Teaching English Vocabulary via Digital Games to 3rd Level

Saudi Male Students: Issues and Attitudes

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Abstract

The integration of technology into educational contexts typically presents its own challenges. The integration of technology into conservative and culturally-sensitive educational contexts presents its own specific and additional challenges. This is certainly the case in Saudi Arabia. Today, most English as a Foreign Language (EFL) learners are highly responsive to digital games and games in general have been part of their lives since they were children beginning with building blocks and playing hide and go seek until they mature and start to play a lot of digital games. Since this is the age of technology and our students are now in the digital era, EFL learners have become more emerged in playing digital games. Inevitably, this phenomenon cannot be ignored and the research area of Digital Game-Based Language Learning (DGBLL) in classrooms has emerged. In this exploratory study this research will investigate the issues that face the students in the college of Languages and Translation in a Saudi Arabian University and their attitudes towards implementing DGBLL in their classrooms. In order to gather relevant data, a mixed-method approach was used: involving pre- and post-tests of learners' vocabulary acquisition and the introduction and use of digital games that were carefully selected by the researcher; as well as surveys and group interviews. This research has revealed a number of issues which include: cultural sensitivities; personal motivations and attitudes, and the appropriate choice of games. This thesis concludes with recommendations and solutions concerning the implementation of a DGBLL method in a culturally-sensitive educational context.
Publication arising from this research

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Declaration

I declare that the work presented herein is original and a result of my own work.

Abdulaziz Abdullah Alsayegh
Summary of Thesis

The broad objective of this thesis is to examine the potential role that digital games can play in improving speaking and in particular vocabulary acquisition in the context of Saudi Arabian EFL teaching. In particular how the content, and whether it is culturally appropriate, can meet the needs of both students and teachers for a more interactive and motivational learning experience. In certain environments the notion of digital game based learning has been suggested as increasing student attention and thus learning and retention of knowledge, particularly in terms of new vocabulary used in context. However, there are also criticisms of the approach grounded in whether the content is culturally appropriate in the strict environment of Saudi schools. Therefore considering these areