dissatisfied because they wanted more authority in the classroom. This withdraw the teacher's power on the classroom seems to be the reason that made some teachers bored and dissatisfied.

6.5.1.1.5 Classroom management

While some teachers thought their power over students was being reduced, they sought the power of their subjects (Arabic and English), but this had also

been reduced. Students needed to gain 50% of the total marks to pass Arabic language, but they needed only 28% to pass English. Therefore, English teacher SC3E-NW thought that, while he did not need punishment to control his students' behaviour, the education system had also withdrawn the power of passing or failing examinations that makes students work hard. He thought some students did not care about the subject if they believed it was easy to pass. This is why some teachers (SC1A-SA, SC1E-NF) used the fear of failure as a tool of control students' behaviour. When students were unsure of passing the subject, they might work harder and be more careful about homework and tests. Arabic teacher SC1A-SA stated:

> *"I don't like to teach students the easiest subject so that the student doesn't pay attention to the teacher because the student can expect his result in advance. The failure is very seldom in this subject." (SC1A-SA:6)*

Thus, the fear of failure was used to make students more active and more serious towards difficult subjects. This teacher preferred to teach the difficult subjects rather than the easy ones because the former gave the teacher more power to control students' behaviour.

The control of student behaviour was the big concern of some teachers (SC2A-NS, SC1E-NF) who did not use ICT in their teaching. Arabic teacher (SC2A-NS) stated:

> *"the most important thing is the control of students, so they follow me (the lesson) and the use of ICT makes the class noisy. For this point, I do not like to use technology." (65-70).*

He was very concerned about losing his power over students' behaviour; in order to keep that power, he decided not to use ICT. Another English teacher (SC1E-NF) was also concerned when using ICT and group work:

> *"I try to control the groups by deduction of students' marks…but the confusion and noise in cooperative learning are disadvantages…(so) I use the traditional method because this is the only method where I can control students' behaviour. I walk between students, I see every student, I push them to pay attention and follow the lesson in their textbooks." (SC1E-NF:29)*

This teacher also did not use ICT or group work because he thought using ICT might affect his control of the classroom. While the teacher was standing beside the computer, some students would talk and distract the others, especially when the classroom light level was reduced. Consequently, the teacher was concerned about losing control; this was the reason that encouraged SC1E-NF and SC2A-NS to use traditional teaching instead of ICT.

Using technology requires the teacher to stand near the computer to change slides. If a classroom is bright, the light needs to be reduced when using a projector or curtains are needed on the windows. Therefore, when the classroom is dark, students will chat with each other, thereby creating noise and diverting the attention of others. As a result, this teacher decided not to use technology in his teaching.

In addition, the evidence of the effects of this factor are found in the observation that only one teacher (Sc1A-Om) out of the eight teachers who agreed to be observed had difficulties in classroom management. He was very serious in his class with his students, because he was sitting near the computer. However, he denied that the computer had any effect on his classroom management. I wrote in the field note that "the teacher seems to be nervous during this observation, probably because this is the second observation. He deals with me as a supervisor. At the end of class (45 minutes), he asked me if I would to comments on his class and if I have more comments on his teaching" (Obs-SC1A-Om2).

6.5.1.1.6 Responsibility

The teacher has a role and responsibility in the classroom; part of this is to choose the teaching method that suits the students. Some teachers need advice from supervisors to find a new teaching method that is more helpful to students. However, some teachers, such as SC2A-ALI, thought that, while teachers should use suitable teaching methods to achieve their goals, some supervisors were asking them to use a new method without a plausible reason, such as using groups and e-learning just because the supervisor was convinced of that new method. He reported:

> *"The teacher is chosen to teach students; he has to shoulder his responsibility, no one has the right to intervene in what teaching methods he should follow, if there isn't a big issue" (A-ALI, 45).*

Therefore, using ICT should be the teacher's decision; if he believes that using ICT is helping his students, he should use it.

6.5.1.1.7 Self-motivation

Teachers need motivation to work hard. If there is an optional task, the teacher's motivation will play the main role in taking it on, so that demotivated teachers will do the minimum. According to Arabic teacher SC1A-SA, the reason that some teachers do not use ICT is because the policy does not require them to do so. Those teachers, therefore, do not have any desire to use ICT in their teaching although they have knowledge of how to use it; he stated: "some teachers know how to use ICT, but they don't want to use it because they consider using it as an extra burden to their work" (A-SA:37-38).

Another factor that might affect teacher motivation is that, when the teacher is convinced of the method he has used for a long time, he might not think it is

necessary to change because the students' results are good. Arabic teacher SC3A-SB, who has a good reputation in the whole region, admitted the importance of using ICT and that the curriculum encouraged them to use ICT; however, he did not see these as adequate reasons for him to use it and stated:

> *"I don't deny the positives of technology. I know that it saves time and effort. In my subject, only three lessons in the unit (it lasts three weeks) need traditional teaching, the rest are listening, reading comprehension, and writing; in all these, technology is useful…I don't have any problem with traditional teaching. The students' results are good. The supervisors visited me. No one asked me to change, so why should I change?" (SC3A-SB22-23).*

It is clear that this teacher did not desire to use ICT because his self-motivation was low. This might be a result of his assessment that the benefit of using ICT is seen in the examination results, but he ignored other benefits of ICT for students (which will be discussed later in 6.6.1).

6.5.1.2 Self-concern, national culture

The second sub-theme, self-concern, is derived from the national culture which relates to how the teacher's background beliefs affects his feelings towards using ICT. These feelings, also called beliefs (Hew & Brush, 2007), are affected by the environment outside the school, such as home, family and the educational system. As mentioned in the Literature Review, national cultural factors are widely spread and difficult to pinpoint. In order to summarise the national factors in this data analysis, the characteristics of Hofstede's model are used to get a clearer picture. In addition, some of the strong educational system factors are considered.

The codes related to this sub-theme are: "ICT takes the teacher's role", "the teacher is supposed to have all the answers", "respect for high status", and "failure is a disaster". These codes are borrowed from the characteristics of

Hofstede's model. For instance, the first two codes, "ICT takes the teacher's role" and "the teacher is supposed to have all the answers", are considered as characteristics of "uncertainty" which usually suggests concerns about the future. The third code is "respect for high status", which is a characteristic of a culture with a "high power distance". Finally, the code "failure is a disaster" is a characteristic of a masculine culture. The next table shows the codes of the self-concern in the national level and which teachers have national concerns.

Table 6-8:Codes of self-concern in the national culture level.

Self-concern 1-Classroom	**Teachers participants**											**SUM**
	E-pil	SC3 ENW	SC3 ASB	SC3 AGZ	SC2 ENI	SC2 ANS	SC2 Ali	SC1 AOM	SC1 ASA	SC1 EBN	SC1 ENF	
ICT takes teachers' roles (Uncertainty)						☑		☑				2
T is supposed to have all answers							☑					1
Respect high status				☑			☑		☑		☑	4
Failure is disaster		☑									☑	2

The national codes' names are borrowed from the Hofstede's value of culture; therefore, some codes could fall under other themes as mentioned earlier in (Section 6.4).

The next table shows the codes of self-concerns in the national level. It also presents examples from the data and the participants who have these concerns.

Table 6-9: Codes and quotations of self-concerns in the national culture

Code	Participants	Quotation
ICT takes teacher's role (uncertainty)	SC2A-NS, SC1A-OM SC1-Leader	"*When I use the computer, I feel I don't have any role in teaching students because the computer does that."* (SC2A-NS:81)
Teacher is supposed to have all the answers (uncertainty)	SC2A-Ali	A-ALI: ... *"The answer (of exercises) must be typical (in Arabic e-book) because the students try several times and then compare their answers to the software."* Researcher: "*Is there a typical answer in the teacher's book?"* A-ALI: *"Where's the teacher's book? now it does not exist!"* (A-ALI: 21-24)
Respect for high status (High power distance)	SC1E-NF	"*Teacher as a father; the relationship between teacher and student should be strong and based on respect, but I was shocked after seeing the reality..* I use the traditional method because this is the only method where I can control students' behaviour*." (E-NF:4)*
Failure is a disaster (Masculine)	SC1E-NF, SC3E-NW	*"The teacher has not been given power. I do not mean punishment, but I mean the subject marks and the pass and failure. To give the subject its prestige so students do not underestimate it."* (E-NW:7-8)

6.5.1.2.1 ICT takes the teacher's role, uncertainty avoidance

Two Arabic teachers (SC2A-NS, SC1A-OM) and SC1-Leader mentioned the concern that computers would take over the teacher's role in the classroom. The only teacher who stated this concern explicitly was SC2A-NS. He felt that students could understand the lessons from the Arabic software and his role would be less important than the computer's. This self-feeling is a value coming from the "uncertainty avoidance" aspect of the national culture. He stated: "When I use the computer, I feel I don't have any role in teaching students because the computer does that." (SC2A-NS:81)

6.5.1.2.2 The teacher is supposed to have all the answers

Believing the teacher should have all the answers is a value of an uncertainty culture. It puts pressure on the teacher's feeling that he should know all the answers because society expects this. Arabic teacher SC2A-Ali, who usually use ICT in his classroom, complained that the answers of the textbook exercises needed research outside the curriculum. He thought the MOE should provide typical answers to these exercises in the Arabic e-book. He felt it was difficult to say "I don't know" because, in the uncertainty avoidance dimension of culture, the teacher is the expert and has all the answers. SC2A-Ali reported his concern towards the quality of the Arabic e-book:

> *A-ALI: ...the answer (of exercises) must be typical (in Arabic e-book) because the students try several times and then compare their answers to the software (on the presentation).*
>
> *Researcher: Is there a typical answer in the teacher's book?*
>
> *A-ALI: Where's the teacher's book? Now it does not exist! (SC2A-Ali: 21-24)*

He was worried that he might give the wrong answer to an exercise because it did not come from the MOE. He did not like to make mistakes in front of students or say he did not know the typical answer.

6.5.1.2.3 Respect for high status

Respect for high status is a value of a high-power distance culture on Hofstede's model (see section 4.3.2.1 National dimension). Some teachers see themselves as having a high status that students should respect. Students should see their teachers as fathers. When students do not have high respect for their teachers, this is a concern for the teachers, which affects their relationship with students. Because Saudi Arabia is a high-power distance

society, respect should be given to high status individuals. An English teacher described his concern as:

> *"the teacher is a father; the relationship between teacher and student should be strong and based on respect, but I was shocked after seeing the reality….* I use the traditional method because this is the only method where I can control students' behaviour*" (SC1E-NF:4- 29).*

He was unhappy with the relationship with some students because he felt they were disrespectful. His perspective was that students should respect the teacher as they respect their father but, when he saw the situation inside the school, he did not find this level of respect. The teacher used traditional teaching methods instead using ICT because he thought traditional methods were the only effective method to control students' behaviour and gain students' respect.

The difficulty with this concern is how to measure respect. The teacher could describe how students should respect their teacher; for example, this teacher thought that when students talked to their classmates in the class it was a kind of misbehaviour and was disrespectful. But it could simply be that a student might be asking his friend about the lesson, illustrating that this factor is difficult to measure.

6.5.1.2.4 Failure is a disaster

In every national culture failure is unlikely but, according to Hofstede's model, in a masculine society failure is seen as a disaster. Some teachers (SC1E-NF, SC3E-NW) made use of this fear of failure to control their students. The students considered English to be one of the difficult subjects, so the English teachers (SC1E-NF, SC3E-NW) pushed their students to avoid failure in the examination in order to control their behaviour. When the MOE lowered the

pass mark, English teacher SC3E-NW saw this as a reduction in the subject's prestige. Where students previously needed to work hard to pass the examination, with the reduced pass mark, they expected to pass and no longer feared failure. In the next table, the codes are shown and the participants who were concerned with these codes. An example from the data for every code is reported.

6.5.1.3 Summary of self-concerns

Self-concerns relate to the feelings of the teacher that affect his use of ICT. Self-concerns were found at two levels: the classroom and the national culture. Self-concerns at the classroom level were found to directly affect the use of ICT in relation to their classroom practice, such as in managing students' behaviour which was found to prevent some teachers (SC1E-NF, SC2A-NS) from using ICT. Another factor of self-concerns affecting the use of ICT is self-motivation as the teacher needs to be completely convinced to use ICT (SC3A-SB for example). Therefore, the factors at this level were influential in causing non-use of ICT as shown in Figure 7.4.

Another level of self-concern is the national level. While the value of the national culture is implicit, these factors were found to have indirect effects on using ICT. For example, "failure is a disaster" affected English teacher SC1E-NF's power over his students. He made use of failure pressure as he thought this was the only way to encourage students to work hard and respect him.

The school level was not found in the self-concerns, probably because all the factors of self-concerns came from the individual (the teacher himself) while concerns about the school were considered more related to the task-concerns, as shown in Appendix three.

6.5.2 Labour and task concerns

The second theme that emerged from the data is the concern towards the task and the labour. These concerns related to the work environment, the system of education and school, and the ICT objectives. Task concerns were found in the three cultural levels: the national level, the school level and the classroom level. This concern would describe every participant's concern towards 'It'. 'It' here

relates to the school system, MOE policy, the job task and the ICT tools. The pronoun 'It', in the task concern, seems to point to every non-human reason.

6.5.2.1 National level

Teachers' concerns regarding labour and the ICT tools were related to the national culture level. The codes of this sub-theme are: the aims of study, subject culture, decentralized power, optional use of ICT, and the structure of the education system. These factors indirectly affect using ICT and most of them are coded using the names of the national culture values of Hofstede's model, as described earlier in Section 4.3.2.1.

Table 6-10: Codes of task concern in national level

Task concern	**Teachers participants**											**SUM**
1-national level	E-pil	SC3 ENW	SC3 ASB	SC3 AGZ	SC2 ENI	SC2 ANS	SC2 Ali	SC1 AOM	SC1 ASA	SC1 EBN	SC1 ENF	
Highly structured education								☑				1
The aim of education is to pass exam (Exam pressure)		☑		☑					☑	☑	☑	5
Optional using (power distance)					☑	☑			☑			3

Table 6-10 above describes the codes of task concerns at the national level. It also identifies the participants who reported these codes.

6.5.2.1.1 Optional use of ICT

When teachers expect to be told what to do, they look for the policy that directs them. Because of the lack of a policy regarding ICT use in the three school,

some teachers considered its use as extra and optional. One Arabic teacher stated: *"I don't use ICT because the MOE doesn't demand it"* (SC2A-NS: 57). If the teacher opted to use ICT, he still could not ask students to use it at home (e.g. email). According to the LRC specialist, *"It is difficult to apply new projects (e.g. e-learning) when they are not made obligatory by the MOE policy. How do you ask students to use email if it is optional?"* (Pil-LRC: 153).

However, in the Arabic textbook, there were some exercises about listening and searching on the internet, so to answer these questions, the teacher would have to listen to the text on a computer or recorder.

6.5.2.1.2 Highly structured education system

The Saudi education system is highly structured, as mentioned earlier in Chapter Two. Teachers are required to use the whole textbook and some teachers use extra exercises and tools to help students' thinking processes. For example, Arabic teacher SC1A-OM stated:

> *"I would shift the student's focus away from the textbook, because this student is in an intermediate level not a primary level (meaning a higher level). I want him to be aware of his stage, so usually I print exercises (from outside the textbook) to do as groups" (SC1A-OM: 65).*

This is because using just the textbook does not help students to be independent learners who can research information themselves.

Another issue of the education system is that the Saudi MOE had been trying to develop the school curriculum and many changes had been imposed to the Arabic and English curricula over the previous five years. For example, Arabic which was previously made of five separate subjects (Grammar, Reading, Literature, Writing, Composition) was changed into one subject named "My language". Such developments are still happening every year. The English

course materials were developed by an international educational company (MM Publications) commissioned by the Saudi MOE. They developed English textbooks, so other educational companies were very careful about creating any subject software because it might change the following year. An LRC specialist pointed to this concern, saying that teachers were affected because they could not find any professional material for their subject. For example, there were no proper Arabic language software, so teachers had to create their own electronic material which tended to be low quality. The LRC specialist stated:

> *"there is a defect from the MOE, it does not set a long-term plan for the curriculum. Because when the curriculum was stable, educational companies competed to issue the best materials, but now the companies have stopped because they do not know when the curriculum will change, so they might lose" (Pil-LRC: 17).*

Therefore, this concern affected using ICT and was found at the national level.

6.5.2.1.3 The purpose of education

The purpose of education in the three cases is how to do (pass the examination) rather than how to learn for one's whole life. This purpose is considered a value of collectivist cultures (see Section 4.3.2.1). If the belief is that the purpose of learning is only to pass examinations, this might affect the whole educational process as Hofstede's model report. The MOE had changed the curricula (Arabic and English) to reflect new aims, from "how to pass the examination" to "how to learn". Unfortunately, many teachers were still teaching students in order to pass the examination. This factor was found to affect teachers' motivation to work hard and create new strategies such as using ICT.

According to the Arabic supervisor:

> *"the old Arabic curriculum followed the behaviourist school; some teachers thought the goal of learning was to pass exams, but this is not true. If*

> *teachers believe that they teach students not only to pass exams, they should teach them for creativity, dialogue and confidence, so students will use what they learnt in their lives. In this point, the teacher will know the importance of the use of ICT" (A-Sup: 12).*

Therefore, the new Arabic curriculum aims at active learning.

Both teachers and students are affected by the perceived aims of education. When students believe they are learning in order to pass the examination, once they achieve the pass mark, they stop learning. Teachers do not bother to use sources other than the textbook. One English teacher reported: *"A student said to his colleague - why are you studying when you already knew you would pass the exam?"* (SC3E-NW: 10). This view makes students' motivation very low. One teacher blamed the MOE's reduction of the pass mark in English, so some students did not care to learn when they had achieved the minimum pass mark.

In sum, the sub-theme of task concerns in the national level relates to the structured nature of the Saudi education system and policy. The following table illustrates this sub-theme in relation to Hofstede's values of culture dimensions.

Table 6-11: Codes and quotation of task-concern in national level

Code	Sub-code	Participants	Quotes
The purpose of education (how to do) collectivist culture	*Aim of study to pass exam*	A-Sup, E-NW	*"The old Arabic curriculum followed the behaviourist school; they thought the goal of learning is to pass exams."* (A-Sup:12) *"A student said to his colleague: why are you studying when you already knew you would pass the exam?"* (E-NW:10)
	Subject culture Pass mark	E-NW, A-SA	*"Ministry policy says that the pass mark in (Maths, Science, and English) is only 28 out of 100. The students just work hard for the first term, until he gets the pass mark. He will then not care about the subject - this is the situation of some students only."* (E-NW)
Optional use of ICT (Large power distance)		PIL-LRC	*"It is difficult to apply new projects (e.g. e-learning) when they are not made obligatory by the MOE policy. How do you ask students to use email if it is optional?"* (Pil-LRC:153)
	Use of ICT is not obligatory MOE	SC2A-NS, A-SUP	*"I don't use ICT because the MOE doesn't demand it."* (SC2A-NS: 57)
Highly Structured education (strong uncertainty avoidance)	*(overreliance on textbooks)*	SC1A-OM	*"I would shift the student' focus away from the textbook, because this student is in an intermediate level, not a primary level (meaning a higher level). I want him to be aware of his stage, so usually I print exercises to do it as groups."* (SC1A-OM-65)
	Change the curriculum	Pil-LRC	*"…there is a defect from MOE; it does not set a long-term plan for curriculum. Because when the curriculum was stable, educational companies competed to issue the best materials, but now the companies stopped because they do not know when the curriculum will change so they might lose."* (Pil-LRC 17)

6.5.2.2 Task concern at School level

The second sub-theme of the labour and task concerns is the concern at the school level. School is the environment of teachers' labour. The participating teachers had many concerns in their schools. These concerns relate to the nature of the system in the school. From the collected data, three codes were used to describe the sub-theme "labour and task concerns" at the school level: professional development, ICT support, and resources. Table 6-12 shows how the participants reported these concerns and also illustrates that the "professional development" code was the most significant concern. Only two teachers out of eleven did not mention this concern. This code is expected to have a great effect on teachers because these concerns come from their daily work in the school system and the tools of ICT.

Table 6-12: Codes of task-concern in school level

Task concern 2-School level	**Teachers participants**											**SUM**
	E-pil	SC3 ENW	SC3 ASB	SC3 AGZ	SC2 ENI	SC2 ANS	SC2 Ali	SC1 AOM	SC1 ASA	SC1 EBN	SC1 ENF	
Professional development	4	2	2	3		3	4	3	6	3		30
Exam pressure				1					1		1	3
ICT support				1			1		2	1		5
resources	3			1			2		2	1		9

6.5.2.2.1 Professional Development

Two kinds of professional development were found in the data to give teachers task concerns. Classroom observation between teachers and training are the main strategies that schools apply to improve teachers. In the Tatweer project,

teachers are expected to visit each other in order to develop their skills. However, teachers do not usually do this. One teacher, who wanted to improve his skills and experience, was shocked when his colleague refused his visit. According to Arabic teacher SC1A-OM:110, who was the first teacher:

> *"in 'Tatweer' project, it is very important to visit the first teacher in his class. Unfortunately, this was not applied. I was embarrassed by my colleague…. when I asked him to exchange visits; he refused" (SC1A-OM:110).*

This is a common issue in the three schools, as four teachers and one leader (SC1-Leader, SC2A-ALI, SC2A-NS, SC1A-OM, SC3E-NW) pointed to this issue. They felt that they lost the benefit of this development strategy because their colleagues did not like to exchange visits.

The second kind of professional development is training. Six Arabic teachers and three English teachers reported the need for training. Many issues related to training were found, such as the time of training, the place of training, and the experience of the trainer. A comment on the training culture in the school came from Arabic teacher SC1A-OM, who felt that the school leader did not like teachers to attend training courses because it might affect the school schedule. He reported his concern towards training:

> *"Unfortunately, there are no training courses. If the Ministry says we are in the training age, see how many courses were held this year, because school leaders do not like their teachers to go out for training during the school day, because of covering their lessons. Why does not the MOE let the trainer come to school? He could train us during free time during school hours."* (SC1A-OM: 92)

He described the lack of training courses and suggested an idea to improve training by holding it inside the school and having a trainer come to school and meet teachers during their free time.

6.5.2.2.2 ICT support

The study participants reported that they had limited knowledge of dealing with technology issues. Every case school had an LRC specialist whose role was to help teachers with technology. He also provided the materials for teachers to use in their teaching. Some technology issues included the need to replace parts such as the projector lamp. The administration department usually helped the school to do this maintenance, but this sometimes took time. During the observation of the three schools, it was noticed that every school had two to three broken classroom projectors.

Teachers were satisfied with the ICT support in their schools. For example, Arabic teacher SC1A-SA reported:

> *"I don't have any difficulties in using ICT, but sometimes I face some technical issues, so I ask the LRC specialist to solve it, such as setting up programs because I'm not interested in technical issues" (SC1A-SA:115).*

I observed some difficulty with using ICT: "some students help teacher to use computer" (Obs-SC2A-Ali2). This might be a result of the lack of training which this teacher reported during the interview.

6.5.2.2.3 Resources

The English e-book was designed by an international educational company (MM Publications). It has a high-quality design and use flash player animations, games, and recorded texts. However, the Arabic e-book is not the same; the MOE designed it in a PDF format. The Arabic teachers do not like this kind of e-book because it does not have any interactivity or movement. Consequently, some Arabic teachers are voluntary uploading their own materials online so that other Arabic teachers can use them. The problem is that since these materials are individually made, they have some issues such as wrong answers, or

differences from the new textbook because they are based on the old version of the textbook.

Some Arabic teachers were very angry about the lack of resources. For example, Arabic teacher SC2Ali argued with his supervisor about providing the resources and reported:

> *"When I read the poem and the students read it, the supervisor asked me why I did not use technology to make students listen to poems. I said, where do I find it? Did you provide a CD to me?... What is the role of the Ministry and supervisors for supporting the curriculum? they should use recordings with the best voice and distribute it to all teachers!" (SC2*A-ALI:31)

That teacher probably does not know how to design his own materials and needs time to record his voice to read the poem. He thought that providing materials was one of the MOE's tasks, not the teacher's task.

During observation of Arabic classes, the main finding was the weakness of software for the Arabic curriculum. I observed also there was no access to internet from the classroom computer and some devices in the classroom needed maintenance (see Appendix eight).

6.5.2.2.4 Exam pressure

The three schools focused on the examinations and results. During the data collection, three teachers declined the classroom observation because of the imminence of the mid-term examination. During observations (Obs-SC1A-OM1-2), the Arabic teachers twice reminded students of the importance of the information for the mid-term examination. Also, during one observation (obs-SC2A-ALI), the Arabic teacher reminded students about the examination. This shows the concern of teachers about examination pressure.

Examination pressure also affected English teacher SC1E-NF, who reported that the English curriculum was difficult for the level of his students. He used the English software because he thought his students needed to revise basic grammar before the examination, so he was teaching them important information to pass the examination; he stated:

> *"I knew that using electronic material (English software) is easier for me, just click on the mouse then ask students to write it down, but the problem is that we have exams…and how they will pass the exam if the students do not understand the correct answer" SC1E-NF:12*

During the classroom observation, I found that exam pressure had some impacts on teachers inside the classroom, such as (Obs-Sc1A-Om) who repeated the exam twice in one class. In the second school (Obs-Sc2A-Ali1), he used exam pressure as an approach to start the class (see Appendix eight). The first five minutes was explaining what the exam would be like! So, the exam pressure is used as an approach to encourage students to be more motivated.

In conclusion, the sub-theme (Labour and task concern - School level) relates to many issues that affect teachers' use of ICT. Professional development, ICT support, resources, and the exam pressure. these aspects were found to be the main concerns about the task at the school cultural level. The two kinds of professional development (classroom observation and training) were the main factors affecting all the current study participants. The Arabic teachers in the three case schools also suffered from the poor e-resources of the Arabic curriculum.

Table 6-13: Codes and quotation of task-concern in school level

Code	Sub-code	Participants	Quotation
Professional development	classroom observation	SC1-LEADER, SC2A-ALI, SC2A-NS, SC1A-OM, SC3E-NW	*"In 'Tatweer' project, it is very important to visit the first teacher in his class. Unfortunately, this was not applied. I was embarrassed by my colleague…. when I asked him to exchange visits; he refused that."* (SC1A-OM:110)
	Lack of training	SC2A-Ali, SC3A-GZ, SC2A-NA, SC1A-OM, SC1A-SA, SC3A-SB, E-SUP, SC1E-BN, SC3E-NW, E-PIL	*"Unfortunately, there are no training courses. If the Ministry says we are in training age, see how many courses were held this year, because school leaders do not like their teachers to go out for training during the school day, because of covering their lessons. Why does not the MOE let the trainer come to school? He could train us during free time during school hours."* (SC1A-OM: 92)
ICT support		SC1A-SA, SC1-Led	*"I don't have any difficulties in use ICT, but sometimes I face some technical issues. I asked LRC specialist to solve it, such as 'setup program'. I'm not interested with the technical issues".* (SC1A-SA:115)
Resources	A lack of official material (Arabic)	SC1A-SA, SC2A-ALI, A-SUP	*"When I read the poem and the students read it, the supervisor asked me why I did not use technology to make students listen to poems. I said, where do I find it? Did you provide a CD to me?... Where are the roles of the ministry and supervisors for supporting the curriculum, by recording the best voice and distributing it to all teachers?"* (SC2A-ALI:31)
Exam pressure		SC1A-SA, SC3A-GZ, SC1E-NF	"*I knew that using electronic material is easier for me, just click on mouse then I ask students to write it down, but the problem is we have exam…and how they will pass exam if the students did not understand the correct answer*" SC1E-NF:12

6.5.2.3 Task concern at Classroom level

The third sub-themes in the labour and task concerns is at the classroom level. Teachers reported many concerns at this cultural level because in this environment, the teachers deal with ICT tools, materials and curriculum at the same time as dealing with students. These multiple tasks caused many concerns. The sub-theme “Labour and task concern at the classroom level” has five related codes: “pedagogical task”, “curriculum”, “change in teacher’s role”, “time and effort”, and “preparing the classroom environment”, as shown in Table 6-14.

Table 6-14:Codes of labour and task concern- classroom level.

Task concern 3-Classroom level	**Teachers participants**											**SUM**
	E-pil	SC3 ENW	SC3 ASB	SC3 AGZ	SC2 ENI	SC2 ANS	SC2 Ali	SC1 AOM	SC1 ASA	SC1 EBN	SC1 ENF	
Pedagogical factors		3			1		3	1	2			10
curriculum		1	4	5		1	3	1	3			18
Time and effort		1		2		1	1		7	3		15
Prepare class							2					2
												45

6.5.2.3.1 Pedagogical task

The preparation of the lessons is one of the teacher’s tasks. Preparation involves designing or providing materials, but some teachers thought that providing material was similar to providing textbooks, which is the MOE’s role. One Arabic teacher agreed that one pedagogical task was looking for the method and material for his lesson:

> *“The Ministry gave us the curriculum and some material (e-books as PDF files). What else does the teacher want? Searching for teaching methods*

is the task of the teacher, not the Ministry. ... When I found a suitable CD for the Arabic language course, I bought it for my class." (SC1A-SA: 88)

He did not wait for any methods or materials from the MOE, because he thought that this was his task, so he bought extra materials which were suitable for his students.

Another pedagogical task was based on the teacher's changing role from being the only source of information to a facilitator and developer of students' thinking. This change was not found clearly in the three schools. During the observations, only the teachers who used group work (SC1A-OM in LRC, SC2E-NI, SC3E-NW) gave students the opportunity to discuss with each other with the teacher guiding their learning, while other teachers who used ICT were still using teacher-centred methods. This might be because they used ICT as a presentation tool not as an interactive tool. For example, Arabic teacher SC3A-GZ was aware of the change in his role:

"Now 75% of the role is for the student, because he speaks and discusses. The teacher's role is organizational, encouraging and discussing students' ideas." (SC3A-GZ: 5)

During the observation of his class, students were active, but he used the traditional teacher-centred method. During the forty-five minutes, he did not put forward any idea for the students to discuss.

6.5.2.3.2 Textbook

In the structured curriculum of Saudi schools, the MOE requires teachers to use the textbook to ensure that they give students all the information for that level. However, if a teacher does not use anything outside the textbook, this might push the students to memorise the textbook without understanding it. This prompted some teachers to try to use other materials and exercises from

another source outside the textbook to encourage student creativity. Arabic teacher SC1A-OM reported:

> *"I would shift the student's focus away from the textbook because this student is at an intermediate level not a primary level (meaning a higher level). I want him to be aware of his stage, so usually, I print exercises to do it as groups." (SC1A-OM: 65)*

This focus away from the textbook makes students read the other sources and use ICT to understand more about the subject.

6.5.2.3.3 Time and effort

The Saudi education system requires teachers to teach every exercise in the textbook. In order to cover all the exercises, teachers need more than the forty-five-minute lesson time (four times a week for English, five times a week for Arabic). Four Arabic teachers (SC2A-Ali, SC3A-GZ, SC2A-NS, SC1A-SA) and two English teachers (SC1E-BN, SC3E-NW) were affected by this factor.

Teacher SC3E-NW who had a new idea to share with his students, did not have any extra time to do this, especially as he taught more than two subjects and at three different levels in the school. He reported: *"I would like to use Google documents as a joint project, but because now I am teaching three subjects, it is very difficult to do so."* (SCE-NW:97). Because of the time and effort needed for each group, he did not use Google documents with his students to share their writing.

English teacher SC1E-BN, who used email and shared resources with his students, agreed that because he taught only one level (Year 7A, B, C) he was able to use ICT and generate new ideas because the one idea would be used three times each week.

6.5.2.3.4 Preparing the classroom environment

The classroom is designed for individual learning. The number of students per class was high and the tables in all classrooms of the three schools were distributed for individual learning. When a teacher wants to use active learning and groups, he has to spend time rearranging students and tables. This situation happens every day because other teachers do not like group work. Arabic teacher SC2A-ALI explained why he used traditional teaching: "*the classroom size is not enough to use groups in teaching because there are thirty students in the class."*

The effect of the darkness in the classroom could not be inquired about before the observation. After the first observation (Obs-Sc1A-Om1), I noticed the classroom was dark. I thought, this environment is not good for learning; that to write something is difficult and there is noise at the back of the classroom by some students which might disrupt the teaching.

Table 6-9: Codes and quotations of labour and task concern- classroom level

Code	Sub-code	Participants	Quotation
Pedagogical tasks		SC1A-SA	*"The Ministry gave us the curriculum and some material (e-books). What else does the teacher want? Searching for teaching methods is the task of the teacher, not the Ministry. ... When I found a suitable CD for the Arabic language course, I bought it for my class."* (SC1A-SA: 88)
Textbooks	overreliance on textbooks	SC1A-OM	*"I would shift the student' focus away from the textbook, because this student is in an intermediate level not a primary level (meaning a higher level). I want him to be aware of his stage, so usually I print exercises to do it as groups."* (SC1A-OM:65)
Time and effort	Teaching load & preparation	SC2A-Ali, SC3A-GZ, SC2A-NS,	*"I would love to use Google documents as a joint project, but because now I am teaching six*

	SC1A-SA, SC1E-BN, SC3E-NW	*subjects, it is very difficult to do so."* (SCE-NW:97)
Preparing class environment	SC2A-Ali	"*Classroom is not enough to use groups in teaching because students' number is 30."*

6.5.2.4 Summary of task concerns

Three levels of concern towards labour and tasks were found in the data at three levels: the national, school and classroom levels. Teachers' concerns at the national level were closely related to the Saudi education system and policy and the values of Hofstede's culture dimensions were found at this level.

At the school level, most teachers had concerns towards the examination pressure, professional development, ICT support and resources. Training and classroom observation, as two types of professional development, affected most participants. Pedagogical tasks, the textbook, preparing the class environment, and time and effort significantly affected the classroom environment, as shown in Table 6-15.

Table 6-15: Sub-themes and codes of task concern

National level	**School level**	**Classroom level**
Highly structured education	Professional development	Pedagogical factors
The aim of education is to pass exam (Exam pressure)	Exam pressure	curriculum
Optional using (power distance)	ICT support	Time and effort
	Resources	Prepare class

6.5.3 Impact concerns

The third theme of the current data is the impact concern. As reported earlier, impact concerns relate to consequences, collaboration and support. the notion of impact concern is closely related to the pronoun “we” or “they” that refers to relationships with others (administrative staff, colleagues and students). These impact concerns were found in the three levels: the national, school and classroom levels.

6.5.3.1 National level

The first sub-theme (Impact concern at the national level) had factors affecting the use of ICT which are related to the Saudi culture or the education system. Only one code was found affecting the use of ICT: femininity.

6.5.3.1.1 Femininity

Femininity is an individual notion it is not the characteristic of the whole society as mentioned by Hofstede. As the Saudi educational system is segregated, I conducted my research at boys’ schools. It is forbidden for women to teach boys. This national cultural aspect was found to have some effect on using ICT. This factor limited teachers’ use of the internet and films. Some teachers did not show videos with a female presenter. For example, English teacher SC3-NW and Arabic teacher SC2A-NS were very concerned about femininity. They left out a great amount of useful materials because they were worried it might create problems with students’ parents. English teacher SC3-NW reported:

> *“I often like explanations (on YouTube) but because the teacher who is explaining is a woman, if I show it in the classroom it may cause problems with parents, so I leave it” (SC3E-NW:40).*

He decided not to use the videos that might cause some issues to the society. Students in the Focus Group SC1-Students were also asked if they accepted to

be shown a video presented by a female teacher. The students refused as in the extract below:

> *Researcher: In English lessons on YouTube, many of the lessons are explained by females. Do you accept to show that in the class?*
>
> *MoH: The students will laugh and be noisy and ….*
>
> *Ja: I accept that.*
>
> *Moh: The question is: why teachers bring these? Although there are men on YouTube who explain lessons?*
>
> *Researcher: What if you see her at home - do you accept that?*
>
> *Moh: Yes, I accept that.*

It is clear that the behaviour of this student came from the culture not from his individual opinion. He was conscious of the reaction of his classmates because they would not accept to be shown in the school videos presented by women. They saw school as a formal place which should be respected and what was banned in the culture should not be shown.

Table 6-16 :Codes and quotation of impact concern - national level

Code	Sub-code	Participants	Quotation
Femininity		E-NW, A-NS	*"I often like the explanation (on YouTube) but because the teacher who is explaining is a woman, if I show it in the classroom it may cause problems with parents. So, I leave it."* (E-NW:40)

6.5.3.2 School level

At the school level, all participants had at least one concern. There are many types of relationships in the school: between teachers, between teachers and administrative staff, and with students and parents. Every relationship has an

impact on teachers' practice in the classroom, especially on their use of ICT. The lack of encouragement, social media encouragement, students' motivation, colleague collaboration and lack of trust are the main codes of the impact concerns at the school level.

Table 6-17: Codes of impact concern - School level

impact concern 2-school level	Teachers participants											SUM
	E-pil	SC3 ENW	SC3 ASB	SC3 AGZ	SC2 ENI	SC2 ANS	SC2 Ali	SC1 AOM	SC1 ASA	SC1 EBN	SC1 ENF	
Support and encouragement	**4**	**3**		**2**		**1**	**7**	**4**	**1**	**10**	**4**	**36**
Lack of leader power	1		1	3			2	1	1	4	1	14
Lack of trust	4	2	2	1		1	6	3	2		1	22
Colleague collaboration	2		1				2			1	2	8
Students' motivation		1				1			1		1	4

6.5.3.2.1 Lack of support and encouragement

Teachers were concerned with the leader's encouragement and the poor policy. Almost all participating teachers (eight out of eleven teachers and two out of three school leaders) reported that schools suffered from a lack of encouragement. This factor was found to affect the use of technology in an obvious way. Teachers needed encouragement to implement ICT effectively as it was not obligatory, and they asked for moral support in addition to tangible help. They needed the MOE and the administrative district to encourage them to teach students by reinforcing their efforts inside the school. They reported that the administration of district rarely complimented or commended teachers.

One new way of encouraging teachers is through the use of social media. As we live in the social media era, schools like to show themselves off on social

media. Every case (school) had a social media account and there was a competition between schools. Some school leaders, such as the leader of School 3, encouraged the use of their account on social media (Twitter, WhatsApp). The school informed parents of every activity of the teachers and also all the activities inside the classroom. English teacher SC1E-NF hoped that his activity inside the classroom would be covered by the school media. This would encourage him to be the best and do extra work. He had an experience in a former school where every activity was covered by social media. He said that every teacher in that school worked hard and reported: *"When my students' parents were the governor and the directors of departments, the school was a pioneer; the media coverage was prominent, so, every teacher has to work hard"* (SCE-NF:46).

The third school was one of the best schools at communicating with parents. Every activity had pictures and written reports sent privately by WhatsApp and Twitter. Arabic teachers SC3A-GZ and SC3A-SB reported that they usually got feedback from parents on these activity reports.

6.5.3.2.2 Lack of powerful leadership

The lack of powerful leadership power was reported as a reason for the lack of encouragement. Two school leaders SC1-Led, SC3-Led admitted there was a lack of encouragement in their school, although they did award a *thank-you* certificate to most teachers at the end of the year. Unfortunately, this upset the teachers who had worked hard as they realised that all teachers received the same certificate. It is apparent that the school leader needs more power so that he can encourage the hard-working teachers and hold lazy teachers to account.

English teacher SC1E-BN said about leadership power: “The school leader needs to be given stronger powers, such as to transfer a teacher to another school and impact on the annual salary of the teacher” (SC1E-BN: 117). He thought the power of the leader was not enough to encourage teachers to work hard or impact on salaries. This kind of power might encourage teachers to make the extra effort to use ICT.

The unclear MOE policy was also reported as a barrier to using ICT. There was no clear policy on ICT use and no accountability for non-use. English teacher E-PIL stated: *“If the MOE would like to be technologically transformed, it should provide technology and infrastructures to schools and provide a clear policy. Then we need a clear accountability system at the end of the year”* (140-141). He thought that the MOE saw using ICT as an optional choice.

6.5.3.2.3 Lack of trust

The relationship between teachers and supervisors should be amicable and they should trust each other. The teachers had some concerns about this relationship. Nine teachers out of eleven pointed to poor supervision. Some of them admitted that they did not have a good relationship with their supervisor because of their emphasis on their weak points. For example, SC2A-Ali:46 reported: *“unfortunately, in their visits, supervisors only give negative criticism to teachers, which makes teachers not accept it”.* In addition, it was very rare that someone visited teachers in their classroom.

Moreover, teachers did not trust the new project of the MOE because, in recent years, many projects had been introduced for a short period and then disappeared because they were not successful such as “Tatweer 1”, which was discussed earlier in (chapter Two). Therefore, the teachers may have believed

that using ICT in “Tatweer” project would cease to exist in a few years. School leader SC3-Led explained why he thought teachers did not trust the MOE projects:

> *“Many MOE projects failed and are gone; teachers believe that this project “Tatweer” will also fail. As “Tatweer 1” when the MOE gave all secondary students laptops, they found that it caused many problems. Thus, the whole project failed” (SC3-Led:6).*

School leader SC3 also admitted that teachers did not accept their colleagues in the role of first teacher because:

> *“teachers do not trust (the knowledge of) the first teacher, because he says that the first teacher is at my level, the teacher believes the first teacher is a supervisor…and they thought that the first teacher would ask about their record keeping and lesson preparation, etc.” (SC3-Led: 4).*

This was notwithstanding the fact that the first teacher’s role was to support his colleagues and develop their teaching. Therefore, teachers had concerns about the MOE’s new projects and supervision and considered their first teacher colleagues as a supervisor and they did not accept their classroom visits or advice.

6.5.3.2.4 Colleague collaboration

Collaboration between teachers, especially in the same subject, was found to be poor. In the “Tatweer” system, there is a “first teacher” with significant experience and is appointed to work with colleagues to improve their teaching. He is considered as a supervisor. Because of the extra work (supervision), the first teacher has reduced teaching hours. However, three teachers from three schools (SC1E-BN, SC3A-SB, SC2A-NS) reported that their school suffered from weak collaboration among colleagues. First teachers did not have the

power to do their supervisory task and this created issues with their colleagues. For example, English teacher SC1E-BN stated:

> *"Last year, I was the first teacher, I supervised my colleagues, but they did not collaborate with me. Thus, I asked the leader to exempt me from this task" (SC1E-BN:51).*

He gave up the role because he did not have any power to make his colleagues work hard and thought that if he persisted, it might cause friction with them. However, there was collaboration between teachers in the same subject, especially if they taught the same level. During an observation (Observation-SC1-SA), a teacher's colleague brought his flash memory to copy some software from the classroom computer; they helped each other peer to peer. This difference might be because working with the first teacher is formal while helping other teachers is more informal.

Collaboration between students was also found to be effective when teachers used ICT in teaching. During the classroom observations, I found that all English teachers (SC1-BN, SC2-NA,SC3-NW) were using groups in the English lab and there was collaboration between students. On the other hand, Arabic teachers used individual teaching because they taught children in the classroom. Only observation (Sc1A-Om-Obs2) used groups when they were in the LRC lab. Most students liked to study in groups. I commented that "students are effective; the teachers made five groups, and he gave them some extra exercises; he encouraged them to compete. The first group, who finished before the others, one of them read the right answer. Teaching groups helps collaboration between students" (Sc1A-Om-Obs2: 34).

6.5.3.2.5 Students' motivation

Teachers should help students to be motivated so that they work hard and help each other. Student motivation also helps the teacher to work hard as he might prepare more activities and bring more tools to answer students' enquiries. For example, English teacher SC1E-NF reported that, when he had taught highly motivated students (outside the region), he had to prepare more than what was in the textbook because the students would ask him questions beyond the textbook. He said that he brought videos to explain some grammar outside their textbook. They pushed him to use ICT and other resources. However, he did not do that in his present school because his new students were less motivated.

Two English teachers (SC1E-NF, SC3E-NW) and two Arabic teachers (SC1-SA, SC2-NS) pointed to the low level of student motivation. They agreed that students were only motivated to reach the lowest mark that allowed him to pass the exam. According to English teacher SC3E-NW:

> *"The students just do hard work for the first term, until they get the pass mark. They will not care about the subject - this is the situation of some students only. Or students study till they get the marks that allow them to pass the exam" (SC3E-NW:10).*

This low motivation of students might make teachers unenthusiastic about using new methods or new technology.

However, in the first observation (Obs-SC2A-Ali1), I commented that "Students were motivated. Almost all of them would answer the teacher's question. He respects all their answers. When students say something wrong he encouraged him and asked some of his colleagues to assist the student". Probably students' motivation differs between when they are in class or at home, which might be related to the national culture.

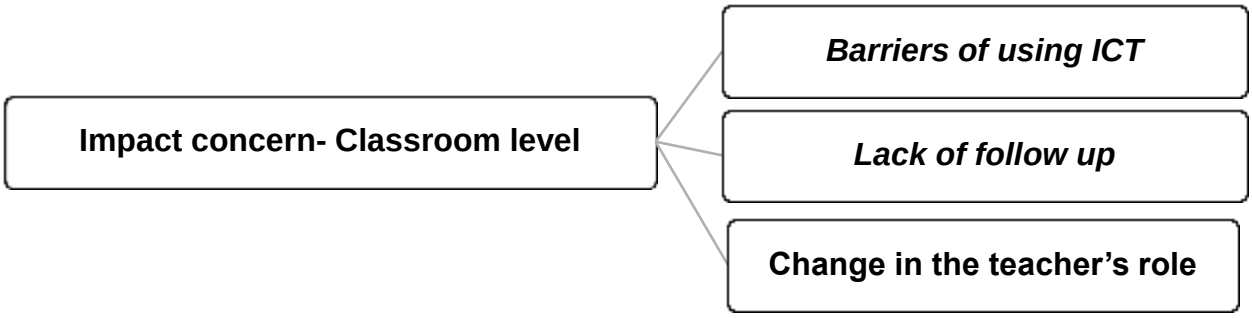
In sum, the school had many impacts on teachers' use of ICT. Teachers reported many factors that concerned them and affected their use of ICT. The lack of encouragement from the school leader and the MOE were reported as factors in addition to the fact that the school leader had insufficient power to encourage or hold teachers accountable. A clear policy on ICT use was also lacking, which discouraged teachers from using it. On the other hand, local social media were found to encourage teachers to work hard and use ICT. Schools suffered from the lack of trust between teachers, on the one hand, and the MOE and supervisors on the other hand. Students' motivation played a major role in encouraging teachers to use ICT, as shown in Table 6-11.

Table 6-11: codes and quotation of Impact concerns-school level

Code	Sub-code	Participants	Quotation
Lack of encouragement	From leader	SC3A-GZ, SC1A-OM, SC2A-Ali, SC1E-BN E-Sup, SC3-led	*"In schools, encouragement is 'zero'(nothing)... Encouragement means a lot and it is only a certificate paper, but it means a lot."* (FA-Leader:24-27)
Lack of leader power		SC1E-BN	*"The school leader needs to be given stronger powers, such as to transfer a teacher to another school and impact on the annual salary of the teacher."* (SC1E-BN: 117)
	MOE Poor policy	A-Sup, E-Sup E-Pil	*"If MOE would like to be technologically transformed, it should provide technology and infrastructure in schools, provide a clear policy, then we need clear accountability system at the end of the year."* (E-PIL:140-141)
Media encouragement		SC1E-NF, SC1E-BN	*"When my students' parents were the governor and the directors of departments, the school was a pioneer; the media coverage was prominent, so, every teacher has to work hard."* (E-NF:46)
	With MOE	SC3-Led,SC2 A-Ali	*"Many MOE projects failed and gone; teachers believe this project 'Tatweer' will also fail. As a 'Tatweer 1' when MOE gave all secondary students laptops, it found that it caused many troubles. Thus, the whole project failed."* (FA-Led:6)
Lack of trust	With supervisor	SC2A-Ali	*"Unfortunately, in their visits, supervisor gave negative criticism only to teachers, which makes teaches not accept it."* (SC2A-Ali:46)
	with first- teacher	SC1E-BN, SC3-Led	*"Teachers do not trust the first- teacher 'supervisor-teacher' because they see themselves at the same level. They believe that the first teacher attempts to play the role of the supervisor in that he tries to guide them and asks them for the follow-up records."* (FA-Led: 4)
Colleague collaboration	Collaborative with first- teacher	SC1E-BN SC3-Led, SC3A-SB, SC2A-NS	*"Last year, I was the first teacher, I supervised my colleague, but my colleague did not collaborate with me. Thus, I asked the leader to exempt me from this task."* (SC1E-BN:51)
	No goal for classroom visits	SC3A-SB	*"The benefits of the idea of being the 'first-teacher' are limited because he visited classes when the school leader or the supervisor asked them to do so. So, teachers who visit are not motivated for his visit because it does not meet their needs such as learning how to use technology."* (A-SB:48)
Students' motivation	Study to pass exam	SC3E-NW	*"The students just do hard work for the first term, until he gets the pass mark. He will not care about the subject - this is the situation of some students only. Or students study till got the marks that allow them to pass the exam."* (E-NW:10)

6.5.3.3 Classroom level

Two main codes were found in this sub-theme of impact concerns in the classroom environment level: barriers to using ICT, and lack of follow-up.



6.5.3.3.1 Barriers to using ICT

The first code, "barriers to using ICT", shows that teachers were very concerned about the barriers to using ICT. Participants reported barriers such as (1) using the projector requires reduced lighting, which might encourage noise at the back of the classroom, (2) using ICT makes the teacher stay near the computer, thereby making him less active in the classroom, (3) using ICT might disrupt students' attention and (4) using ICT has a negative effect on students' writing because they choose answers by clicking not writing.

During the observations (Obs-SC2-ALI1, Obs-SC2-ALI2) of an Arabic teacher and English teacher (Obs-SC2E-NA) who were using technology, the light was reduced in order to show the presentation. Despite the fact that for this observation (Obs-SC2-ALI1), the classroom light level was acceptable, the English lab was dark, which made it difficult to write my notes on the observation sheet. Teacher SC1E-NA said it had to be dark because the projector lamp was weak. Some students at the back of the class could not be seen because of the darkness and were talking to each other. The teacher was

at the front of the class in order to use the keyboard or the computer mouse, so he could not see the back of the class.

Another barrier to using ICT that impacted teachers in the classroom was that using ICT distracted students' attention. Teachers tried to push students to pay attention to what they were saying. However, according to SC2A-NS and E-PIL, when the teacher was busy with a computer, some students would sometimes pay less attention and talk with their friends and it would be difficult to come back to attend to the lesson. An Arabic teacher reported: "*Using ICT is very helpful, but it might distract students' attention"* (SC2A-NS:22).

6.5.3.3.2 Lack of follow-up

Every job needs supervision and accountability to ensure its quality; when follow-up is absent, this might affect the educational process. Three Arabic teachers and three English teachers reported that, in their schools, most of the leaders and supervisors did not know how the students were learning or how the teachers were teaching. The teachers felt that the school administration focused on management more than on education. They did not look for the quality of teaching or the results of students' learning. According to SC1A-OM, the lack of follow-up was the reason that teachers taught their classes with minimum effort. He stated with a frustrated voice: *"In fact, no one asks or cares about what is going on inside the classrooms"* (SC1A-OM: 104). Thus, some teachers felt they needed encouragement from the leader by visiting their classes to find out how they were doing, which would highlight the positive and negative aspects of their practice and their use of ICT.

In sum, the impact concerns in the classroom were found to affect teachers through two aspects: the barriers to using ICT and the lack of follow-up. The need to reduce classroom lighting, and the distraction of students' attention

were reported as disadvantages of using ICT. The lack of follow-up and classroom visits was frustrating to the teachers who worked hard and did extra work.

Table 6-18: Codes and quotation of impact concern-classroom level

Code	Sub-code	Participants	Quotation
Barriers to using ICT	Making noise	SC1E-NF, SC2A-NS, SC3A-SB	*"When the teacher uses computer and projector, students will start to talk and make some noise." (SC3A-SB: 6).*
	Projector needs dark class	SC1E-NF	"*Projector needs to reduce the light of class; some students will feel sleepy, I could not observe them."* (SC1E-NF: 30)
	Distracts students' attention	SC2A-NS, E-PIL	*"Using ICT is very helpful, but it might distract student attention."* (A-NS:22)
Lack of follow-up	Lack of care about what goes on inside class	3 Arabic T, 3 English T	*"In fact, no one asks or cares about what is going on inside the classrooms.*" (SC1A-OM: 104)
Change in the teacher's role		A-Sup, SC3A-GZ, SC2A-Ali, SC3A-SB	*"Now 75% of the role is for the student, because he speaks and discusses. The teacher's role is organizational, encouraging and discussing students' ideas."* (SC3A-GZ:5)
	The teacher as a facilitator	SC3A-GZ, SC1A-SA	*"Now teacher's role is guiding students' learning 'thinking and behaviour."* (SC3A-GZ, 46)
	Develop students' thinking		"*Teacher's role is to develop students.*" (SC1A-OM, 69)

6.5.3.4 Summary of the impact concerns

The third set of themes of the cultural factors are the impact concerns. These concerns relate to the relationships with others and were related to consequences, collaboration and support. Teachers had impact concerns at three levels. The changes to the curriculum and femininity were the main concerns impacting on teachers at the national culture level. The school level had many factors: lack of encouragement, social media encouragement, lack of trust, colleagues' collaboration, and student motivation. The third level was the classroom level and had three main factors: barriers to using ICT, and the lack of follow-up in the classroom, and the change in the teacher's role. Support and encouragement were also found to have the most significant effect on teachers in relation to impact concerns. The number of participants expressing concerns towards these factors was the highest in this group, which means that this factor had the most significant effect on teachers. This is shown in Appendix 5.

6.5.4 Summary of the affecting factors

The first question in the current study is: "what are the socio-cultural factors that influence students' and language teachers' usage of ICT in their schools?". In order to answer this question, three methods were used to collect data: interviews (with six Arabic teachers, five English teachers, three school leaders, three supervisors, and one LRC specialist), school and classroom observations (six Arabic lessons, five English lessons), and students focus groups (with three groups of five to six students each).

The teachers reported their concerns about the culture at three main levels: (1) the national level of the Saudi culture and the education system in Saudi Arabia, (2) the school culture level that emphasises relationships in the school and (3)

the classroom culture level which is specific to the relationships in the class during lessons.

Teachers' concerns were divided into three groups: (1) self-concerns, (2) task and labour concerns, and (3) impact concerns. In terms of the self-concerns, every teacher had different concerns. Self-concerns were found at two levels: the classroom level and the national level. Self-concerns in the classroom related to managing student behaviour and self-motivation while self-concerns at the national level related to ICT taking the teacher's role, respect for high status, teacher having all the answers, and failure being a disaster. These were found to affect teachers' practice in using ICT. Self-concerns were found to have a great effect on teachers' usage of ICT. Three teachers (SC1E-NF, SC2A-NS, SC3A-SB) reported that self-concerns were the factor that prevented them from using ICT in their teaching.

The second set of concerns that teachers reported were related to their tasks and their labour. They reported their concerns at three levels: the national, school and classroom levels. Most of the factors were found at the school level because this is the environment of their labour.

A highly structured education system and the optional use of ICT are the two main codes covering teachers' concerns towards their tasks at the national level. The three main codes of concerns towards tasks in the school level are: professional development, ICT support, and resources. These task concerns at the school level occur inside the school but not in the classroom. The next level of task concerns at the classroom level that were found to affect using ICT are pedagogical tasks, the textbook, changes in the teacher's role, preparing the class environment, and time and effort. All the participants reported more than two task concerns as these concerns relate to their job, school and ICT.

The third concern is the impact concern in terms of consequences, collaboration, and support. The main codes at the national level were: changes to the curriculum and femininity. While the lack of encouragement, social media encouragement, lack of trust, collaboration between teachers, and student motivation were found at the school level, barriers to using ICT and lack of follow-up were the main codes at the classroom level.

As shown in Appendix 4, the concerns most frequently reported by the participants were “professional development” and “support and encouragement”. Professional development was reported thirty times by nine participants out of eleven. The “support and encouragement” was reported thirty-six times by nine participants. This means that participants wanted more support from administrative staff. They also wanted training and classroom observation to develop their skills. The next Table 6-19 summarises the socio-cultural factors based on the three levels of culture (national, school, and classroom).

Table 6-19: Socio-cultural factors based on three levels of culture

		Culture Levels		
		Classroom-level	**School level**	**National level**
Concerns	**Self-concerns**	Satisfaction, Attitudes, Responsibility, Classroom management, Self-Motivation		Respect high status (High power distance), Failure is a disaster (Masculine), ICT takes teacher's role (uncertainty), supposed to have all the answer (uncertainty)
	Task-concerns	Pedagogy, textbook, Time & effort, Prepare class environment	Exam pressure, Professional Development, ICT support, Resources	The purpose of education, To pass the exam (to do), collectivist culture, Optional use of ICT, (Large Power distance), Highly Structured education (strong uncertainty avoidance).
	Impact-concerns	Barriers to using ICT, Lack of follow-up, Change teacher's role	Support & encouragement, Students' motivation, Lack of trust, Colleagues collaboration	Changes to the curriculum, Femininity

The above table shows the socio-cultural factors found to affect the use of ICT. They are divided into three themes, every theme found more effective on the use of ICT by group of teachers participants. Therefore, teacher users of ICT in the classroom can be divided based on their kinds of ICT use. These kinds are also affected by teachers' concerns, as shown in the next chapter.

6.6 Using ICT in the Classroom

The second question is: "how do students and language teachers use ICT in their schools?". Before attempting to answer this question, it might be helpful to illustrate the availability of ICT tools in the case schools, as well as the affordances of ICT. Both the availability and the affordances of ICT tools are factors that influence how teachers use ICT. They influence the level of use at

which teachers prefer to use ICT tools in their classes. After describing how teachers use ICT, the research investigated the most effective factors or concerns for each group of teachers.

6.6.1 Kinds of ICT use

Participating teachers did not all use ICT at the same level. Some teachers were able to integrate ICT into their teaching methods and depended on ICT to communicate with students, send homework and feedback. Other teachers used ICT tools to present their lessons. Thus, there were two different levels of using ICT. PIL-LRC reported how teachers actually used ICT in their daily classes:

> *"The majority of teachers in this school do not dispense technological tools in the classroom, I mean the presentation tools. So that some of them could not start to teach until preparing his class using the tools of his subject (hardware and software). Their attitudes are excellent, even if I told them I would stop these devices, teachers would change their methods and would be tired." (PIL-LRC:8)*

It is clear that the majority of teachers used ICT tools to teach their subject, because it is easier than using traditional teaching. Therefore, using ICT helped teachers reduce their effort and enhanced students' understanding. Hence, for students, for example, words appeared clearer than with the teacher's handwriting, as reported by student SC1ST-SH. This suggests that using presentations saved time compared to the teacher writing his lesson on the whiteboard, as reported by student SC1ST-JW. Most teachers used ICT in this stage as presentation tools, but this did not mean that they changed their pedagogy. For example, most participants who used ICT were still adopting teacher-centred methods and most students in their classes were not active. The change in their teaching might be caused by ICT affordances, not because

of the change of pedagogical methods implemented by teachers. This issue will be explained further in Section 6.6.2 (p.230).

However, this stage of ICT use as a presentation tool did not satisfy some administrators, who wanted a change from traditional learning to e-learning. E-learning is an environment in which the teacher and students communicate with each other inside and outside the school. Hence, e-learning is an environment more than a tool. Schools have the components of e-learning, such as computers and the internet and students have smart devices which they use to communicate with others. However, there was no communication between teachers, on the one hand, and with students and their parents on the other. There was no electronic homework or examination system whereby students could do their examinations online. Some teachers, such as SC1E-BN, used e-learning by sending the lessons to students by email and students sent their homework by email too. However, many students did not respond because there was no policy imposing the use e-learning. The type of use ICT in the school is a presentation tools not as environment that students might involve with. According to LRC specialist:

> *"The situation now is not e-learning, it is just presentation use. The problem is that schools have the components and devices of e-learning, students also are ready to use his smart devices in his home and outside. We need something like an (Apple classroom) a complete administrative education system. This system has homework, and communication system with parents…If students are absent, they can find the lesson online, they can find the homework and they can send it to their teachers. So, this is an educational system (E-learning) and it is easy to apply. For example, one teacher (E-BN) tried to use this environment before (e-learning)" (PIL-Lrc:27)*

Therefore, using ICT in the school has two stages. The first is using technology as a tool, the second is using technology as an environment. Most teachers used technology with traditional teaching because they used it as a presentation

tool, and students' role did not change as they remained passive. Some teachers (only one of my participants) used e-learning in way that students were active. Every student used their email to send homework and see the lesson material at home, so if he did not understand it the first time, he had another chance at home. In this way, individual differences between students were considered in that every student had more than one chance to understand the lesson.

6.6.2 Effect of ICT use on student learning

Only three English teachers (SC1E-BN, SC3E-NW, SC2E-NA) and one Arabic teacher (SC1A-OM) used both teacher-centred and student-centred methods. They used student-centred methods through group work. For example, the English teachers were found to use their private lab where they organised the students' tables as groups. Teachers asked questions to the whole group, so students were active and asked their colleagues in the same group. Every student had an opportunity to answer the question, especially when the teacher distributed an exercise to each group.

Arabic teacher SC1A-OM also used group work in the LRC. According to an observation, students seemed to be more active in the LRC (Obs- SC1OM1: 5) than in the classroom (Obs- SC1OM2:5) because the LRC was equipped with five round tables where students studied in group. Students were also more active when they were outside their classroom, such as in the English lab (SC3E-NW- SC2E-NA) or in the LRC hall (SC1A-OM). The reason for students' greater activity might be due to the fact that students changed their classroom routine and sat with their classmates to help each other. The students, then, were active and had a role in the class by teaching or helping their classmates.

Therefore, using group strategies in teaching made the students more active, while the use of technology as a presentation tool did not seem to have any positive effect on student learning. This concern was reported by SC3A-SB who did not use technology in his teaching:

> *"I don't have any problem with traditional teaching. The students' results are good. The supervisors visited me, no one asked me to change my teaching method, so why should I change? When my colleague's students (who use ICT) come to study in my class, there are no differences in the level of information or understanding between those taught by ICT and my students (taught by traditional method). The evidence is in the students' results; it is the same in both methods." (SC3A-SB:22-23)*

According to this teacher, using ICT did not have any significant effect on students' knowledge or examination results. He compared the results of his students (taught without ICT) and other students in the same school (taught using ICT). The examination results were similar between the two groups. However, this evidence does not mean ignoring the benefits of using ICT. This teacher (SC3A-SB) limited the benefits of using ICT to the final results but he seemed ignored how students could be interested when they are taught using ICT, how they gained experience and knowledge from dealing with ICT. This might be because the school environment of the teacher only emphasised on the textbook, and the Saudi educational system (national level) also mainly focused on examination results.

However, the students expressed another view towards being taught using ICT. According to SC3ST-FA:

> *"The Arabic textbook needs to be supplemented by writing things on the board; it is difficult to read all the teacher's handwriting. Usually, I ask him to use Microsoft Word to write so it is clearer and easier to follow than the teacher's handwriting" (20).*

His colleague also added another benefit of teaching through ICT:

> *"PowerPoint is the best software for learning because it summarises the lesson into small points. Every point appears alone. The movement of the slides helps students to understand the whole lesson and answer the exercises in his textbook" (SC3ST-AB:22-24).*

Therefore, these students from the same school (school 3) liked when teachers used ICT in their teaching because they saw the advantages of using ICT from the affordances of this technology.

6.6.3 Classroom equipment (availability).

Every class in the three case schools was equipped by the MOE with various tools such as computers, data show projectors, and interactive whiteboards. However, the three schools suffered from a lack of maintenance of these tools. One of the roles of the LRC specialist was to maintain the daily issue of these tools during the school day, except for the data show projector. As projectors' parts are expensive to buy and replace, the schools usually send them to the administrative region for maintenance. I found that every school had two or three classrooms with a broken projector. The schools did not replace the old projectors from their own budgets because the administrative region was supposed to provide new ones.

The English teachers in Schools 2 and 3 had labs equipped with a computer, document cameras, data show projectors, IWBs and round tables. The only difference between the English labs and the classrooms was the round tables. The LRC hall was also equipped like the English labs but was bigger. This means that all three case schools had the equipment needed to use ICT in teaching.

The English software was of high quality, supplied by the international educational company (MM Publications) who issued the English textbook. English teachers SC2ENA and SC3ENW commended the quality of the English

software, but SC1ENF criticised the textbook because he thought the average level of his students (SC1) was low; he argued: *"the curriculum is above the students' level"* (20).

The Arabic curriculum did not have a high-quality software. The software was made by the individual efforts of some Arabic teachers. The Arabic supervisor had collected some lessons from educational websites and helped other teachers to access them. As these lessons were designed by individual teachers, some exercises had wrong answers. The Arabic teacher (SC2ALI) was very critical about the poor quality of the Arabic software.

6.6.4 Affordances

The presentation software used by the language teachers was PowerPoint and Adobe flash player. The Arabic language had a web page to which many teachers from Saudi schools uploaded their own presentations on lessons from the curriculum. They usually used PowerPoint because of its affordances.

Participants in each subject (Arabic and English) gained many benefits from the course materials. Although Arabic materials were designed using Microsoft PowerPoint, and English materials designed in Flash player, the affordances of both softwares were reported to be similar. Both PowerPoint's and Flash's feature are: (1) sound and colour, (2) movement, (3) and division of information into small pieces and (4) they appeal to many senses. Therefore, the software affordances help students to be more attentive, and make the lesson more understandable. The software also helps students to remember because they are multi-sensory. The differences between these two sets of software is the quality of design of the materials.

Table 6-20: Affordances of the two subjects.

Features	Affordances	Arabic curriculum (PowerPoint)	English curriculum (Flash player)
Sound & colour	Students' attention	✓	✓✓
Divides information	More understandable	✓	✓
Movement	Students' attention	✓	✓✓
Sensation of the senses	Individual	✓	✓

6.6.5 How do teachers use ICT?

Based on the data analysis in section 6.6.1 page 228, three main categories were found to describe the teacher's use of ICT in the classroom: non-user, routine user, and integrated user.

6.6.5.1 Non-user

The first group of teachers are non-users of ICT in their teaching who are affected by some cultural factors that make them non-users. Three teachers (SC1E-NF, SC2A-NS, SC3-SB) reported that they did not use ICT. The data showed that the reason for this was self-concern. Based in the data, two teachers (SC1E-NF, SC2A-NS) were very concerned about managing student behaviour; Arabic teacher SC2A-NS repeated this concern five times and the English teacher four times. The English teacher stated that the traditional method was the only method through which he could control students' behaviour because, with ICT, he could not clearly see the students at the back of the class. Thus, this teacher's concerns centred on controlling the students

> *"I use the traditional method because this is the only method where I can control students' behaviour. I walk between students, I see every student, I encourage them to pay attention and follow the lesson in their textbooks." (SC1E-NF:29)*

He believed the only teaching method that allowed the control of students' behaviour was the traditional one as with ICT he would be busy dealing with the computer and the light would be reduced. He stated*: "to use the projector I need to reduce the light of the class; some students will feel sleepy and I cannot see them" (SC1E-NF: 30)*. Hence, he was concerned that using ICT would affect his control of the class.

An Arabic teacher (SC2A-NS) gave the same reason for not using ICT:

> *"the most important thing is the control of students, they need to follow me (the lesson) and the use of ICT makes the class noisy. For this reason, I do not like to use technology" (65-70).*

He felt similar to English teacher SC1E-NF that the use of ICT would make the classroom noisy and he could not control the students. However, Arabic teacher SC3-SB had a different reason for not using ICT: he did not have the self-motivation, as he repeated six times during the interview. He denied the need to use ICT, as he reported earlier:

> *"I don't deny the positives of technology. I know that it saves time and effort. In my subject, only three lessons in the unit (the final three weeks) need traditional teaching, the rest are listening, reading comprehension, and writing; in all these, technology is useful…I don't have any problem with traditional teaching. The students' results are good. The supervisors visited me. No one asked me to change, so why should I change my teaching method?" (SC3A-SB22-23).*

Because the use of ICT did not change students' examination results, he ignored the other benefits, as explained above (Affordances section).

Both factors (managing student behaviour and self-motivation) are related to self-concerns and these three teachers reported these factors more than all the other participants, as shown in Table 6-8

6.6.5.2 Routine user

Seven teachers out of eleven were routine users as they used ICT every day as a presentation tool but did not try to develop their presentations to make their students more active. Most of the concerns of this group were task concerns and impact concerns. They had few self-concerns, but not as many as the first group (non-users). Most of their concerns were about the task and impact at the school level. Therefore, they did not have concerns about their relationship with students nor with dealing with ICT tools inside the classroom. They had many concerns in terms of their relationship with the school leader (impact concern). Their most salient factors were professional development (task concern) and encouragement (impact concern), as shown in Figure 6-21:.

6.6.5.3 Integrated user

Only one English teacher (SC1-EBN) out of eleven could be considered as an integrated user as he was able to integrate ICT with his pedagogy. Students were active in that they could communicate with him outside school times and access the lesson at any time.

> *"I create a new channel on YouTube. I upload some videos with the text and exercises, so the students are able to read the lesson and watch it for several minutes during their free time" (71).*

He therefore used ICT as an environment in which students could join and contact others at any time and from anywhere. Likewise, students did not have to study the lesson only at school as they could access the lesson materials from home. This teacher (SC1E-BN) was awarded the best English teacher in

the district and was the first teacher to use email to communicate with students. Students could send their homework by email and he sent them feedback and links to many websites to support them. He also created a YouTube channel and sent his teaching materials to absent students. Furthermore, he reached students using the PlayStation platform when playing games, so they could see the lesson or the homework. In addition, he created sixty email accounts by himself for his students and taught them how to use emails.

Despite these efforts, his leader did not encourage him, and in the evaluation at the end of the year, he gave him a mark lower than expected, which was a reason for excluding him from teaching evening classes (usually attended by mature students, and a source of additional income). He only received encouragement from his supervisor, who supported him and nominated him to participate in the competition organised by the MOE. This competition was a good trial to integrate ICT into teaching. That teacher repeated this experience last year with twenty-four students. Afterwards, his leader encouraged him and gave and increased his scored on his assessment report. As a result, he was nominated to receive training from the MOE, received the visit of the administration in his class, and received a thank you letter from the supervisor. However, he felt he did not receive enough encouragement. Some of his colleagues asked why he was doing this hard work when no-one encouraged or rewarded him and did not receive a commendation letter from the Minister of Education or the administrator of the district.

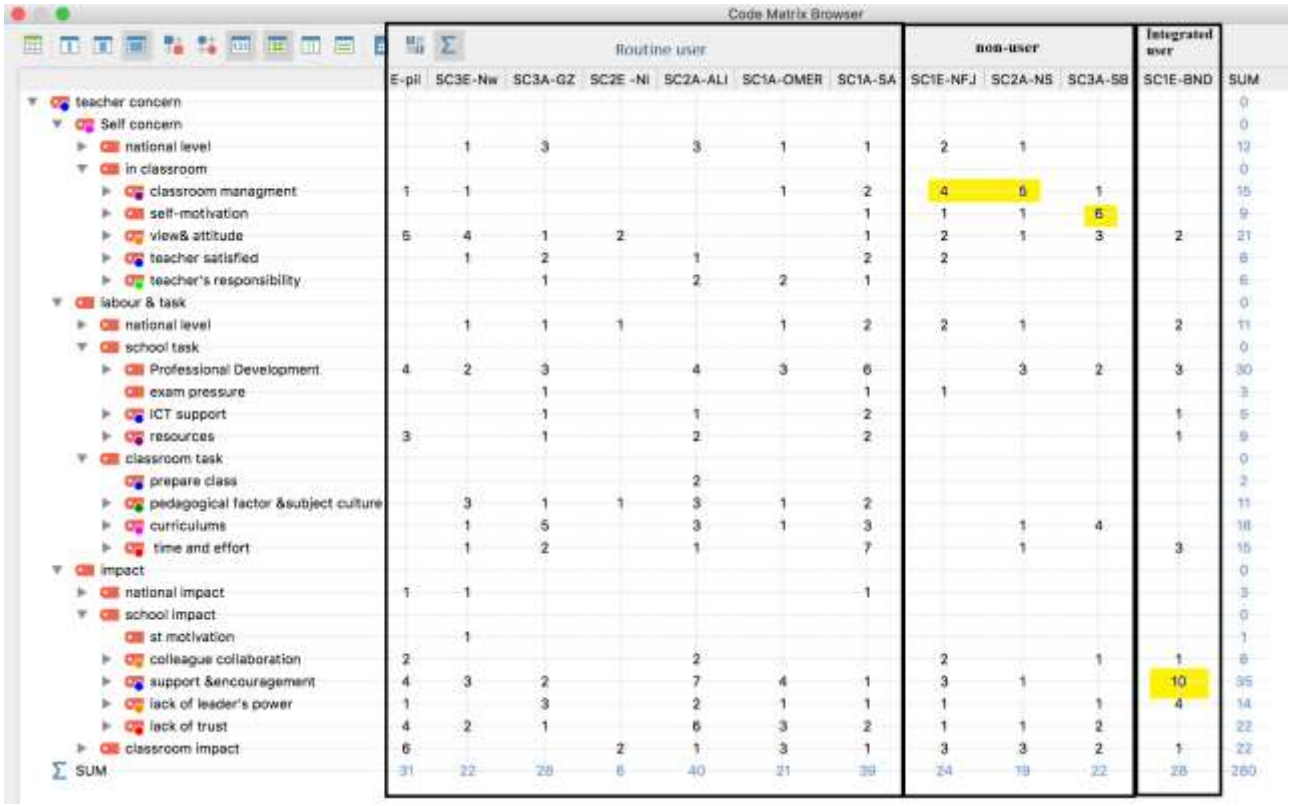


Figure 6-21:Teachers' use of ICT

This figure shows the three types of participants who used ICT in their teaching. Most participants (seven out of eleven) were considered as routine users. They had many concerns about the task and impact, especially at the school level. The second set was the non-users, who did not use ICT; they reported more self-concerns, especially in the classroom level. The third type of teacher was the integrated user. There was only one teacher at that level of use and his major concern, he reported, related to support and encouragement.

6.7 Summary of the Chapter

This chapter was divided into two main sections: the case descriptions (6.2) and the thematic analysis of the data (6.4). In relation to the research questions, three main themes emerged from the data: self-concerns, task-concerns, and impact concerns. The self-concerns covered the feelings of the participants

themselves, which could be called the “I” concerns. Task concerns were directed related to the “it” concerns, that is, the job, the education system and the policy. Concerns towards ICT software and hardware are also considered part of the task concerns. The third theme was the impact concerns, which encompassed concerns towards relationships with colleagues, administrative staff and the school leader.

The theoretical framework of the current study suggests three levels of culture: the national, school and classroom level. Hence, the three themes, self, task and impact-concerns, have been analysed at three levels and the codes divided into nine categories, as shown in Table 7-1. However, some quotations were coded in different levels of culture and different themes, such as the exam pressure. This shows how socio-culture factors are interrelated and that the three levels of culture need to be investigated. The national level is difficult to account for because many factors describe the Saudi culture. These national factors are implicit because they come from the Saudi culture and are usually unquestioned. The current study used the values of national culture suggested by Hofstede’s model, which are considered national level’s concerns. At the school level, many teachers were found to have task and impact concerns, but not self-concerns. At the classroom level, all three types of participants’ concerns were found.

Participants’ views towards the benefits of using ICT were investigated. The positive views towards using ICT in Arabic and English the benefits of ICT, such as reducing teaching time, hiding teachers’ shortcomings, helping students to take an active role, maintaining students’ interest, and giving students the opportunity to listen to native English speakers. These views helped to answer

the research question: “What are the intermediate school students’ and language teachers’ views about using ICT in teaching and learning?”.

Participants were divided into three types of ICT users: non-user, routine user, and integrated user. Three participants (SC1E-NF, SC2A-NS, SC3A-SB) were non-users due to self-concern factors. Seven participants were routine users, using ICT as a presentation tool. Most of their concerns were to do with task and impact. Only one participant (SC1E-BN) could be called an integrated user. He was able to use ICT as an environment for learning and enabled students to become active in their learning. The findings from this chapter will be discussed in the next chapter focusing on the main findings based on the theoretical framework.

7 Chapter Seven: Discussion of the Main Findings

7.1 Introduction

In the previous chapter, detailed information about the data were presented in order to answer the research questions. This chapter aims to interpret the meaning of the main findings these are related to what is a known about the socio-cultural factors. In this chapter, a new understanding of the socio-cultural effects on the usage of ICT by teachers is also discussed.

As stated earlier, the benefit of focusing on the culture is to interpret the reason of the participant's use of ICT (see section 4.2.1). Indeed, gaining an understanding of the socio-cultural factors of impacting on the participants might help to comprehend how participants use the technology and identify the barriers that may prevent the effective use of ICT.

As mention in Chapter Three, the current study aims to explore the language teachers' and students' perspectives towards the cultural factors that affect their use of ICT. Hence, the research questions focused on exploring the cultural factors affecting participants' use of ICT and how the teachers react towards using ICT. The research questions were formulated as follows:

1. What are the socio-cultural factors that influence students' and language teachers' usage of ICT in their schools?
2. What are the intermediate school students' and language teachers' views about using ICT in teaching and learning?
3. How do students and language teachers use ICT in their schools?
4. How does culture affect students' and language teachers' usage of ICT?

For the purpose of the current study, the data from teachers' interviews, students' focus group and classroom observations were analysed to understand the socio-cultural factors at three levels, as the framework suggests: (1) the

national level, (2) the school level, and (3) the classroom level. Table 7.1 below summarises the findings from the data analysis in the previous chapter related to the socio-cultural factors at the three cultural level levels and the participants' concerns of the use of the ICT.

Table 7-1: Socio-cultural factors based on three levels of culture

		Culture levels		
		Classroom-level	**School level**	**National level**
Concerns	**Self-concerns**	Satisfaction, Attitudes, Responsibility, Classroom, management, Self-Motivation		Respect high status (High power distance), Failure is a disaster (Masculine), ICT takes teacher's role (uncertainty), supposed to have all the answer (uncertainty)
	Task-concerns	Pedagogy, Textbook, Time & effort, Prepare class environment	Exam pressure, Professional Development, ICT support, Resources	The purpose of education, to pass the exam (to do) collectivism culture, Optional use of ICT, (Large Power distance), Highly Structured education (strong uncertainty avoidance)
	Impact-concerns	Barriers to using ICT, Lack of follow-up, Change teacher's role	Support & encouragement, Students' motivation, Lack of trust, Colleagues collaboration	Changes to the curriculum, Femininity

These three levels have been suggested by the study's framework. Hofstede's model has been used to investigate the national culture because it is difficult to study the whole national culture for any country without using a model that could measure the cultural effects. In addition, Hofstede's model has been widely used and tested by several studies conducted in Saudi Arabia (Alamri et al., 2014a; Glowacki-Dudka & Treff, 2011; M. Hakami, 2015) and it has been

tested widely in the literature e.g.(Kaur & Noman, 2015; Siakas & Mitalas, 2004).

At the School level, as organizational culture, there is an emphasis on the relationship between the teachers on the one hand, and the administrative staff and the education system on the other while the classroom level describes the personality of the teacher himself and the relation with his students, as suggested by the ecological perspective model (see Figure 7-1). The factors from each level of culture tend to affect each other and it is difficult to isolate one single factor from the others.

Participants reported these factors as concerns or barriers that affect their daily use of ICT in teaching and learning. As seen in Table 7.1, many themes emerged from the data relates to what affects teachers when using ICT. However, in this chapter, not all themes are discussed but only the most problematic issues that closely relate to the research questions or the issues of greater concerns for the participants such as their concern towards professional development. These findings are discussed in terms of the following points which was suggested from the literature and the theoretical framework of this study. Hence, the following main points will be discussed as shown in the next table.

Table 7-2: the relationship between the main points of the Discussion Chapter and the research questions.

main points of discussion	section number	Related Research question
New theoretical model to study the effects of socio-cultural factors	(Section 7.2)	1-What are the socio-cultural factors that influence students' and language teachers' usage of ICT in their schools?
Teachers' concerns and the level of use	(Section 7.3).	2-What are the intermediate school students' and language teachers' views about using ICT in teaching and learning? 3-How do students and language teachers use ICT in their schools?
The improvement of teachers' level of use	(Section 7.4).	3-How do students and language teachers use ICT in their schools?
E-learning to gain the integration level	(Section 7.5).	3-How do students and language teachers use ICT in their schools?
The relationship between professional development and peer support	(Section 7.6).	1-What are the socio-cultural factors that influence students' and language teachers' usage of ICT in their schools?
Learning with ICT or integrating ICT	(Section 7.7).	3-How do students and language teachers use ICT in their schools?
Culture is stable or dynamic	(Section 7.8).	4-How does culture affect students' and language teachers' usage of ICT?
Culture affects using ICT or is influenced by using ICT	(Section 7.9).	4-How does culture affect students' and language teachers' usage of ICT?

7.2 New Theoretical Model

This section discussed the steps of improving the study theoretical framework in order to study the cultural factors. This section is divided into two sections; the initial framework and the improved framework.

7.2.1 The initial framework

The initial framework is the framework suggested by the ecological perspective, as explained earlier in (chapter 3). The initial study framework (Figure 7-1) suggested to divide the culture into three levels: national culture, organisational 'school' culture, and classroom culture. This model shows how complex culture is and that it should be studied at multiple levels because it cannot be analysed in a single level (He, Memarovic, Sabiescu, & de Moor, 2015; Laroche, 2003; Leidner & Kayworth, 2006).

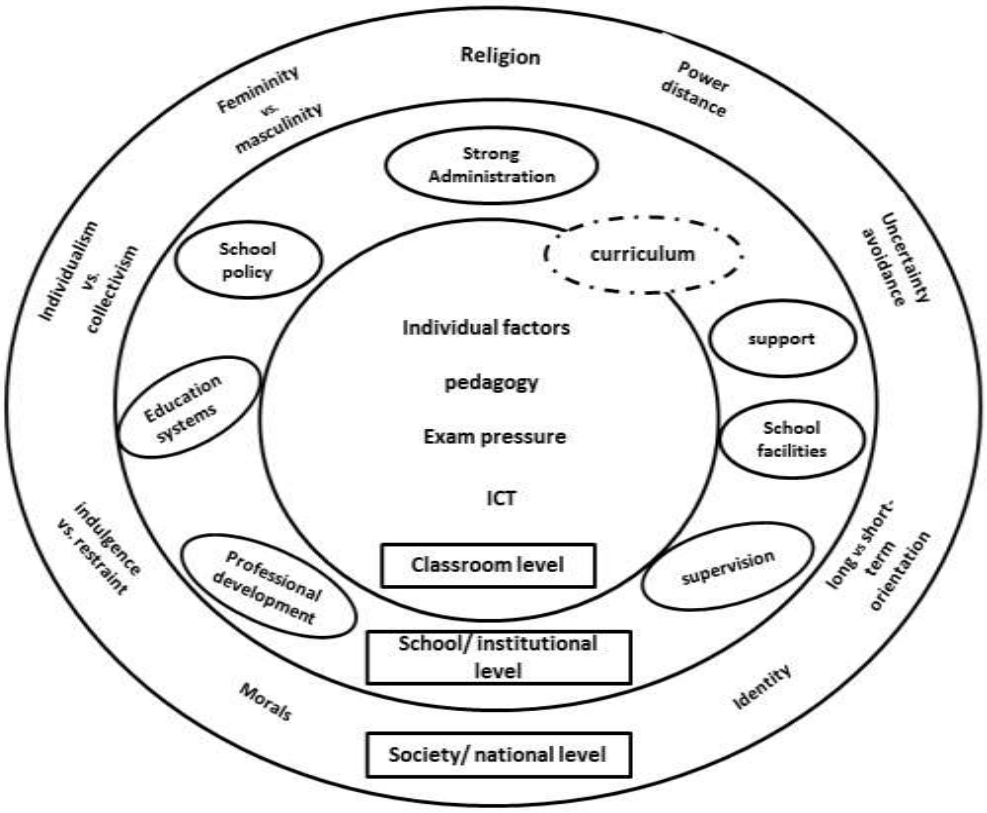


Figure 7-1: an initial theoretical framework

In order to cover all the aspects of the current study, this framework needs to include the national culture that has been borrowed from the ecological perspective. The ecological perspective framework might be suitable to explore the socio-cultural factors at the school level and the classroom level but appears to be limited as it does not cover the national culture level. The other limitation of the ecological framework is that it does not help to answer the second research question which aims to explore the actual use of ICT by teachers. Therefore, the framework needed to be improved in order to cover all the aspects of the research questions. This need to improve the theoretical framework corroborates the ideas of Myers and Tan (2002)and Alenezi (2015) who called for a much stronger theoretical framework to study culture and information technology. Moreover, there is a need to improve the theoretical framework because most social sciences theories are culturally limited because they have been framed by researchers with Western cultural orientations (Davison & Martinsons, 2016). Therefore, the ecological perspective might need to be improved in order to find a suitable model to study the socio-cultural factors.

7.2.2 The improved framework

The new framework model (see Figure 7.2) is a multi-layered framework containing the ecological framework, the national culture dimensions and elements from the Concern Based Adoption Model (CBAM). Thus, the ecological perspective covers the school culture and the classroom culture and Hofstede's model covers the national level. The relation between the level of use and the level of concern has been borrowed from the CBAM. This multiple model can be considered as under the umbrella of the sociocultural theory.

As shown in Table 7.1, the participants reported these factors as a concern that affected their use of ICT. Three types of concerns were used to identify how the participants react towards using ICT. Using ICT for teaching purposes is considered as a kind of change for which teachers' participants have expressed their concerns.

As we have seen in the previous chapter, these concerns have been divided into three types: (1) self-concern, (2) task-concern and (3) impact concern. The self-concern relates to the individuals' thought about how the change affects them. This kind of concern relates to the teachers' ability to use ICT or how the other perceive their ability. The reason for this thought might be related to self-moral and beliefs. In other words, the self-concern relates to what the participant has concerns about, whereby "I "refers to his views. Moreover, the task concern is apparent when the individual is worried about the task itself, not about his ability. For instance, teachers may have concerns about the ICT material, the curriculum, or the education system as a whole. The task concerns could be explained as concerns about "it" which refer to non-human factors. Finally, the impact concern is considered on the CBAM framework as a high level of concern, whereby teachers reach this type of concern when they have experience in using ICT. This experience makes them focus on the impact of using ICT on the students. At the same time, teachers have some concerns towards their colleagues (other teachers and the principal) and how to support them in using ICT. The impact-concern seems to be more related to the relationship between teachers, leaders, supervisors, students, and parents. It related to human factors, hence it refers to "we" or "they".

All these concerns existed in the three levels of culture and the root of some concerns are coming from the other levels of culture. For instance, teachers

have concerns about the effect of the exam pressure. This is a task concern at the organizational level, and at the same time, this concern might stem from the national level of culture and the collectivist nature of that society. According to Hofstede's model, the purpose of education in the collectivist society is 'how to do'; in other words, 'how to pass exam' rather than 'how to learn'. In addition, as reported in the previous chapter, the data showed that exam pressure was used by some participating teachers to manage the classroom and manage student behaviour. Therefore, the factor 'exam pressure' was found to have an influence at the three levels of culture at the same time, as shown in Figure 7.2.

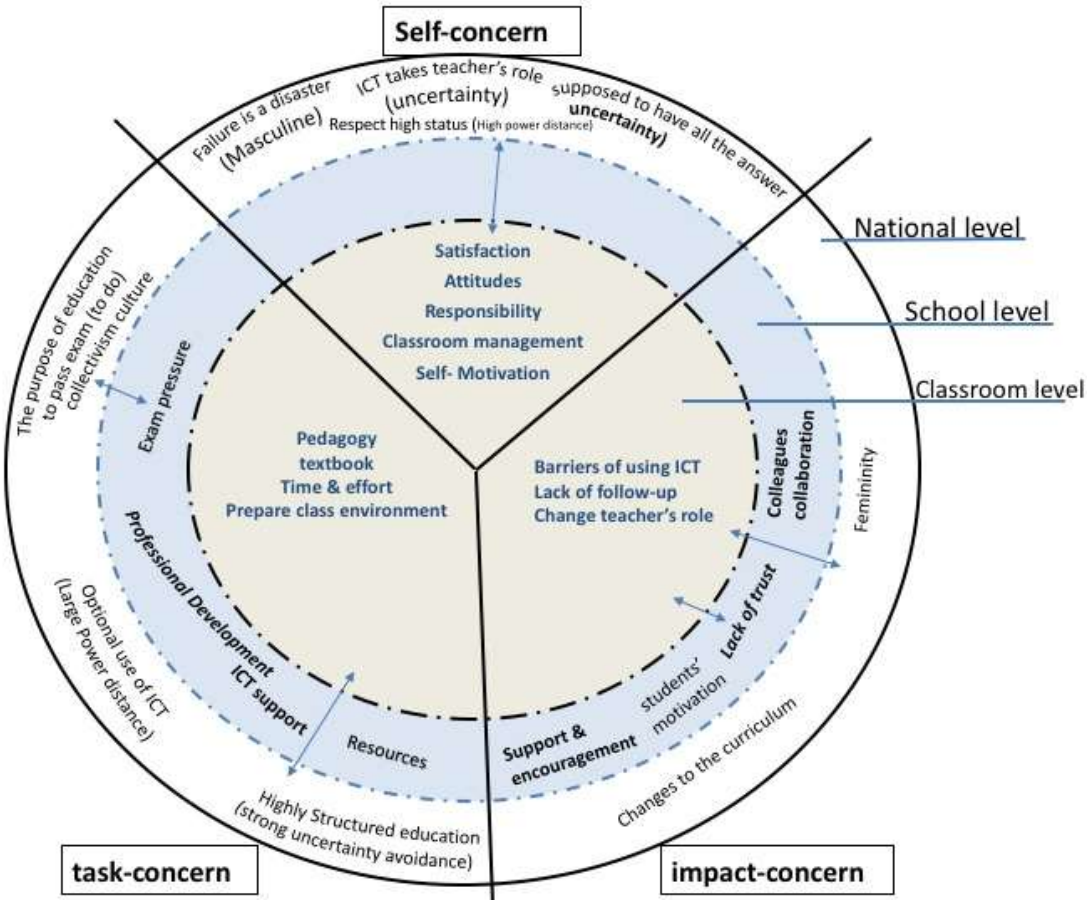


Figure 7-2: Model of Cultural factors affecting the use of ICT

The representation derived from the findings, as shown in Figure 7.2, is different from other frameworks suggested by previous studies (Ertmer & Ottenbreit-

Leftwich, 2010; Tearle, 2002; Zhao et al., 2006) in at least two ways. First, in the current model, the national level of culture has been studied with the school culture and the individual level. Some of the previous studies have studied the organizational culture level without relating it to the national level (Ertmer & Ottenbreit-Leftwich, 2010; Tearle, 2002; Zhao et al., 2006) while other studies focused on the national level separately (Alamri et al., 2014a). However, the findings of this study (see Section 6.5 p.171) have demonstrated that the national level is considered as a prominent factor affecting individuals (teachers), which is consistent with conclusions from previous studies (Albirini, 2006; Kedia & Bhagat, 1988; Mansour, 2013) who emphasised on the significant effect of the national level on individuals. The second feature of this improved model is that it considers the national level with the other levels (school and classroom). Showing the three levels of culture at the same time may help to show more clearly how societal factors differ from one society to another due to the differences between the national culture dimensions as suggested by (Hofstede & Hofstede, 2010).

Therefore, when comparing two schools or education systems from different countries, it is important that the two national cultures are nearly similar based on the Hofstede's dimensions model. For example, when needs to improve the use of ICT on Saudi teachers, we need to find another successful model that applied in another country. This country should have similar characteristics in terms of national culture and a model would be needed to compare between cultures, such as Hofstede dimensions. The Saudi culture dimensions, according to Hofstede, are: collectivism, high power distance, masculinity and uncertainty avoidance. Therefore, it should be compared with a country with a similar culture as Saudi Arabia. This is because, choosing a country from a very

different culture from Saudi Arabia, such as Finland for example, can be problematic as their national culture is characterised by individualism, low power distance, and femininity in society. Saudi teachers are not similar to Finnish teachers although the school level, and the classroom level factors may be similar.[3] For instance, some teaching method can be successful in individualist cultures such as Finland while the same teaching method might not be effective in collectivist cultures such as Saudi Arabia while it could be suitable for Finnish students. These practices could not be the similar that teachers will do in Saudi school regarding to their different national culture because their practice is based on their culture (Hofstede & Hofstede, 2010).

Hence, I argue that using the current model of culture can help to explain why research tends to suggest that individuals' use of ICT is based on their belief or religion (Albirini, 2006; Mansour, 2011). In other words, while most features of ICT are created by other cultures (western countries) which are differs from the teachers' culture, teachers will measure the features of ICT based on the three levels of culture, the national culture, the school culture, and the classroom culture. Therefore, the national culture drives the teacher's activities including their use of ICT.

7.2.3 Culture divided by concern

The Figure 7-2 shows the relationship between the three levels based on the teachers' concerns (i.e. self-concern, task-concern, and impact-concern). This figure is more like a pie chat rather than a circle figure, because the aim of the current study is to explore the current level of ICT use among the participants

[3] For example, the Khebrat project sent teachers to foreign countries to gain experience from other teachers as a type of professional development. One of these countries is Finland see: http://www.utu.fi/en/news/news/Pages/Saudi-Arabia-Develops-Its-Education-by-Seeking-Ideas-from-Finland.aspx

and how the participants are located in this model. It does not aim to develop their use, as suggested by the CBAM which views the use as a process rather than an event (Anderson, 1997).

The self-concern section of this diagram is the first concern that can be found in two levels: the national and the classroom levels, which suggests the strong relationship between these two levels. For example, while the teachers have concerns about the fact that the use of ICT might impact negatively on their classroom management, as reported by two teachers (SC1E-NF, SC2A-NA) who do not use ICT, they thought that because they believe that students should have a great respect for the high status of teachers because the Saudi society, according to Hofstede, is characterised by a high-power distance national level. The participants' concerns about the fact that using ICT might be a reason to lose classroom management also relates to the classroom level. Losing classroom management is a result of what those participants think about 'the high-power distance society' in which students should have a high respect for teachers. This result tends to show that the Saudi culture is similar to what the Hofstede dimensions suggest, as explained in section 4.3.2.2 p.88 (see Figure 4-5). This result is consistent with findings from (Alamri et al., 2014a; M. Hakami, 2015) demonstrating that Saudi users' cultural characteristics are similar to Hofstede's dimensions. However, the current study does not aim to examine Hofstede's model that characterises Saudi culture, but used this model because it was found to be more reliable.

On the other hand, the task-concern section of the diagram shows the relationship between the three levels (the national, the school, and the classroom levels) because teachers' concerns relate to "it'", that is, their job, system, policy or the ICT tool. For example, as Saudi Arabia can be considered

as a collectivist society, the aim of education is how to pass the exam. Therefore, exam pressure was a strong factor that was found in the school level and the classroom level (6.5.2.2.4 page 202). This result is consistent with (Chen, 2008; Li, 2014) who conducted their studies both in China and Taiwan which considered both collectivist societies based on Hofstede's model. This constitutes an evidence that the national culture dimensions should be considered when comparing the results of studies insofar as some countries are nearly similar on the national dimension while others are very different in terms of national characteristics.

The third part of the chart is the impact-concern which relates to the relationship with others, hence the "we" or "they". The relationship with the school leader was the main factor in this group. As shown in chapter 6 (Table 6-17 page 213), most participants have a concern of this type, especially with regards encouragement and support factors. These factors were widely reported in studies and include, for instance, the Ministry of education support (Alenezi, 2015), peer support (Binothman, 2015; Younie & Leask, 2013), leadership support (Binothman, 2015; Salinas et al., 2017); Vanderlinde et al., 2014) and the relationship with supervisors (Salinas et al., 2017). Thus, the human factors are powerful factors that are the cornerstone of the factors affecting the use of ICT. This result is consistent with (Albion, Tondeur, Forkosh-Baruch, & Peeraer, 2015) and supports the findings of (Kedia & Bhagat, 1988) that the national culture shapes the cognitive process affecting behaviours. This might be the reason why some participants do not like the school environment because of the lack of support they receive, which makes them feel unhappy with their job (chapter 6 section 6.5.3.2.1 page 213).

It is difficult to consider one level of culture alone without considering the other levels and how these cultures affect participants when using ICT. This result is consistent with (Myers & Tan, 2002) who state that the different levels of culture are often interconnected and intertwined.

The three concerns are related with the three levels of culture: the national, the school and the classroom levels. The three concerns can be understood within a relationship between the three levels of culture insofar as every concern is related to more than one level of culture. For example, the self-concern was found to affect the classroom culture, as shown by the teachers' attitude, satisfaction, self-motivation, and management of the classroom, as reported in the data analysis (see section 6.5.1.1 page 177).

This new result that integrates the three levels of culture holistically has not been pointed out in the existing literature and relates to more than one level of concern. In order to gain a good understanding of the socio-cultural factors, it is essential to be aware of the different levels.

The findings also tend to suggest that factors might play several roles in different levels as explained by the ecological perspective: "because the process of technology adoption is one of co-evolution, a factor may play different roles at different times" (Zhao & Frank, 2003, p. 831). This explains why one quotation was coded in different levels of culture and was thought to be relevant to different of themes. For example, "exam pressure", as described earlier (see section 6.5 page 171), is related to the task concerns at the school level, and at the same time, to "failure is a disaster" under the theme "Self-concern" at the national level.

7.3 The Type of Concern and the Level of Use

As discussed earlier, the type of concern relates to three levels: the self-concern, the task-concern, and the impact concern. Based on the research data, participants were divided into three groups; (1) non-users, (2) routine-users and (3) integrated users. It was found that each group emphasises on one type of concerns. As shown in Figure 6-21, most concerns of non-user participants were considered self-concern. This might be because the self-concern is the first concern that teachers have when they think about using new materials. This result is consistent with (Hall, 2010) who found the first concern is the self-concern then the task concern and lastly, the impact concern. This result constitutes an evidence that indicates a relationship between the non-user and the self-concern.

The three levels of use found in the data were: (1) the non-use, (2) the routine-use and (3) the integration use. While the non-use level includes teachers who do not actually use technology regardless of who has an orientation to use technology or not, the routine user refers to the one who has skills in using technology and has used it for two to five years. The integrated teacher, however, is the teacher who is able to use technology individually and able to help his colleague. This division according to the type of user is consenting with (Hall, 2010).

Moreover, the data show a linear relationship between the level of concern and the level of use as shown in Figure 7.3. Just like the use level evolves from non-use to routine use and, lastly, to the integration use, the type of concern also moves from the first type, which is the self-concern, to the task concern and, lastly, the impact concern. The first level of use (the non-use) was found in the current data to be related to the first type of concern, the self-concern.

Furthermore, the next level of use, that is, the routine use, has a relationship with the task and impact concerns. With regards the third level of use, the integration of use, the participants at this level had impact concerns. These results are consistent with (Hall, 2010) and support the CBAM model. The findings from the current study are considering the levels of use as three levels while in the CBAM contains seven levels of use, as shown in Table 3-2 page 59.

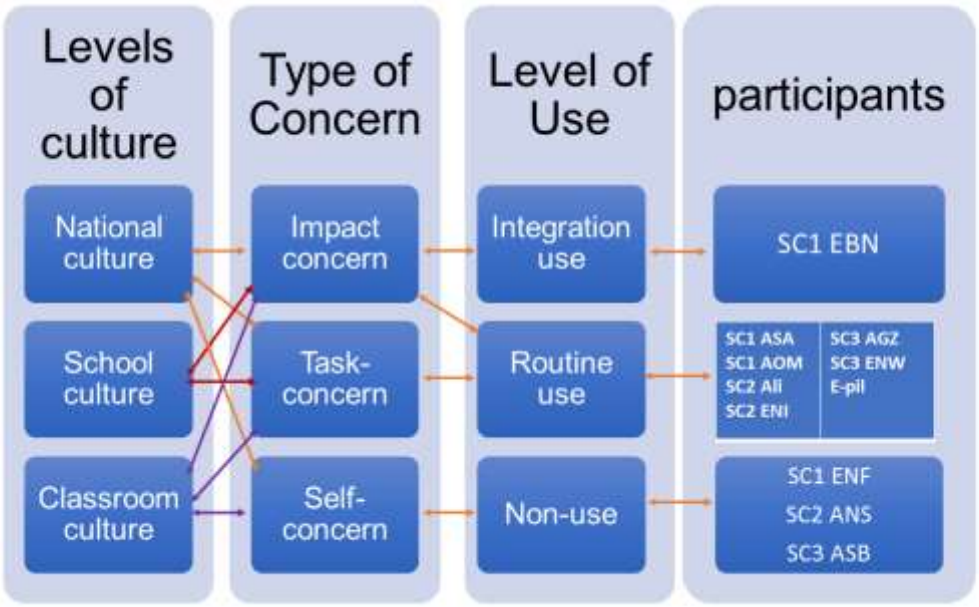


Figure 7-3: the relationship between the level of culture and the participants.

This figure describes how every level of culture affects the teachers' concern and how these types of concern determine the level of use of ICT. This evidence from the data suggests that participants can be divided based on their level of use. Therefore, only one teacher (SC1E-BN) was considered an integrated user of ICT, and three participants (SC1ENF, SC2A NS, SC3A SB) were deemed non-users of ICT in their classrooms. Seven teachers out of eleven can be considered routine-users.

7.4 Improving Teachers' Level of Use

The theoretical model of the current study (Figure 7.2) aims to locate the participants to the three groups; non-user, routine user, and integrated user. However, based on the CBAM model, these levels of use are considered a process more than an event. This means that the non-user teachers might become a routine user, and the routine user might become integrated user. But not in the reverse. This means that to improve teachers use of ICT, we need to see the type of concern as a stage which CBAM model suggested.

When change the type of concern to stage of concern the process will be a linear relationship. The teachers who are non-user will become a routine user when their self-concerns are limited. They could be reaching to the integration level when they could limitation their task and impact concern, as seen in Figure 7-4.

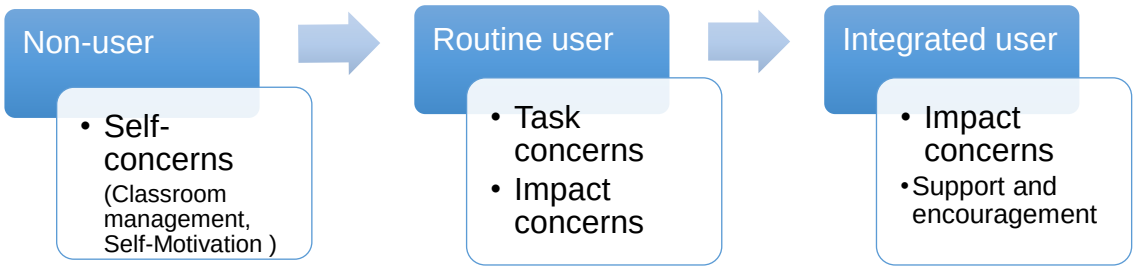


Figure 7-4: the process of improving the teachers' level of use.

As shown in Figure 7-4, I argue that the value of exploring the level of participants use of ICT will help develop their use when considering the factors of every concern. Teachers might improve their use when they are able to respond to their concern. Their concerns begin with the self-concern, such as their attitude towards using ICT in their teaching. Then, when they have responded to their self-concern, they deal with the task concern and the impact

concern. These results are consistent with the literature (Zhao & Frank, 2003) that considers teachers' attitudes toward technology as key factors affecting their use.

An integrated user is the one who could solve issues of his tasks or asks for support and encouragement from his school leader. He also may ask for some kind of appreciation or acknowledgement when he thinks that he performed an extra duty or task which is not required by the education policy. These finding are consistent with (Salinas et al., 2017) who found that the teachers needs acknowledgement from the school administration, and this factor helps them to achieve a high level of ICT adoption. For example, the teacher (SC1E BN) seemed this type of the user. Because, as data shown, this teacher found that he expressed limited concern about other factors. This, therefore, is an evidence that the impact concern operates at a higher level than the self-concern. This finding supports the results by Hall (2010) and it is consistent with the CBAM model that starts from the non-use level to the renewal level (see Table 3-1).

From an ecological perspective, the school with more opportunity for teachers to help each other is more likely to use technology (Zhao & Frank, 2003) and therefore improve teachers' usage of ICT. These aspects were found to be essential factors that affect the current study's participants use of ICT.

7.5 E-Learning to attain the Integration Level

Only one teacher (SC1EBN) out of eleven in this study could be considered as an integrated user. He reached this level as he was able to integrate the students' role in his lesson whereby every student seemed to have an active role in his class. Students also have to respond to his queries by email and

send their comments to the teacher. Every student seems to be taking responsibility for his own learning.

The teacher used ICT as part of the learning environment and uses high affordances of ICT tools as a form of e-learning. E-learning is defined as “information and communication technologies used to support students to improve their learning” (Ellis, Ginns, & Piggott, 2009). E-learning takes different forms; it could be a completely digital learning environment which includes ICT tools or students completing quizzes and tests using digital tools rather than on paper (Christensson, 2015). Teacher SC1EBN used ICT as presentation tools, in addition to assessment and evaluation tools. Successful integration, according to (Tondeur et al., 2009), occurs when assessment and evaluation are included in ICT use as a form of e-learning.

Consequently, the use of ICT as this level helps to achieve active learning, which is, as mentioned earlier (section 2.10), a national project of the Saudi MOE, the idea being that every student has a proper role in his or her own learning.

Using E-learning, therefore, is a method that could be called the integration level and when teachers reach this level of use, they can be called integrated users. Likewise, this use of e-learning will ensure that students become active learners whereby everyone has to respond to his or her own learning and communicate with others in order to acquire new knowledge and skills.

The use of e-learning is considered a transformation of the pedagogical practice and this change increases the richness of teaching and learning. This result is consistent with the results of Al-Harbi (2014) that all learners need to compete with ICT skills to become fully engaged in social activities and by fulfilling this aim, a transformation of pedagogical practices can occur.

Resources and infrastructures are offered in the three cases, according to the technical support (PIL-RES). It just needs to be adopted by the MOE, then teachers can use E-learning. Hence, e-learning can be considered as the level that every teacher should gain. According to Aljaber (2018), e-learning in Saudi universities is a success because it is suitable to the students' needs. For instance, it can be beneficial to shy students who are uncomfortable with class participation. This result of the Aljaber study relates to the university level.

However, the students' age of this study should be considered. Therefore, the full e-learning could fail at this age (13-15 years old), which is what happened in the "Tatweer 1" project (see 2.10), because students still need to improve their writing and reading before using a high level of e-learning. Therefore, blended learning that combines the use of e-learning alongside traditional teaching might be the best choice to integrate ICT with pedagogy. Teaching methods such as collaborative learning could be used inside the classroom in order to achieve active learning. For example, this could be done by using e-learning for homework with collaborative learning. Hence, students may be active learners with peers both in the classroom and at home online. Thus, the level of integration of ICT can be achieved.

7.6 The Relationship Between Professional Development and Peer Support

The most significant issues emphasised by the participants relate to training as a type of professional development and the encouragement and support from the school leader and colleagues, as shown in the data table (see Appendix Four: Task Concern). Both factors, professional development and peer support, occur at the school level environment. However, while professional

development is considered as a task concern, the encouragement and peer support relate to the impact concern because it is more related to the impact of relationship with the school members.

The literature supports this aspect of the data from the participants that training is a significant factor that affects the use of ICT (Salinas et al., 2017; Vanderlinde et al., 2014; Younie & Leask, 2013). In the current study, most participants had concern towards the quality of training and nine of the elven teachers' participants believed in the effect of training while being unsatisfied with the quality of the current training provision. This issue will be discussed at two levels: (1) the value of formal training and (2) the type and the quality of the current training courses.

Based on the data, participants reported that they were not satisfied with the actual training provision within their local regional education authority because of its formal nature and its focus on theory rather than practice. In other words, training was described as out of date according to the participant SC2ALI. This is consistent with the theoretical framework of the study whereby the ecological perspective assumes that formal training does not help teachers to use ICT as much as the support from colleagues and friends (Zhao et al., 2006). Also, this finding supports the ecological perspective's claim that "district training does not yet seem to have had a significant impact on technology uses in schools, although it could become a significant factor at a later stage" (Zhao & Frank, 2003, p. 828). This might be true in the current cases where teachers asked for help from colleagues or LRC specialists. However, this finding seems to contradicts previous studies which have suggested that no evidence to show a relationship between technology adoption and the perception of support from colleagues (Salinas et al., 2017). This study has been conducted in three Latin

American countries where the national culture differs from the current study's culture. In addition, the number of participants of this quantitative study was 89 in the three countries and the researchers also suggested further research to be conducted through a qualitative study. However, in the current study, teachers asked for help with a specific issue or sought technical advice using a mobile application such as WhatsApp. Therefore, in doing so, teachers create a community of professional development.

The second issue reported by the participants is that the training courses are conducted by supervisors who are not professional trainers or that course are conducted by non-professional trainers. This is a main weak point of the training, as reported by participants. These results corroborate the findings of a great deal of the previous work in (Binothman, 2015; Younie & Leask, 2013) that they found the peer support as a peer trainer is more effective because teachers learn more from their colleague than from non-teacher agent.

The type of training courses is found affecting participants. Participants were looking to the implementation of ICT in the pedagogical practice. The lack of knowledge in regard to pedagogical practice and ICT is a factor that seemed to have limited the benefit of the training courses. This result is similar to what has been reported by teachers in Saudi schools (Alblaihed, 2016; Binothman, 2015); The reason for this lack of pedagogical knowledge might be linked to the fact that most teachers use ICT as a presentation tool only and not as an environment of learning such as e-learning.

Theoretically, the ecological perspective states that "technology use and learning practice evolve together" (Zhao et al., 2006). Thus, using traditional pedagogies, such as the lecturing approach, encourages the use of ICT as a presentation tool. In other words, if students have a negative role within the

traditional class, they cannot become active learners when teachers merely use ICT without changing their pedagogical approaches.

In addition, technology helps to establish what is called a “community of professional development” (Li, 2014) among teachers of the same subject. This community of professional development was found to be informal through WhatsApp groups for teachers who work at the same school, for example. The other kind of community of professional development for teachers from other schools took the form of a formal group, as reported by English and Arabic supervisors (section 6.5.2.2.1). This community of professional development might help to improve teachers’ skills and encourage them to explore new ways of using a software. However, teachers have different views and different uses of these groups. These results are similar to the outcomes of other studies (Li, 2014).This community of professional development appeared successful between the teachers of the same subject, such as Arabic language department, because the Arabic supervisor was encouraging teachers to upload their own materials which may be developed other colleagues.

Students held views towards using the community of professional development. All four groups in the three cases admitted that they used classroom groups on WhatsApp, but mainly as a new communication tool, instead of using the telephone, as explained by (SCH1ST). The groups were administrated by a teacher who created these formal groups because he could monitor the content of the group. However, some students reported that they do not like these formal WhatsApp groups because teachers are administrators. In order to contact each other informally, students created new groups without the teacher to help each other with the homework.

The second aspect that emerged from the data and with which most participants have concerns is the notion of peer support. According to certain participants (Pil-E, S1ASA), teachers have three types of relationships in their school. The most important aspect is to have a good relationship with the school leader because the school leader has a role to play in every activity inside the school. The second most important aspect of relationship affecting teachers' use of ICT is the support from the technician with the daily technology issues that arise. This is because teachers sometimes give up using technology when they face technological problems. The third group reported by participants is the other teachers in the same school. These aspects have been reported in the literature in relation to the same context (Alblaihed, 2016; Binothman, 2015).

Participants believe they should obtain help from other colleague and felt they do not get this kind of support because the school leader does not encourage classroom observations between teachers. This type of professional development, as reported by SC1AOM, does not encourage teachers to improve their usage of ICT because they do not have the opportunity to use new methods. Therefore, the school leader plays a main role in terms of both professional development and peer support.

7.7 Learning with ICT or Integrating ICT

As the professional development was criticized by the participants of this study (see Chapter Six, page199). The issue is that the MoE and the schools emphasise on the importance of integrating ICT in the teaching while teachers do not have the knowledge for such integration. Thus, there is a lack of ability to integrate technology for several reasons relating to different levels of culture.

First, at the national culture level; the Saudi education system is very centralised, and the main purpose of learning is to pass exam as it is a collectivist society (Hofstede & Hofstede, 2010). Hence, according to Hofstede's model, people might focus on gaining a certificate rather than on how much the students learn. In addition, at the school culture level, the lack of quality training and the lack of support from the school leader and colleagues were considered as factors that limited their ability to integrate ICT in learning, as reported by the participating teachers. This limitation of teachers' ability can be explained by their need to see a real model of integration of ICT by a colleague in an actual lesson and thus, follow his strategies. Finally, at the classroom level; Arabic teachers who participated in this study reported that they do not know how to integrate ICT in their lessons, and that the classroom environment does not help to integrate ICT. For instance, the students' desks are shaped and placed in a way that is mainly adapted for individual study, which suits the lecturing approach to teaching.

Thus, several issues seem to limit the use of ICT effectively. Such as, the meaning of integration of ICT with the curriculum is one issue that explains why some participants such as SC3-ASB, SC2-ANS do not use ICT and why other participants use ICT as a presentation tool. These participants recognised the fact that they do not know how to integrate technology in their lessons and that they use basic affordances of ICT. This result is consistent with the study conducted in Saudi schools by (Alblaihed, 2016) and also supports the literature, such as the study by (Albion et al., 2015; Lee, Hung, & Cheah, 2008) who found that the guidelines on how to integrate ICT in teaching and learning are too weak.

Therefore, the integration level, as suggested by the study's theoretical framework, is a high level of adoption of ICT into teaching and learning. For example, teachers will reach the integration level when they are able to apply ICT tools into the curriculum and create new tools to include in the instruction process. This description of integration is similar to the claims of (Salinas et al., 2017) whereby the teacher's creative application to a new context is a high level of adoption of technology into the curriculum. Hence, teachers can apply what they know about technology in the classroom and are able to use technology as an instructional tool by integrating it into the curriculum. This, therefore, is consistent with the ecological perspective that assumes that the major factor of success in using ICT in school is based on the quality of the ways technology is used (Zhao & Frank, 2003)

As mentioned in the findings (section 6.6.5.3 page 234), only one English teacher out of eleven teachers was considered as an integrated user whereby he created a new ICT application such as Google class and used it for many years. He was also using emails to communicate with his students or send and receive materials. In doing so, he was able to engage students in active learning through the use of ICT tools. This kind of use 'the integration' was rare in Saudi schools.

Teacher SC1E-BN seemed in advance compared to his colleagues in terms of ICT use, which can be considered as an evidence to support the ecological perspective principle that to reach quality, technology users (teachers) usually need more time to practise on the new material. This is the one characteristics of the integrated user in the current study, whereby he tested using Google Classroom for a period of three years. The ecological perspective assumes that the long time spent by teachers in using the same materials enhances the

quality of technology use (Zhao & Frank, 2003). Therefore, the current use of ICT as a presentation tool does not seem to achieve the integration level.

7.8 Culture is Stable or Dynamic

Figure 7.2 shows the socio-cultural factors from the direction of the participants' concerns because the theoretical framework obtained from the literature (see Figure 7-1) which suggested that the socio-cultural factors are related to three levels of culture: the national, institutional, and classroom level. The benefit of looking from this different angle is to divide the three levels of culture based on participants' concern as these factors are different based on the three levels of culture. These factors themselves change from time to time. For example, when the school leader is changed many school level factors will change also. This situation also is similar at the classroom level.

However, the national culture is similar for all participants as they all belong to the Saudi culture but only some participants reported some national factors. The national culture seems to be stable and does not change. However, participants have several interpretations of the same factors. For instance, some participants do not use the internet in their classroom because the teacher was a female (SC3ENW) while other participants (Pil-Res) saw this factor as an old aspect and expressed the view that no one cared about the feminist. Nowadays, because we use technology widely in our life, it might be acceptable to use film at the school that lead by a female teacher. This result supports the findings of (Myers & Tan, 2002) that the national culture is dynamic and not stable because the culture is considered "as something that is interpreted and re-interpreted, and constantly produced and reproduced in social relations" (Myers & Tan, 2002, p. 10). It seems to be a guide for the individuals' reaction.

Theoretically, this change in the school culture and the effect on the national culture are consistent with the ecological perspective view that when the new technology is being used in a new ecosystem (a school) it will face resistance to change and the teacher will calculate the costs and benefits of adopting technology, which means that “their calculation is based on perception rather than reality” (Zhao & Frank, 2003, p. 831). Thus, the cultural factors which found in the current study might affect some teachers and do not affect other based on their perception.

7.9 Culture affects the use of ICT or is Influenced by the Use of ICT

Nowadays, ICT tools are widely used for communication purposes. This study focuses on the effects of culture on using ICT in the classroom. However, the culture itself is influenced by using ICT. As the data showed, changes occur in the school culture such as using ICT for students’ registration or sending report to parents. Change could also be noticed in the classroom culture whereby some participants reported that they could not teach without using presentation tools (SC3AGZ-SC2ASA). In addition, reducing the light in the classroom in order to clearly show the presentation was an example as a change in the classroom culture.

The most difficult aspect to observe was the influence of using ICT (particularly the effects of using social media) on the national culture. The changes at the school level and the classroom level were easier to observe and most participants in their classroom changed their teaching and depend on using ICT. As the national level is dynamic, it is slowly changing and needs years to observe change. For example, as reported in (Chapter Six 6.5.2.1), the

education system encourages students to use computers and most students' participants use their smartphones and the social media. They reported that they are not interested in learning about computer programs as they considered this as a kind of formal learning which should be learnt in school. On the contrary, they felt that smartphones applications and the social media are more interesting as they can use them in their daily lives.

This issue might explain the ecological perspective's idea that technology is an active agent, and not necessarily "a slave to the pedagogical master" (Zhao et al., 2006, p. 141). Therefore, using ICT contributes to change in terms of the classroom culture and the school culture in the short-term. At the same time, it allows for changes at the national level in the long term. For instance, several changes occurred to the national culture due to the widespread use of social media whereby people have learned about different cultures through interaction with other people from different countries.

7.10 Conclusion

Based on the research question of the current study, this chapter has discussed the main socio-cultural factors that emerged from the data, as highlighted in the Findings Chapter. Six main issues were discussed in order to make sense of the main findings. The most important finding was the new theoretical framework model suggested whereby I argue that this model may cover the most important points that relate to the socio-cultural factors.

The second important finding is the relationship between teachers' aspects of concern and their level of use. Hence, the suggested theoretical framework may work as a guide to improve teachers' level of use. Based on the teachers' level of use, the actual use of ICT revolves around the issues of "learning with ICT" or

“integrating ICT”. In this regard, the most important factors reported by teachers and discussed in this thesis relate to the relationship between professional development and peer support.

E-learning has been found to be a suitable way to gain the integration level for the teachers and at the same time students can become active learners thereby achieving the MOE goals. Finally, just like culture affects the participants’ use of ICT, at the same time, culture is influenced by the use of ICT. Hence, as discussed above, culture seems to be dynamic.

The above discussion the findings has resulted in a new framework for understanding the effects of culture on using ICT in the classroom. This study also has a number of implications and recommendations including suggestions for further research .The next chapter concludes this thesis and discusses the implications and limitations of this study.

8 Chapter Eight: Conclusion

8.1 Introduction

The previous chapter presented and discussed the main findings of this study. This chapter summarises the main findings, provides answers to the research questions and presents the contribution to knowledge of this research in terms of theory and practice. It also presents the implications of the study for policymakers and for practitioners and highlights its limitations. It also makes several suggestions for possible future research and the thesis concludes with final remarks. This chapter ends with a reflection on my doctoral research journey.

8.2 Overview of the Study

This research was conducted in three intermediate boys' schools in Arrass city in Saudi Arabia and its primary focus was to explore the socio-cultural factors that affect teachers' use of ICT in the classroom and to investigate how these factors affect teachers. Previous studies explored the school factors and classroom factors (Binothman, 2015; Tearle, 2003; Tondeur et al., 2009; Vanderlinde et al., 2014; Zhao & Frank, 2003) or the national factors (Al-Gahtani et al., 2007; Myers & Tan, 2002; Nistor et al., 2014; Siakas & Mitalas, 2004). This study, however, integrated the three levels of culture and suggested a new theoretical framework to study the socio-cultural factors.

This study aimed to fill a knowledge gap by studying all three levels in a single research to explore the relationship between the three levels (Gallivan & Srite, 2005). It also aimed to investigate the effects of these factors on teachers' use

of ICT. Therefore, the analysis of qualitative data and the study's theoretical framework helped to answer the following questions:

Research question 1: What are the socio-cultural factors that influence students' and language teachers' usage of ICT in their schools?

The findings related to the socio-cultural factors indicate that the factors from the three levels of culture (national level, institutional level, and classroom level) were reported by teachers as concerns. These concerns were divided into three types: self-concerns, task-concerns, and impact-concerns.

The findings also showed that self-concerns contain factors such as teachers' attitude, satisfaction, teachers' responsibility, classroom management, and self-motivation, which are related to the classroom level. It also contains other factors from the national level such as respect for high status, failure is a disaster, ICT takes teachers' role, and teacher supposed to have all the answer.

The findings also point out that the task concerns contain many factors (pedagogy, textbook, time and effort, prepare a class environment) which relate to the classroom culture. The task concerns also contain factors such as the exam pressure, professional development, ICT support, and resources, which are factors related to the school level. However, the factors such as the purpose of education to pass the exam, optional use of ICT, and highly structured education are factors related to the national level.

The third type of concerns are the impact-concerns. This contains factors such as barriers to using ICT, lack of follow up, and change of teachers' role, which are related to the classroom culture. The factors such as the encouragement and support, students' motivation, lack of trust, and colleague collaboration, are related to institutional culture. Lastly, the factors such as changes to the curriculum, and femininity are related to the national culture.

Research question 2: How do students and language teachers use ICT in their schools?

The findings show that the majority of students have no role in the use of ICT in school. Few students use the internet in the LRC for their homework in Arabic such as research about famous scientists. Nonetheless, the students of the integrated user (SC1EBN) used emails to send their homework.

The findings also divide teachers into three types of users of ICT in the classroom based on their concerns about ICT use: (1) the non-user teachers who were three out of eleven teachers in this study, (2) the routine users who constitute the majority of teachers and (3) the integrated users, only one teacher out of eleven teachers.

Research question 3: How does culture affect students and language teacher usage of ICT?

The findings and the theoretical framework showed the effects of culture on using ICT at school. Most effects were negative ones. Individuals concerns, or self-concerns were strong factors. Using the three levels of concerns is helpful to divide teachers based on their use. The current findings suggested three levels of use: (1) non-use, (2) routine use, and (3) integration use. The non-user teachers were found to have more self-concerns towards using ICT. This result is evidence of the strong effects of self-concerns and that it could prevent the use of ICT. Thus, teachers who have these concerns are usually non-users. The routine user is the second level of use. Seven out of eleven participants in the current study have reached that level; they use ICT as a presentation tool. Thus, their use is considered as a low pedagogical level (Alblaihed, 2016; Binothman, 2015). This group of users have task-concerns and impact-concerns. Their self-concerns are limited and do not have a strong effect on

their use of ICT. These teachers, probably the majority of teachers, are still at this level because they have self-motivation, but most factors reported in the current study affected their use. Finally, the integrated user is able to integrate ICT into the curriculum. The students of that type of user have an active role in learning through ICT. For example, students have the opportunity to contact the teacher and their classmates outside the classroom. This group of users has concerns towards the support from the school leader, which is an impact-concern.

Research question 4: What are the intermediate school students' and language teachers' views about using ICT in teaching and learning?

The findings demonstrate that the students like to study via ICT when they have a role. Some students surprisingly prefer traditional teaching because of the use of ICT as presentation tools do not change their role. In addition, the technical issues might affect the lesson and waste time; therefore, some of them like traditional teaching. The findings also show that all participating teachers have a positive view toward using ICT in the classroom despite their using ICT or not. The use of technology helps them by saving time and efforts; for example, they do not need to spend time for writing on the board. However, this positive view is not enough to influence them to use ICT.

From these results, the main contribution of this study relates to the effects of socio-cultural factors on using ICT with particular respect to Saudi Arabia.

8.3 Main Contribution

The findings of this study made a significant contribution in three respects: a theoretical contribution, a practical contribution to the existing knowledge and a methodological contribution.

8.3.1 Theoretical Contribution

The current study aimed to raise awareness of why culture matters and how we can study socio-cultural factors. Therefore, this required the use of a design or model to investigate these factors. The model suggested by the current research (Figure 7.2) is based on multiple frameworks from the ecological perspective, Hofstede's model, and the CBAM model. This multiple-framework model provides a conceptual framework that could be useful to study the surround circumstances of the use of ICT in the classroom. It may be helpful when used as a guide while investigating similar cases or comparing between two cases. This study makes a substantial theoretical contribution to the existing knowledge, as it presents the socio-cultural factors from a holistic view of culture.

The new model is designed to cover most of the socio-cultural factors at different levels at the same time. This is because taking every cultural factor at the same time helps to investigate the cause of the individuals' actions. In addition, there is a strong relationship between the factors from different levels. This model (Figure 7-2) covers the three levels of culture and could be seen as a new version of the ecological framework. The new elements of this model are the national model and the metaphor of the CBAM model.

The national model of the ecological perspective covers societal factors such as religion, morals, values, and traditional culture. While these factors are difficult to determine, the present framework suggests using an international model which has been adopted to the Saudi culture. Therefore, Hofstede's model was used because its dimensions are determined and known, which helped to focus on the effects of these dimensions.

The second theoretical contribution of this study is the involvement of the CBAM model in the study theoretical framework. The reason for using the CBAM model was to investigate how the cultural factors affect using ICT. Based on this model, the cultural factors were divided according to the teachers' concerns. Three main concerns were borrowed from the CBAM model: the self, task, and impact concerns. These concerns led to a modification of the ecological model (See Figure 7.1) into a new model.

The new model, therefore, has shed light on the sociocultural factors from a different angle as it investigates socio-cultural factors based on teachers' concerns. These concerns can be divided into three types: self-concerns, task concerns, and impact concerns. In addition, this model could be useful to determine the teachers' use of ICT based on their concerns. This multi-layered model constitutes a contribution to knowledge because it shows that teachers with more self-concerns are likely to be non-users. On the other hand, teachers with more concerns towards their tasks are likely be routine users. Lastly, teachers who have more concerns towards the encouragements from the school leader and supervisors might be referred to integrated users, as shown in Figure 8-3.

8.3.2 Practical Contribution to Knowledge

One of the objectives of this study was to describe the levels of teachers based on their use of ICT in the classroom. The findings are noteworthy to investigate the relationship between teachers' level of use and their type of concerns. The findings have shed light on the relationship between the non-use level and the self-concern. The results also showed the relationship between the routine use level on the one hand and the task concerns and the impact concerns on the other hand. The integration level of use has been found to be affected by the

support and the encouragement from the school leader. The relationship between the three levels of use on the one hand and the three types of concerns on the other is the major contribution to the existing knowledge, especially in the Saudi context. the CBAM and previous studies illustrated the seven types of concern and seven levels of use as mention earlier (see Figure 3-5). Therefore, the three types of concerns and the three levels of use are more suitable and clearer for studies with fewer participants. Most studies based on the CBAM involved administering questionnaires amongst hundreds of users so they used seven levels of use and eight stages of concern. However, as this study, being interpretive, does not have great numbers of participants, using the seven levels of use was not deemed not suitable because some levels of use might not fit to any participants which be questioned. Therefore, no reason to use such these level if no participants fit to these level (see Table 8-1).

The second contribution of this study is practical, as it draws on the suggestion by the study's participants that the students need to be given a role by using technology in their study. They recommended that they could design some lessons to present in their classroom. This recommendation by students could help them to be an active and improve their skills as computer user, and at the same time, this can enhance their understanding of the lesson by individual learning. The students who are able to design presentations might improve their classmates' work by sharing their computer skills. At this point, students could achieve the active learning stage which was described earlier in Chapter Two.

8.3.3 Methodological contribution

The third contribution is at the methodological level. Interpretive research methods such as interviews, observation, and focus groups have not been

extensively used in intermediate schools in Saudi Arabia. This study established the basis for further research. For example, intermediate students in Saudi Arabia, in general, have not been expected to speak freely about their teachers in the presence of someone they are not familiar with. Therefore, this study, from a practical view, suggests using focus groups as an alternative method to individual interviews with Saudi students. It has been found that students encourage each other and are more relaxed about adding rich information to the data.

8.4 Implications and Recommendations for Policy and Practice

This study has several implications for practice and policy inside and outside the Saudi context. Recommendations can be made based on the findings that analysed data from the direct users of ICT in the school, namely, language teachers and intermediate school students. Several recommendations were made by participants (teachers and students) in order to improve the use of ICT in the classroom as they faced several obstacles when they use ICT in the classroom. Other recommendations can also made from the interpretations of the study findings and the review of the literature.

8.4.1 Implication for Policymakers

The Saudi education policy requires teachers to integrate technology in their classroom without any clear description of how achieve this. Teachers, therefore, use technology based on their own understanding of integration. The findings have shown that most teachers use technology as a presentation tool because they might think that is the level of integration of ICT with teaching. Hence, students' role is still absent. Therefore, language teachers asked for a

clearer policy that describes their role and students' roles in this process of integration of ICT.

The MOE should understand the complexities of cultural influences on the use of ICT in schools. Therefore, they should consider these factors when launching a new project such as "Active learning", as discussed in Chapter Two. The considerations of these factors can help them adopt these new projects based on the cultural complexities of Saudi schools.

The shift from teacher-centred to learner-centred approaches, such as active learning, is limited by the national cultural values of teachers such as the strong power distance. Therefore, national cultural values should be considered when studying the reasons behind resistance to the new pedagogical methods as teachers need time to accept changes. The support of the school leader played an important role to improve the integration of ICT in the learning process and pedagogical methods should be improved in order to integrate ICT into the curriculum.

Using a national model such as Hofstede's framework to investigate cultural factors might help to determine the specific factors which could affect the society, and in turn, education. This view helps to compare educational systems from different societies. By using the current model, by comparing between two schools from different national dimensions, differences of ICT use will be expected based on the teachers' national cultures. In addition, when the MOE decides to adopt a new method for using ICT which has been successful in other countries, they should be focusing on countries that have a very similar national culture than Saudi Arabia. The differences in using ICT between two schools from different countries can be expected because the national culture affects individual users. Therefore, the national culture should be considered

when studying the organisational culture such as the school culture. For example, when the Saudi MOE adopts a new successful model obtained from different countries, they should focus on two aspects: (1) the success trial itself and (2) they should be careful to choose a society that is very similar to the Saudi society. This choice should be based on any national model, such as Hofstede's model. This is because if we compare between two schools from different societies, the two societies should be convergent and close to each other so that schools' cultures can be compared. However, if there are very significant differences between the two societies, the comparison between two schools from different cultures is unreliable and inaccurate, as the results of the Finland trial.

Training is one way to improve teachers' skills. However, the findings point to several implications for teachers. Firstly, the training courses are usually held in training centres, which makes teachers leave their school. This situation affects the school's and teachers' plan. Therefore, teachers prefer to hold training courses at their school in an intensive way. The second issue with training is the trainer himself/herself. Teachers suggested that the trainer should be a teacher who has a successful experience of using ICT. They do not like trainers focusing on theory without practical experience in a school. The findings also showed that teachers prefer to observe colleagues who are able to integrate ICT in their lessons, to emulate their experiences in their own lessons. It is therefore strongly recommended that policymakers and administrators develop training based on the teachers' views and needs.

Moreover, the curriculum should support the integration of ICT, not as an add-on or as a presentation tool only. ICT tools should be considered in pedagogical methods. Hence, these tools should be used at the level of integration within a

framework of teaching principles, such as using ICT within an e-learning environment

Although students in the English curriculum are still not playing an active role, the project of improving the curriculum appears to be somehow successful. This project could be replicated to improve other curricula such as the Arabic curriculum. As reported in Section (6.6.5 p. 234) a technical support staff (PilRes) stated that the materials and infrastructures of e-learning as a kind of "ICT integration" existed in every school but the MOE did not encourage the change to e-learning. The MOE could encourage many trials of e-learning which were successfully implemented by teachers, but the MOE ignored these trials. The MoE could also empower school leaders to reduce the level of bureaucracy. The school leaders can lead teachers towards involvement in the integration process. The school leader as a cornerstone of the Saudi school should create a clear plan for his school, as they are part of the Tatweer project.

8.4.2 Implications for Institutional Practice

All staff should know and understand the complex factors that affect using ICT. This understanding will help them make clear decisions and avoid the factors that affect using ICT. The study has implications for school leaders, supervisors and teachers.

The school leader should also support the community of professional development which already informally exists in the school among teachers. Likewise, supervisors should create a community of professional development. Teachers should observe a variety of examples and models to gain more knowledge about integrating ICT into the curriculum (Ertmer 2003). The e-learning experiences of some teachers should be adopted to examine the advantages of using technology for students. This use, as a form of "active

learning", should be the aims of the integration of ICT. The e-learning as a learning environment would be the level of integration when providing an assessment and evaluation of students' learning. At this level, it could be considered a successful integration (Tondeur et al., 2009).

Likewise, teachers themselves should encourage their colleagues who have self-motivation and knowledge about ICT integration, such as SC1-EBN who reported his concerns about the lack of support from his leader and from his colleagues, as explained earlier in Chapter Six (see Section6.6.5.3). Teachers should commit with a community of practice with their colleagues from other schools in order to improve their use of ICT and, in turn, improve their students' learning. This community should upload materials from every subject that other teachers could use or improve in a way that suits students' needs.

At the classroom level, the implications are usually related to the teacher's role and the relationship with students. Teachers should improve their skills in ICT and the aim of their lesson should determine the aims of their use of ICT. They should try to use ICT as an environment not just as tools, so students can have an active role. Students' response is the key factor for active learning, which may happen when teachers give them a chance to contribute to the lesson using external resources from the internet as a form of self-learning and homework because there is usually only one computer in the classroom.

The project of "active learning" (as described in chapter 2) that found is adopted in the three cases aims to shift learning from teacher-centred to student-centred. This essential goal can be achieved if teachers shift their role and become facilitators. They could achieve this position when they adopt "active learning". When the teacher is able to change his pedagogical method to be learner-centred, ICT use will evolve with the pedagogical method, based on the

ecological perspective. This means that ICT tools will shift from being mere presentation tools to become part of an environment of learning. Within the forty-five-minute-lesson time, teachers cannot be sure that every student is active. Hence, using ICT applications such as Google Classroom can allow every student to play a role in his learning. Students, therefore, can enjoy their learning more because they are active.

E-learning can be a major factor that helps teachers to change their pedagogical approach and become facilitators. When teachers use e-learning, such as the Google classroom tool, every student has to respond to the material, through homework for instance. Students also have the opportunity to engage with the lesson individually. They can use ICT tools to learn and have fun as well. The experience of English teacher SC1EBN was very helpful when his students could respond to the lesson using the Sony PlayStation console. The students, therefore, were active learners and their use of ICT made a difference in the learning process and in their role.

8.5 Limitations of the Study

This study has several limitations. The first limitation, as mentioned earlier in the Methodology Chapter, is that the data collection was conducted over three months during which every school case was investigated for only three weeks. The limited time available to complete this research may have had an impact on the study's results. The second limitation is that this study followed an interpretive approach using a case study methodology. While interpretive research does not aim to generalise results (Wellington, 2015), it may generalise a model (Yin, 2013). Hence, the present study did not aim to generalise its result, and the new theoretical framework needs further examination in different societies before it could be used. However, using the

same factors in another region could help illustrate in a comprehensive manner how socio-cultural factors could affect the use of ICT. Using another approach such as the mix-methods approach and survey would provide more varied data from a larger sample from different schools.

The study also relies on the teachers' perspectives, supervisors, school leaders, and students' focus groups. This could be seen as a limitation as it could have been more valuable if other participants were involved such as students' parents, and stakeholders. Involving more participants might provide richer data about the culture.

In addition, the school level and the gender are considered limitations as this study relied on the data from the three intermediate school in Arrass city in Saudi Arabia. The particular culture of these schools which might differ from the culture of other schools at various level in the same city such as primary schools and secondary schools. This study also has been conducted at boys' schools because it is difficult to access girls' schools as gender segregation operates in the Saudi education system. This is another limitation of this study.

Finally, the factors found in the current study are based on a limited number of participants from a particular area, Arrass region, in Saudi Arabia. In other regions of the country, these cultural factors may not be the same because, as mentioned earlier, culture is dynamic.

8.6 Suggestions for Future Research

Future research should be investigating the socio-cultural factors at the three-levels at the same time and examine the current improved model. Research should not address the factors of every level alone without considering the whole picture of culture. Both quantitative and qualitative studies should be

conducted to investigate the current factors and examine these factors in other schools, especially in Saudi Arabia. Researchers could see the current model as a process model that starts with the self-concerns, then task-concerns and lastly, impact-concerns. When using it as a process model, it can improve the teachers' use of ICT by addressing every factor. Future research could examine if the teachers' concerns determine their use of ICT in teaching.

In addition, researcher brought a high-quality example for integration ICT because the term *interaction* should be clearly defined. Researchers should address the impact of different factors in order to reduce negative attitudes towards using ICT in the classroom. Researchers could study the factors that make teachers resist new pedagogical methods such as the "active learning" project. These factors might be derived from different levels, especially the national values.

Likewise, researchers could also focus on several successful experiences in schools and investigate the main factors that allowed teachers to successfully integrate ICT in the classroom. For example, in this study, the experience of English teacher SC1E-BN who was able to integrate the ICT in his classroom is worth studying. Hence, by determining the factors which help teachers to integrate ICT successfully, educators may be able to treat the barriers and the factors negatively affecting the use of ICT in teaching and learning. A new research question could be: how can teachers successfully integrate ICT in their class? Hence, research could also investigate the factors that help teachers to successfully integrate ICT in their class.

Lastly, the findings suggest that culture is dynamic and influenced by ICT. New research should investigate the differences between the cultural factors reported in previous studies and the cultural factors affecting the current

generation. The research questions could be: how does technology affect the school culture? What are the effects of technology use on culture?

8.7 Final Remarks and Personal Reflection

I conclude this story saying that the socio-cultural factors play a main role in integrating ICT in teaching and learning. To ensure success of this integration an “if the” narrative can be told: if the teacher has the motivation to use ICT in teaching, if the curriculum is designed to integrate ICT, if the stakeholders find a way of marrying teachers personal concerns and motivations with the policy goals (Hammond, 2014) or if the school leaders support teachers to use ICT. When these conditions have been met, the integration of ICT in learning might be possible.

I have come to the end of this four-year journey, and after finishing my MA in instructional technology from King Abdul-Aziz University in Saudi Arabia, I thought I had learned scientific research in the social sciences. However, I was concerned about the generalisation of research results. My concern related to controlling the different variables. After some years, I was encouraged by the ministry of education in Saudi Arabia to do my PhD in a great international university such as Exeter University.

When I started the first year of this PhD programme, I faced many challenges. The first challenge related to academic language and to new philosophical concepts such as ontology, epistemology, and research paradigm. This new experience was completely different from my first Master’s degree experience in Saudi Arabia. Thus, in the first year, I found it hard to think critically because of my national culture and its large power distance, which is characterised by more respect towards high status (see section 3.3). I realised this after studying

Hofstede's model. Then, I found that this model could help me interpret my cultural values and in turn, interpret my actions. I used this model to compare between the reactions of colleagues from different cultures. I conclude that this model has some logical interpretation of culture, so I used it to interpret the study's participants culture.

Moreover, the most interesting experience was to adopt an interpretive approach. Indeed, as soon as I felt I understood this approach, I realised that this was the approach I needed to adopt in research. This approach shifted my focus from the experimental view to the interpretive one. Also, before I started the PhD, I was focusing on the use of web 2.0 in the school as an experimental study. I wrote many draft research proposals as I was interested in this area for professional reasons, as during the last ten years I was an educational technical support staff in different schools. Therefore, I thought I could design new materials on web 2.0 and observe their effects on the students' learning. This new experience with the interpretive approach has changed my area of interest to focus more on the existing experiences of ICT use in Saudi schools. I read about the factors and barriers to using ICT in the classroom and found that the literature reported socio-cultural factors. However, there was a lack of details about which cultural factors, and how to deal with these factors. I looked at these factors from another angle and I asked myself why such factors have not affected certain teachers within the same school and from the same culture. Hence, I thought that there might be something missing in relation to the socio-cultural factors in the Saudi School and outside

During the first year of my PhD journey, I aimed to improve my skills and my knowledge about educational research in general and about my area in particular. I attended many training courses and presented at local and

international conferences. The feedback from the audience was helpful and provided me with different views towards the response to the culture. With the recommendation from my supervisor, Dr Wegerif, and from many researchers and colleagues, I found this topic interesting and useful as an educational technical support staff, and for the education field as it can add an important contribution to our understanding of the use of ICT in schools.

The different experiences and skills I earned during this PhD journey positively shaped my academic and as well as my personal growth. My responsibility after completing this journey, is to take these experiences with me back to Saudi Arabia as a repayment of the support I got from the Saudi government. Likewise, I consider this thesis as the beginning of my academic research as I am hoping to pursue research in ICT and link research with practical action by training teachers and help them acquire new skills and experiences.

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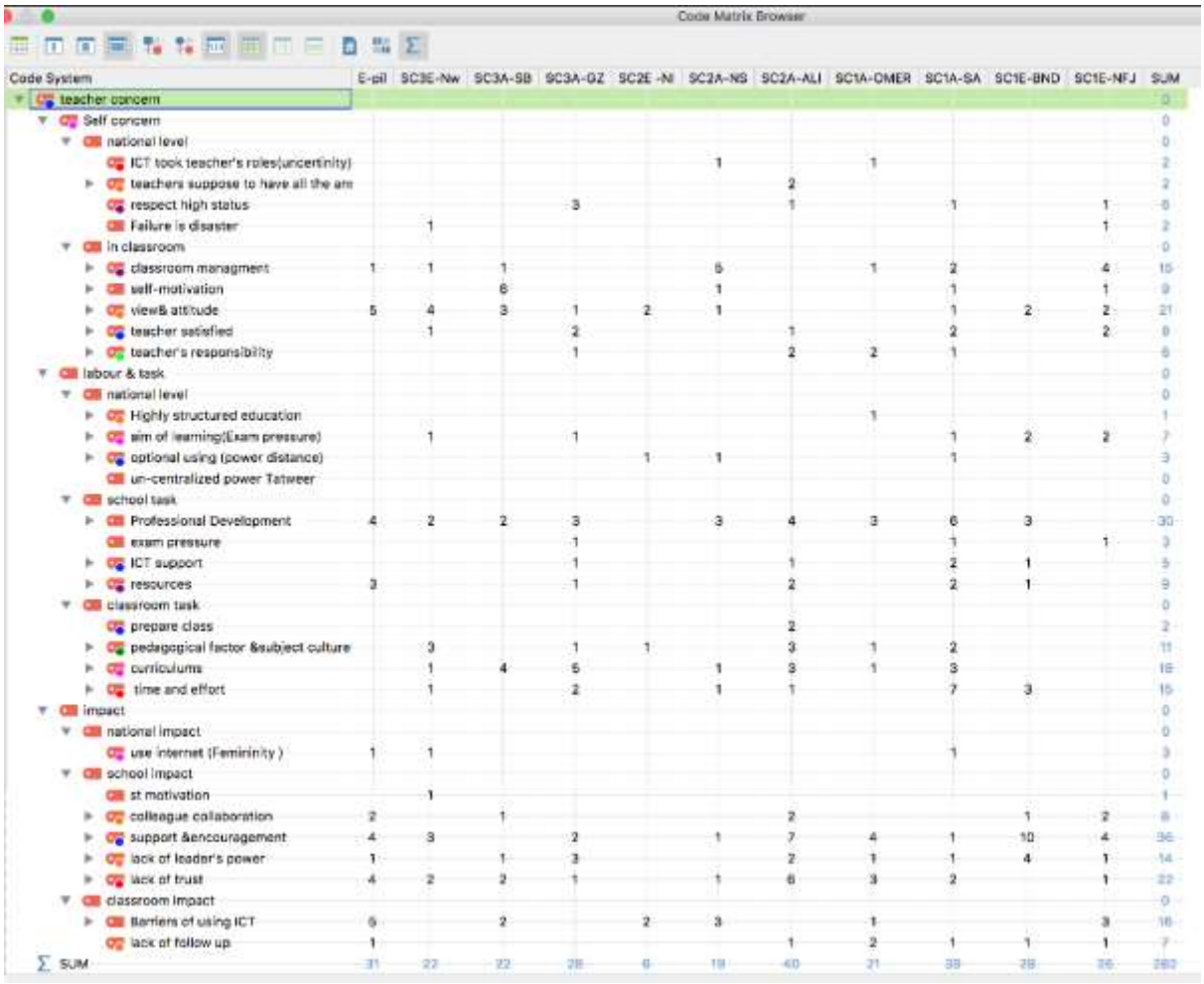
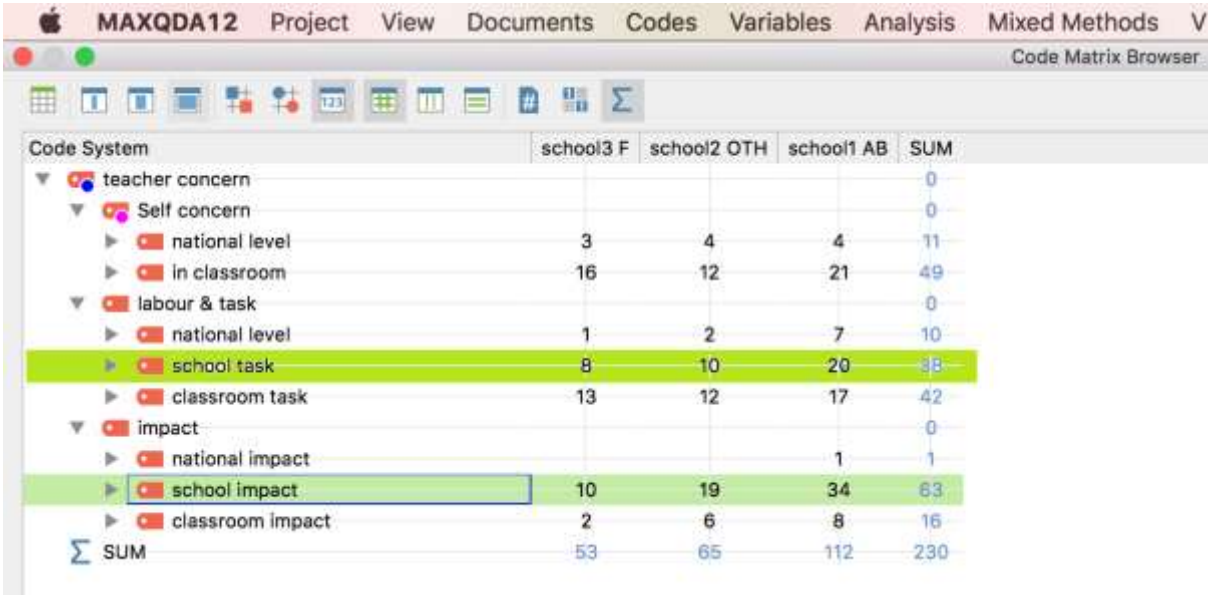
Appendix One: Codes and themes



Code System	E-pil	SC3E-Nw	SC3A-SB	SC3A-GZ	SC2E -NI	SC2A-NS	SC2A-ALI	SC1A-OMER	SC1A-SA	SC1E-BND	SC1E-NFJ	SUM
teacher concern												0
Self concern												0
national level												0
ICT took teacher's roles(uncertinity)						1		1				2
teachers suppose to have all the an							2					2
respect high status				3			1		1		1	6
Failure is disaster		1									1	2
in classroom												0
classroom managment	1	1	1			5		1	2		4	15
self-motivation			6			1			1		1	9
view& attitude	5	4	3	1	2	1			1	2	2	21
teacher satisfied		1		2			1		2		2	8
teacher's responsibility				1			2	2	1			6
labour & task												0
national level												0
Highly structured education								1				1
aim of learning(Exam pressure)		1		1					1	2	2	7
optional using (power distance)					1	1			1			3
un-centralized power Tatweer												0
school task												0
Professional Development	4	2	2	3		3	4	3	6	3		30
exam pressure				1					1		1	3
ICT support				1			1		2	1		5
resources	3			1			2		2	1		9
classroom task												0
prepare class							2					2
pedagogical factor &subject culture		3		1	1		3	1	2			11
curriculums		1	4	5		1	3	1	3			18
time and effort		1		2		1	1		7	3		15
impact												0
national impact												0
use internet (Femininity)	1	1							1			3
school impact												0
st motivation		1										1
colleague collaboration	2		1				2			1	2	8
support &encouragement	4	3		2		1	7	4	1	10	4	36
lack of leader's power	1		1	3			2	1	1	4	1	14
lack of trust	4	2	2	1		1	6	3	2		1	22
classroom impact												0
Barriers of using ICT	5		2		2	3		1			3	16
lack of follow up	1						1	2	1	1	1	7
SUM	31	22	22	28	6	19	40	21	39	28	26	282

Appendix Two: Comparison between the three schools

Comparison between the three schools' impact on teachers



Code System	school3 F	school2 OTH	school1 AB	SUM
teacher concern				0
Self concern				0
national level	3	4	4	11
in classroom	16	12	21	49
labour & task				0
national level	1	2	7	10
school task	8	10	20	38
classroom task	13	12	17	42
impact				0
national impact			1	1
school impact	10	19	34	63
classroom impact	2	6	8	16
SUM	53	65	112	230

Appendix Three: Self concerns

self-concern

Number of participant-reported codes of self-concern in the classroom.

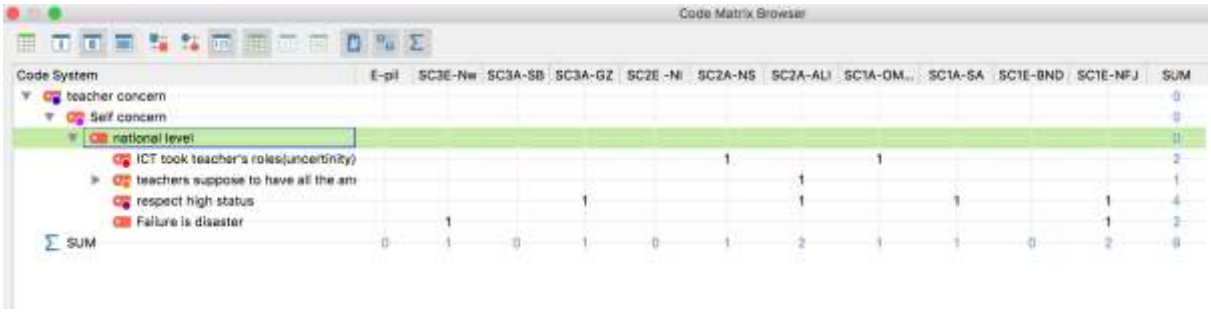


Figure 8.7-5: Codes of self-concern in national culture

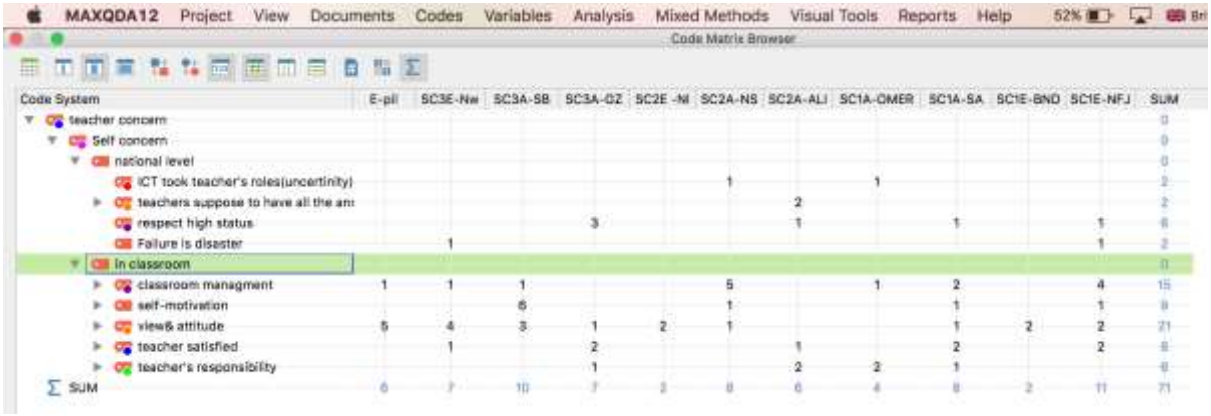
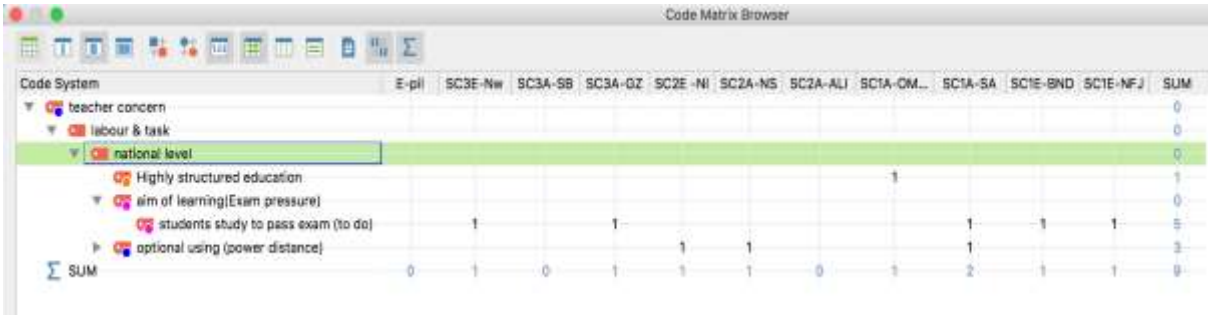


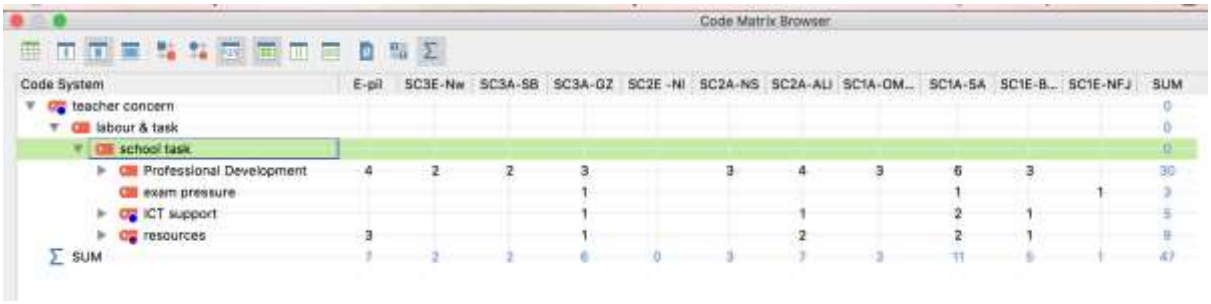
Figure 8.7-6: Sub-themes and codes of self-concern

Appendix Four: Task Concerns

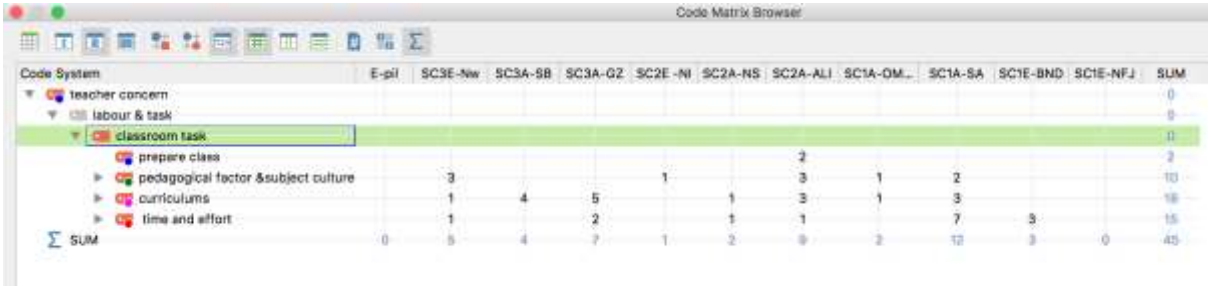
1- Task-concern in national level

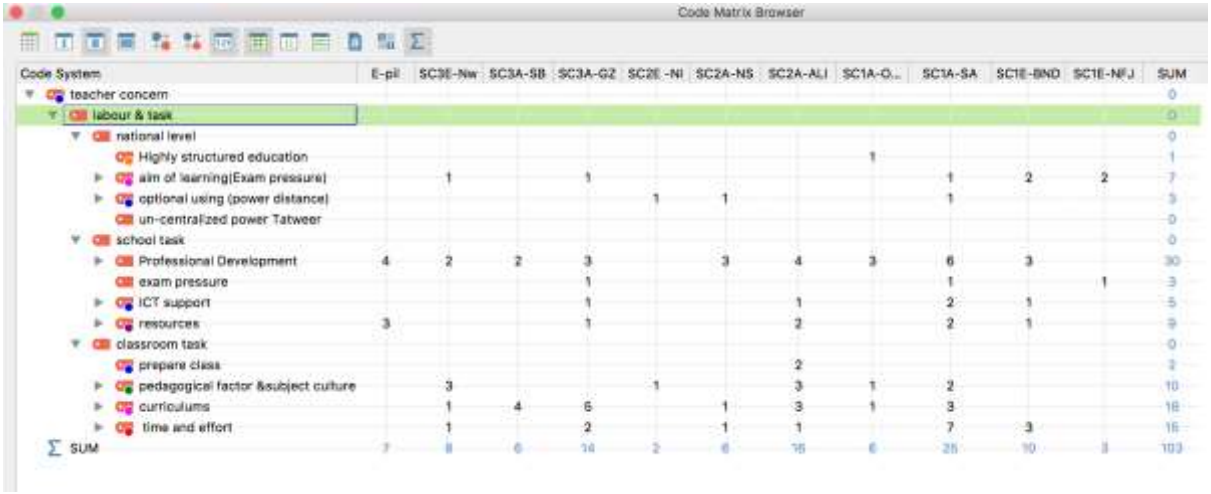


2- Codes of task-concern in school level



2- Codes of labour and task concern- classroom level





Code System	E-pil	SC3E-Nw	SC3A-SB	SC3A-GZ	SC2E -NI	SC2A-NS	SC2A-ALI	SC1A-O...	SC1A-SA	SC1E-BND	SC1E-NFJ	SUM
teacher concern												0
labour & task												0
national level												0
Highly structured education								1				1
aim of learning(Exam pressure)		1		1					1	2	2	7
optional using (power distance)					1	1			1			3
un-centralized power Tatweer												0
school task												0
Professional Development	4	2	2	3		3	4	3	6	3		30
exam pressure				1					1		1	3
ICT support				1			1		2	1		5
resources	3			1			2		2	1		9
classroom task												0
prepare class							2					2
pedagogical factor &subject culture		3			1		3	1	2			10
curriculums		1	4	6		1	3	1	3			18
time and effort		1		2		1	1		7	3		15
SUM	7	8	6	14	2	6	16	6	25	10	3	103

Figure 8.7: Sub-themes and codes of task concern.

Appendix Five: Impact Concerns

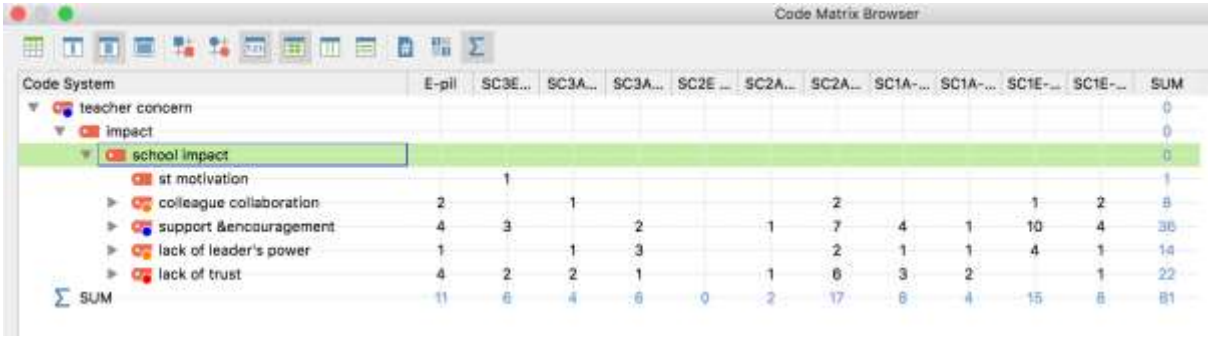


Figure: Codes of impact concern - School level

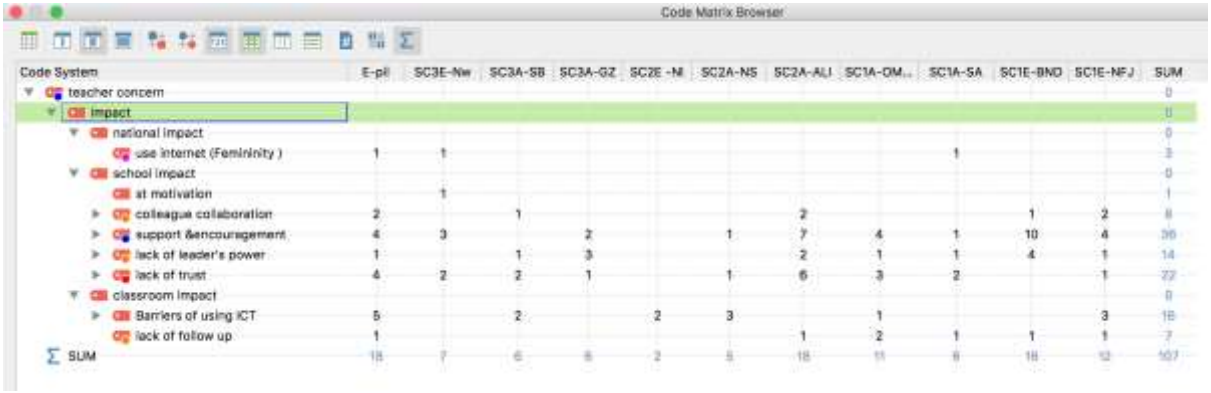
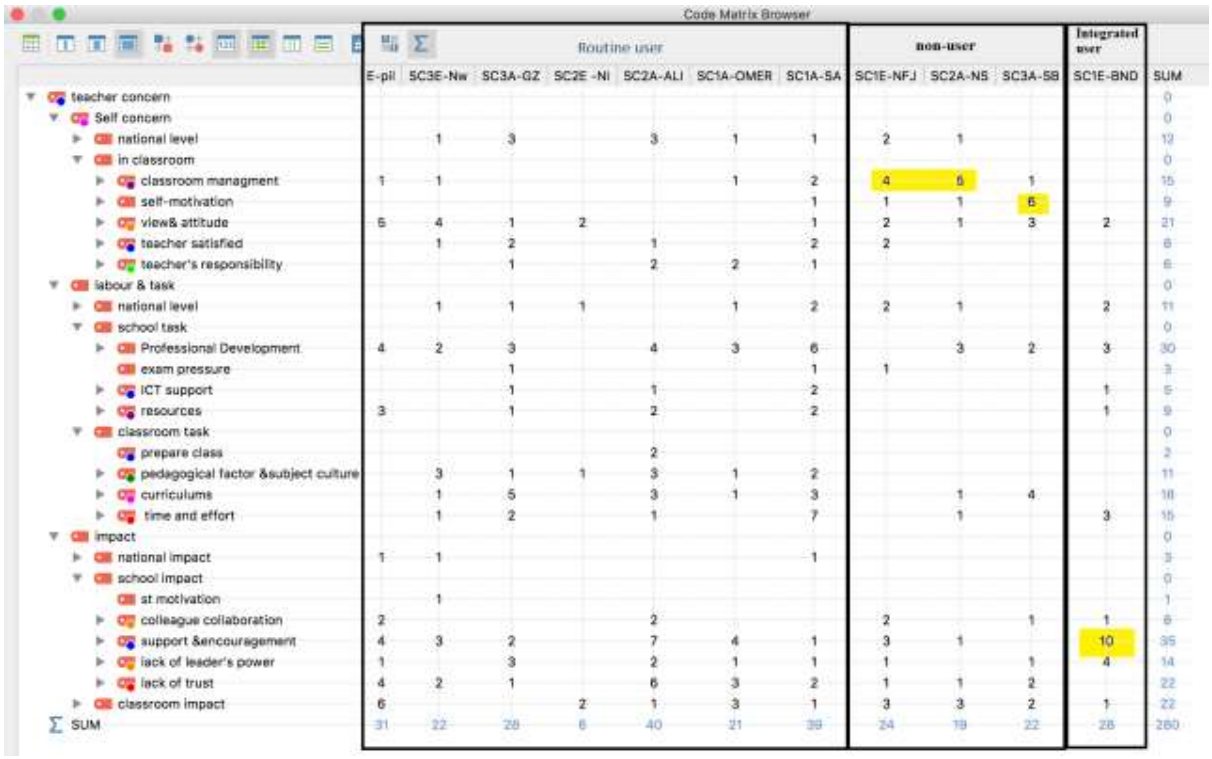


Figure: Sub-themes and codes of the impact concern

Appendix Six: Types of Users



	Routine user							non-user			Integrated user	
	E-pil	SC3E-Nw	SC3A-GZ	SC2E -NI	SC2A-ALI	SC1A-OMER	SC1A-SA	SC1E-NFJ	SC2A-NS	SC3A-SB	SC1E-BND	SUM
teacher concern												0
Self concern												0
national level		1	3		3	1	1	2	1			12
in classroom												0
classroom managment	1	1				1	2	4	5	1		15
self-motivation							1	1	1	6		9
view& attitude	5	4	1	2			1	2	1	3	2	21
teacher satisfied		1	2		1		2	2				8
teacher's responsibility			1		2	2	1					6
labour & task												0
national level		1	1	1		1	2	2	1		2	11
school task												0
Professional Development	4	2	3		4	3	6		3	2	3	30
exam pressure			1				1	1				3
ICT support			1		1		2				1	5
resources	3		1		2		2				1	9
classroom task												0
prepare class					2							2
pedagogical factor &subject culture		3	1	1	3	1	2					11
curriculums		1	5		3	1	3		1	4		18
time and effort		1	2		1		7		1		3	15
impact												0
national impact	1	1					1					3
school impact												0
st motivation		1										1
colleague collaboration	2				2			2		1	1	8
support &encouragement	4	3	2		7	4	1	3	1		10	35
lack of leader's power	1		3		2	1	1	1		1	4	14
lack of trust	4	2	1		6	3	2	1	1	2		22
classroom impact	6			2	1	3	1	3	3	2	1	22
SUM	31	22	28	6	40	21	39	24	19	22	28	280

Appendix Seven: Interview schedule

Interview schedule's aspects.

Initial questions: Satisfaction	Beliefs:	: Policies	: Challenges
Pedagogy:	Experience and skills:	Religious and moral factors:	
Actual usage of ICT:	level of using ICT	Availability and Access:	
School culture and Relationships:	With Headteacher:/Students:/Other Teachers :		

<u>Example interview (translated)</u>

<u>NS(Arabic teacher).</u>

-Personal ID

(….. NS), a teacher since1422 (Hijri Islamic calendar), means that I have been in this job for 17 years, but I have been here in this school just for 4 years.

- Did you choose this school?

No, this is not my choice; I came here because my employment contract is there, despite the fact that I found this place among the best schools in the area.

- What do you think about teaching process?

I think that education is better now than before. There have been difficulties in education because it depends on the theoretical curriculum, but now it depends on practical ones. So, students way of thinking become better, however, there are shortening in the materials than before as you may find in a unit now little dictation and other less things.

- Which curriculum is the best, is it the modern or the former one?

Certainly, the experts put it only because it is better and that the first is over-detailed, but there is a special need for some students whose educational foundation is weak for details, and indeed, I don't know if the cause of this weakness whether from the student himself or the family or the former teacher, and I don't suppose that.

-What kind of weakness do they have?

Reading problems for the students on the year eight is the main weakness. they really have, but I organized a training program to strengthen their weakness, and the last year they have improved a little bit, but I noticed that their level returned as bad as before. Every year, this happens despite that I struggled to achieve this level with them, and I expect that the previous long vacation that extend for 4 months was the main reason, in addition to the parents Lack of interaction.

-Have you used any technical tools to raise their level?

I have no communication with them outside the school, only used the “file of achievement”, when looking for signs and let them read it, but there are 3 of the 77 students who have bothered me by their level and I could not find a solution, and the rest are excellent, as I always make sure to make them read and write, and provide them with information and topics that are common on the society talks.

I motivate them to follow these issues on Twitter and YouTube, and I talked about it freely with the students in the class, and by the end of each unit, I open a discussion between the students in front of their colleagues and gave them 5 marks in return, so all of them interact. Sometimes, I request from them to explain a lesson after me and gave the one who initiate to take this role 2 marks.

- Have you tried the group system with them?

Yes, but the problem is the inconvenience of each student wants to choose a colleague, also there is an issue of time because the material is long, for instance, if you entered the classroom and formed groups, you would need 5 minutes to do this, and when I finished my class, the teacher came after me needs to reorganize them to the first position also.

To make a long story short, we know that this is a better way for teaching if these negatives haven’t exist, as we figure out that every unit has 2 or 3 topics require this groups system, as the most parts on the subject need this method, despite the fact that it can motivate the students to derive ideas as each one shares with an idea from his side and allow among the groups an honest competition.

-Do you use technical devices in your classroom?

Sometimes, if I had a reading lesson, I would open the passage and display it on the blackboard, if it contains (Quran) or some poetry to be read by all the students. And in this case, I formed groups by dividing the classroom vertically not circularly to two parts, So, that the first students section repeat the first part of the poem verse and the second section repeat the other part and memorize the text in this manner.

This is my most usage of the device and this is a little, because I have to take my lessons in the resource center and most of them solutions for existed questions in the book so if you wanted a solution by your opinion you would need time, but I have a plan to design something like that in the future.

- Is this not available in the Internet?

The existing one is just a personal effort that may not correspond to your vision and explanation way, despite the great dedication of her creator, I did not find something suitable for me and the level of students, and I do not want to take the effort of other one.

What is your vision of the benefits of technology?

Technology is useful and helps students. For example, when the teacher uses PowerPoint with pictures, it draws more attention of the students. But I see it distracts (the attention of) some students because the teacher will be busy near the computer, he could not see students in front of the class, especially when it is required to reduce the light. so you need to control the classroom But it helps them (students) to understand.

Also, the difficulty of using the technology sometimes face us, as I didn't take any course in some of this technologies from which I hope I can use, is the smart board, but I do not know.

- Do you know other programs like PowerPoint?

Yes, but as a use not as a design, and I can type in Word.

- Did you attend any courses?

I did not attend courses and I do not know whether there are any courses, or it may be announced in a time that is not suitable, as we are keen to finish the long subject and this is the most important goal.

- When was the last course you attend?

Since 8 or 9 or 10 years ago, I would like to have a session on the Smart board, but the projector does not need a session just you have to run it, and if the computer has a ready program, I do not need to learn a new thing, because nobody doesn't know how to use computer.

- Are you sure that the smart blackboard will benefit your subject?

I do not know the features of the smart board and I did not see anyone deal with it, I need to write on it, so do the usual blackboard with the projector will fit instead of it, I also do not know.

- As a teacher of "my language" and you have texts in the book, do you use technology, especially audio to read those texts and the Quran?

No, I read them by myself and sing poems, as many of them have heard, for example I was able to sing them a poem name" Oh,,Khalid" on a tune they all know, and other one called " ……." and within five minutes students can memorize it because the melody is known to them, if I delivered my speech as it, they wouldn't keep it ,so I always use sweet Poems on a common melody that is known to students such as "……", which made them catch it quickly.

Some do not like this method because it is seen as strengthening the attachment to poems and lyrics, but I see that the goal is developing the student skills in memorizing their material by any means.

- In the last units of the book a research about famous characters, where do you ask students to do research?

They search on the internet, and I give them two options either go to the library or use the internet, because the internet is not in the classroom.

- Did you teach them how to search on the web?

Yes, so that the student writes the name of the hero and sets the most important features that distinguish it, the most important battles if he is energetic, his writings, his life, and his inception. And write to them on the blackboard.

- Did you teach them how to search in Google for example with quotation marks?

No, I did not tell them about it, just write in Google and find it.

- What is your action when the student searches in front of you and get some malicious advertisements?

I advised the students and I told them that before as I said “we open YouTube and put the poem and at the bottom of the screen there is an advertisement that may contain things that are not good and you do not want so you are the responsible one for that in front of God” and I said that to strengthen self-censorship, and I added “search in words such as a football match. You are indispensable to search it instead of your material”.

I warned them about all of these things and I allow them to search some suitable words but after they finished their study, they always hear these words from me, but at all every man is rewarded by his actions.

- Do you use the internet a lot?

Yes at home, most of what I use in teaching things such as site named ".....", This explanations are accurate and use the smart board in their explanations which is close to our lessons, and in which some teachers explain the lesson in another way may be simpler than my style. I also follow the website ".....".

- Do you give these sites to students?

No, I give them the subject of the research and the student may find sites better than I found, I want the student to learn the research method himself, and .. organization is the most prominent and the best like the Arabic alphabet " ....." that has its own channel.

- what about the ministry channel?

I heard that it had a channel called "Aien "but I did not see it.

- Did not you receive any circular about this channel?

It may be happened but I have not seen it.

- Is "my language" curriculum helps students use technology?

In each unit there are things that require searching the internet and files of achievement, and this by googling.

-Previously, groups have been found between students and teachers in the province schools, which have been prevented by an administrative decision, what do you think of this ban?

It is better if it regulated, because the relationship is by the limits of the school and their mentalities are different, and the spread of the teacher number with the students lead to many people send you and call you, causing problems, as everything has negative and positive.

- And what about the positives?

A student may ask about the assignment, that the teacher can communicate with the students about any new topic that gives them a hint.

- What if this communication technique changed to the email?

It may be better, also via Twitter.

- Have you thought about using it? And why?

No, because the ministry did not ask for it.

We always hear that there are a lot of WhatsApp groups among the students, that they are always tell that they sent the homework in the group, so sometimes I asked them if they sent it on the group, and someone replies that he sent it. Thus, I think it is especially important close to the tests time.

- Do you use other programs to communicate with students, Such as telegram or school channel?

I do not know it. I know WhatsApp and YouTube and the most used thing is the mobile, as I used the laptop just for writing and printing as for a working paper and other things for work. The computer is for official things and work issues, while the mobile is a good alternative for all the other missions.

- With colleagues, is there any technical connection?

Yes, we have WhatsApp application to communicate, and the relationship between us is excellent, but it is for social interaction not formal.

- Since you are a development school, Do you and your colleagues in the same specialty visit each other?

I am the first teacher and I visit colleagues, we discuss simple things and they are all about paper routines, we discuss the use of devices, and I got many benefits from them, because they are the experts on this field, as one of my colleague always uses the technology. the most important thing is the control of students, so they follow me (the lesson) and the use of ICT makes the class noisy. For this point, I do not like to use technology.

- Is the director visiting teachers?

Yes, he always do it suddenly, but not with me, as he could come to me at any time and this because of his confidence in my work that do not change just for a visit.

- Did he notice that you do not use the technology?

He said nothing to me but the supervisors who came said that. I welcomed happily when someone gives me this comments, whether a manager, a supervisor, a colleague or a student because a person may not know his mistakes and I am happy for that. For example, I always said to myself that I have to use a device and after that I feel that the time go out and I didn't implement, as we go out to work.

- Have you visited learning resources center?

I have never had a visit on my own or with my students. The manager said it to me and I told him "I wanted to but I have a problem because the most important thing for me is to control the students". It is very important to follow you, and indeed this observation is two weeks before the director, because education is not like before as it isn't just about declamation but the development need for a period, the sources and the smart board are what I wish to use but it needs a period to get used to it like the mobile, we buy it first and we do not know

nothing about it then we learned it, but I see in the sources a big negative which is the exit of students and their return from the classroom to the sources, I felt that it takes time, and I do not want to waste a minute of the lesson.

- Do the rest of the teachers not waste the same time when they use the sources?

May be, there is a way to shorten the time.

- Do you think that lack of experience has a role in that way you want to control students?

I do not know as I taught here for four years and before that I was a director or a deputy and it is far from teaching, as I was in villages where there is no technology.

- What is your relationship with student parents?

Some parents send me on what's app or call to ask about the level of their son, but I do not want my number to reach my students, because it happened in previous schools to get annoyed from students actions.

- What difficulties do you see as obstacle in the use of technology?

As I said "Training" and sometimes I prefer to discover the thing myself. I feel that training gives you certain things to apply. It is about understanding the person who is give the training and his way, but I would like to see a group of trainers or teachers and choose the appropriate method for me. For example, a lesson about the alphabetic letter "……" in YouTube, I watched all the videos and chose what was convenient to me, and if the lesson about a personality, I looking for it at YouTube and put my headphone in my ear and listen to him when I am in my work in the school or outside, and sometimes I gained information and write it down in the book and this new information is not with

the student, so I ask students to do such, as to listen to more than One of YouTube's videos to take an overall idea about what they searched.

- Do you think that YouTube can take the lead over the traditional books?

I see that now it took the attention from the whole library, as the visual and audio materials are better than readable like books, and I would like to use the smart blackboard, but!

-Thank you very much for your time, do you like to add any ideas?

No thanks, I like to conclude that the use of the computer makes me do nothing. Everything the computer did. I feel that I do not have any role. This is the honesty. I want to teach the students not the device do. I feel that the students do not get benefits... so, really I don’t know. Thank you.

Appendix Eight: Observation field notes

Observation Example

(Sc2-Obs2-Ali)

1) Classroom observation

Initial information

1- School	School 2
2- Date	الأحد 2017/3/11
3- teacher name	علي
4- classroom	7
5- year of pupils	1
6- subject	التواصل اللغوي (لغة عربية)
7- number of pupils	19
8- organization of classroom (groups-individual...)	فردي
ICT material in classroom	كمبيوتر + سبورة تفاعلية+ بروجكتور + سماعات

A- Interaction / communication /influences

Code	Action
٥ دقائق ضغط الاختبار استخدام ضغط الاختبار حتى يلفت انتباه الطلاب جميعا ويحثهم على الاهتمام بما سيقال في الدرس(مدخل للدرس)	بدأ المعلم الدرس بتعريف الطلاب بما هو **مطلوب** في الاختبار القادم
	يعطي المعلم الطلاب فكرة عامة عن الوحدة والمطلوب منها ليعطي فرصة للطالب المجتهد إن كان يريد أن يحفظ قبل زملائه
المعلم أب	أربعة من الطلاب سألوا عن توضيح تلك النقاط كل الطلاب متابعين وأثار اهتمامهم هذا الموضوع كثير من الطلاب يسأل عن موضع الواجب في الكتاب يستخدم المعلم كلمة (يا ابني) بكثرة
تفكير ناقد	ربط الدرس بأهمية الوطن والوطنية، وفضل السعودية علينا مهبط الوحي استخدام مرادفات لغوية ذات معاني مشتركة (يدب)
	وجد بعض الطلاب الصفحة المطلوبة وبعضهم مازال يبحث عنها لأن المعلم لم يظهرها على الشاشة
تعاوني	طالب في الصف الأخير يسأل زميله عن رقم الصفحة سؤال الطلاب من بلاد أخرى(سوريا-مصر- تشاد)عن معالم دولتهم
تعاوني power|اعطاء الحرية للطالب- distance الخوف من الخطأ، الخوف من زملائه، يحترم المعلم الطلاب جميعا تشجيع الطالب الضعيف	في الكتاب مكتوب فيه (اشترك مع مجموعتي..)بمعنى طلب التدريس الجماعي لكن التدريس في هذا الصف فردي يسمح المعلم للطلاب بالضحك فيما بينهم مع التزامهم بأماكنهم محاولة إشراك أكبر عدد من الطلاب في المناقشة مع المعلم، بعض الضحكات من الطلاب على زملائهم، والمعلم يوقف ذلك. يعطي المعلم الطلاب فرصة للمشاركة بسؤاله (من يقرأ؟) أكثر من عشرة طلاب يرفعون ايديهم ويقولون أنا يا أستاذ. فيختار المعلم أحدهم أغلب الطلاب يشارك عشوائيا لأن المعلم أعطاهم الإذن بذلك طرح أسئلة خاصة لكل طالب لم يشارك (أبرز معالم مدينتك)

1

عصف ذهني تشجيع الطلاب motivation المعلم واثق من نفسه عدم الخوف من المعلم التعلم النشط)	عصف ذهني للطلاب وفتح باب المشاركة لمن يرغب استنتاج من ذلك مفهوم الوطنية الصحيحة زرع بعض المبادئ مثل (من أحب شيئا حافظ عليه) تشجيع الطلاب لإضافة المزيد من الاجابات مثل ...أحسنت...أحسنت اغلب الطلاب متحمس للمشاركة، () المعلم أعطاهم الحرية في التحدث والسؤال عشوائيا ، علاقته مع الطلاب جيدة بحيث يجرؤ الطالب على طرح أي سؤال ولو كان بعيدا عن الموضوع. الوقت يمضي بسرعة على الطالب لأنه يشارك في الحل والأسئلة فالطالب نشط(
Additional interaction notes: طالب يكتب على السبورة طالب يتابع مع زميله بسبب نسيانه للكتاب يحمل الطلاب ملف (انجاز) لجمع أوراق العمل تعليم التفكير الناقد بمعاني (ويحميني من الأعداء) هل هو الوطن أم أبناءه	

B- Using ICT in the class

شاشة الكمبيوتر على الجدار الجانبي للفصل مما يجعل المعلم يلتفت لها مع أنه جالس في مكتب المعلم ويتابع في يده الثانية كتابه	مكان الكمبيوتر
المعلم متضايق من أن الكتاب يختلف قليلا عما كتب في البرزينتشن، المعلم غير واثق من مادة البرزينتيشن المعلم جالس قرب الكمبيوتر ولم يتحرك من مكانه يظهر الكتاب ليدلل على تغير الكتاب عن البرنامج تختلف صفحات الكتاب وتمارينه عما هو موجود في البرنامج المستخدم للشرح (كأنه مصمم لطبعة سابقة)	تحضير الدرس مهام الوزارة والمشرفين إدارة الصف عدم الوثوق في البرزنتيشن
تعريف البطاقة التعريفية في كتاب الطالب وإظهارها لهم على السبورة وايضاح الأماكن التي ينبغي تعبئتها	استخدام الكمبيوتر وسيلة عرض
اظهار صور الكتاب على الداتاشو ويتابع الطلاب في كتبهم(معرفة المعالم) يرجع المعلم للشريحة السابقة عندما سأله طالب عن الجواب النموذجي(مكتوب بالشريحة)	معرفة الاجابة النموذجية
استخدام التكنولوجيا ساعد الطالب في ١- معرفة الطالب موضع السؤال في كتابه ومتابعة المعلم ٢- عرض الصور والمشاركة مع الجميع في إظهار المعالم ٣- نقل الاجابة النموذجية –إن وجدت-إلى كتابه (وسيلة عرض فقط)	تعليم جماعي إجابة صحيحة واحدة
يطلب من طالب القراءة السؤال (أتأمل الصورة التالية ثم أجيب) صورة في الكتاب وليست في البرزينتشن، يعلق المعلم أنها غير موجودة في البرزينتيشن يحاول البحث في الدروس السابقة واللاحقة. يعقب كثير من الطلاب بعدم وجودها في الكتاب يتشاورون فيما بينهم يسألون بعضا عن موقعها يبحثون في كتبهم.	تحضير الدرس مساعدة الطلاب الآخرين (بيئة الفصل جيدة)

وجود أخطاء إملائية في عرض البوربوينت, مما يدل على أنه اجتهادات شخصية تغير في حدود الصور لتكون غير واضحة (الكيبل)	مشكلات تقنية
المعلم جالس بجانب الكمبيوتر الوحيد في الفصل لتحريك شرائح العرض لا يوجد انترنت داخل الفصل لا وجود للأصوات سوى المصاحبة لتحريك الشرائح الألوان كثيرة في البرزينتشن (أصفر –أحمر-أزرق) أغلب الصور واضحة ومطابقة لما في كتاب الطالب	نوع الاستخدام توفر التكنولوجيا
Additional observation notes: المعلم يقارن بين الكتاب والكمبيوتر (يد على الكتاب ويد على الفأرة) إضاءة الفصل العامة مقبولة ليست قاتمة البرزنتيشن من الانترنت تم الحصول عليه من أخصائي مصادر التعلم ولكنه موافق للكتاب المدرسي في الطبعات السابقة لم يذكر الأستاذ أي لفظ يدل على التكنولوجيا خلال ٤٥ دقيقة، لكنه معتمد على الكمبيوتر في الشرح وحل التمارين ولذا فهو متضايق جدا من اختلاف عرض البوربوينت مع هذه الطبعة من الكتاب، ولذا فهو يطالب الوزارة والمشرفين بتوفير نفس المادة إلكترونيا لتساعده على الشرح وتوصيل المعلومات	

C- Using ICT in the school

يستخدم الطلاب الكمبيوتر للعب في أوقات الفسحة في مركز المصادر
أستاذ النشاط يطلب من بعض الطلاب البحث في النت عن صور وقصاند في أجهزة مركز مصادر التعلم
يوجد خمسة أجهزة كمبيوتر في مركز مصادر التعلم مخصصة للطلاب ومتصلة بالإنترنت ويشرف عليهم اختصاصي المصادر
معظم استخدام الطلاب للكمبيوتر للتسلية وليست للتعلم
Additional observation notes:

Observation (translated) (Sc2-Obs2-Ali)

1) Classroom observation

Initial information

1- School	School 2
2- Date	Sunday 11/3/2017
3- Teacher name	Ali
4- Classroom	1B
5- Year of pupils	First stage
6- Subject	Language Communication (Arabic language)
7- Number of pupils	19
8- Organization of classroom (groups- individual…)	individual
ICT material in classroom	Computer + smart board + projector + headphone

A- Interaction / communication /influences

Code	Action
5 min Exam pressure	The teacher started the lesson by telling students what is required in the next test.
	The teacher gives the students a general idea of the unit, and what is required of it to give a chance to the clever one if he wants to study, before his colleagues.
The teacher is a father	Four students asked for clarification All the students followed the teacher and interested in this subject. Many students ask about the specific part of homework in the book. The teacher uses the word "my son" frequently.
Critical thinking	Linking the lesson to the importance of homeland and patriotism, and the grace of Saudi Arabia on us as "land of revelation". Use of linguistic synonyms with common meanings.
	Some students found the requested page and some are still looking for it, because the teacher did not show it on

	the screen.
cooperative	A student in the last row asks his colleague about the page number. Ask students from other countries (Syria - Egypt - Chad) about the features of their country.
cooperative Giving students freedom – power distance Fear of error, fear of colleagues, all students respect the teacher Encouraging the weak student	In the book, it is written (join my group ..) which means a request for group teaching, but teaching in this class is individual. The teacher allows students to laugh among other colleagues with their commitment to set in their places. The teacher tries to involve the largest number of students in the discussion; some students laugh at their colleagues, the teacher stops it. The teacher gives the students an opportunity to participate by saying his question (who reads?). More than ten students raise their hands and say, "me, teacher." The teacher chooses one of them Most students participate randomly because the teacher gave them permission to do so Ask specific questions for each student who did not participate (their cities most prominent landmarks).
Brain storming Encouraging the students Motivation The teacher is confident No Fear from the teacher (Active learning)	Brainstorming to the students and open the door to those who want. A conclusion from that is the concept of true patriotism. Instilling principles some principles such as (who loved something kept it). Encourage students to add more answers by saying words like “well done ... well done” Most students are excited to participate. () The teacher gave them the freedom to speak and ask randomly, his relationship with the students is so good that the student dares to ask any question even if it is away from the subject. Time passes quickly to the student because he is involved in the solutions and questions, as the student is active

Additional interaction notes: A student writes on the blackboard. A student follows with his colleague because he forgot his book. The students carry an (achievement) file to collect worksheets. Teaching critical thinking by asking about meanings, for example the statement (and protecting me from enemies) is this referred to the homeland or the people on this land.

B- Using ICT in the class

Computer location	The computer screen on the side wall of the classroom, which makes the teacher look to it while sitting in the teacher's office and also continuing with his second hand on his book.
Lesson preparation Is the one of the ministry and supervisors' tasks class Management Do not trust the presentation	The teacher is annoyed that the book is slightly different from what was written in the presentation. The teacher is unsure of the presentation material. The teacher sits near the computer and does not move from his place. He uses the book to show the difference between the book and the program. The pages and exercises of the book differ from those in the program used to explain (as if it designed for a previous edition).
Use the computer as a display tool	Identify the identification card in the student's book and show it to them on the blackboard then clarify the places that have to be filled.
Find out the typical answer	Show pictures of the book on the Data show and follow the students in their books (knowledge of the landmarks). The teacher returns to the previous slid, when asked by a student about the typical answer (written in the slide).
collective learning One correct answer	Using the technology helped the student in: 1- Knowing where the question in his book and follow-up the teacher. 2. View photos and share with everyone in showing landmarks. 3 - Write the typical answer - if exist - in his book. (Display tool only).
Lesson preparation Help the other	Ask a student to read a question (look at the following picture and then answer). A picture in the book and not in the presentation. The teacher comments that it is not exist in the presentation, so, He tries to look at the previous and subsequent lessons. Many students comment that it does not exist in the book.

students (Good classroom environment)	They consult among themselves and ask each other questions about the location they are looking at in their books.
Technical problems	There are misspellings in the PowerPoint presentation, which indicates that it is Personal interpretations. Change in picture boundaries which make it blurred.
Type of use Availability of technology	The teacher sits next to the only computer in the classroom to move the slides. There is no internet in the classroom. There is no presence to any sounds except the sounds to move the slides. There are many colours in the presentation (yellow-red-blue). Most pictures are clear and identical to what is in the student's book.
Additional observation notes: The teacher compares between the book and the computer (hand on the book and the other hand on the computer mouse) General classroom lighting is acceptable not dim. The presentation from the internet was obtained from the learning resource specialist. but it is according to the school book in the previous editions The teacher did not mention any term indicating technology in 45 minutes, but he is computer-based in explaining and solving exercises. Therefore, he was very annoyed from the difference between PowerPoint presentation and this edition of the book. Thus, he asks the ministry and supervisors to provide the same material electronically to help him to explain and communicate information.	

C- Using ICT in the school

Students use the computer to play in the break at the Resource Centre.
Activities Teacher asked some students to search the web for pictures and poems in the Learning Resources Centre (LRC)devices.
There are five computers in the Learning Resource Center(LRC) dedicated to students and connected to the Internet and supervised by LRC specialists.
Most students use computers for entertainment rather than learning.
Additional observation notes:

Appendix Nine: Ethical Approvals

UNIVERSITY OF EXETER

COLLEGE OF SOCIAL SCIENCES
AND INTERNATIONAL STUDIES

Ethics Committee
ssis-ethics@exeter.ac.uk

CERTIFICATE OF ETHICAL APPROVAL

Academic Unit:	Graduate School of Education
Title of Project:	Socio-Cultural Factors Influencing the Use of ICT in Intermediate Schools in Saudi Arabia: A Case Study
Research Team Member(s):	Abdullah Saleh Alnosiaan
Project Contact Point:	asaa205@exeter.ac.uk
Supervisor (s):	Rupert Wegerif

This project has been approved for the period

From: 20.10.2016
To: 01.02.2017

Ethics Committee approval reference: 201617-023

Signature: Date: 23.02.2017

(Lise Storm, Chair, SSIS College Ethics Committee)

بسم الله الرحمن الرحيم

المملكة العربية السعودية
وزارة التعليم
(٢٨٠)
إدارة التعليم في محافظة الرس
التخطيط و التطوير

وزارة التعليم
Ministry of Education

التخطيط والتطوير
الرقم : ٣٨٢٦٨٨٣
التاريخ : ١٤٣٨/٠١/٠٣
المرفقات :

تعميم لجميع المدارس المتوسطة (بنين)داخل المحافظه

المكرم / مدير مدرسة..... حفظه الله

السلام عليكم ورحمة الله وبركاته .. وبعد

إشارة الى الطلب المقدم من الطالب /عبدالله بن صالح النصيان بتاريخ ١٤٣٧/١٢/٢٧هـ الباحث في مرحلة الدكتوراه بجامعة اكستر البريطانية والمرفق به خطاب من الجامعة رقم بدون وتاريخ ٢٠١٦/٩/٢٩ م بشأن قيامه بإجراء دراسة بعنوان **"الآثار الاجتماعية للبيئة المدرسية على استخدام تكنولوجيا التعليم"** .

ونظراً لأن موضوع البحث يتطلب الحصول على بيانات علمية وتطبيق مواد وأدوات الدراسة نأمل تسهيل مهمته وتزويده بالبيانات التي تحتاجها الدراسة.

شاكرين تعاونكم،،،

والسلام عليكم ورحمة الله وبركاته ....

مدير التعليم

د. خليفة بن صالح المسعود

ص. للتخطيط والتطوير
ص. للاتصالات

البريد الإلكتروني : tatweer@alrassedu.gov.sa تلفاكس : ٠٦٣٣٣٩٤٦٧

UNIVERSITY OF EXETER

معلومات عن الدراسة

(خاصة بأولياء الأمور)

عنوان الدراسة:
أثر البيئة المدرسية على استخدام التكنولوجيا في المدارس المتوسطة.

وصف الدراسة:
عمل الباحث كمعلم واختصاصي مصادر التعلم في المدارس التابعة لإدارة التعليم في محافظة الرس، والآن أنا في مرحلة الدكتوراه في جامعة إكستر البريطانية، هذا البحث هو جزء من برنامج الدكتوراه وذلك للتعرف على آراء المعلمين والطلاب ونظرتهم واستخدامهم للتكنولوجيا في المدارس السعودية المتوسطة.

أهداف الدراسة
تهدف هذه الدراسة لفهم العوامل الاجتماعية التي تؤثر على استخدام التكنولوجيا في البيئة المدرسة، وتسعى هذه الدراسة أيضاً لإيصال صوت المعلم والطالب وآرائهم حول تأثير العوامل الاجتماعية على استخدامهم للتكنولوجيا، وذلك بهدف تزويد المسؤولين في وزارة التعليم بالمعلومات المساعدة لبناء الخطط والاستراتيجيات التعليمية لبناء المناهج المناسبة للبيئة السعودية.

دور الطالب
بما أن ابنكم أحد طلاب المرحلة المتوسطة فإني أسعد بدعوته لأن يكون أحد عناصر عينة هذا البحث، وسوف أستضيفه مع مجموعة من زملائه لمدة ٣٠-٤٥ دقيقة لطرح أسئلة متعلقة بهذا البحث، علماً بأن حضوره اختيارياً وطوعاً من تلقاء نفسه بدون أية ضغوط عليه ليكون عنصراً من عينة البحث، علماً بأنه يحق لك ولابنك الانسحاب من المقابلة وقتما تشاء بدون إبداء أي سبب.
كما أني سأستخدم أداة ملاحظة لتقييم استخدام ابنك وزملائه للتكنولوجيا المتوفرة في المدرسة، وذلك في الفصل وفي مركز مصادر التعلم وفي معمل الحاسب الآلي.
نقدر لكم قبول هذه الدعوة علماً بأنه سيتعامل مع هوية ابنكم وما سيقوله ويتحدث به في سرية تامة، وستستخدم لأغراض البحث فقط.

إخفاء الاسم / السرية
كل المعلومات سوف تحفظ بسرية تامة وتستخدم لأغراض البحث فقط، المقابلة والملاحظة سوف تسجل صوتياً من قبل الباحث، وسوف تكتب وتحفظ بسرية تامة، ولن يطلع أي طرف آخر عليها، وسيكون حفظها بناء على نظام حماية المعلومات، سيضمن الباحث عدم تعرضكم لأي أذى جراء ابدائكم هذه المعلومات.
كل أفراد العينة لهم الحق في إخفاء اسمائهم، ولا يحق لأي أحد غير مصرح له بأن يطلع على هويات العينة ولا على التسجيلات الصوتية أو الكتابية.

حفظ البيانات
كل المعلومات ستستخدم لأغراض البحث فقط وتحفظ بحسب قوانين الجامعة لحفظ البيانات، المعلومات الشخصية لابنكم ستعامل بسرية تامة، نتائج البحث ستنشر بأسماء مستعارة، بمجرد الانتهاء من البحث كل البيانات سيتم التخلص منها بيد الباحث.

للتواصل مع الباحث
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في حال رغبتكم بالاستفسار مع أي أحد آخر من الجامعة الرجاء التواصل مع:
PROF. RUPERT WEGERIF (r.b.wegerif@exeter.ac.uk)

Revised: December 2014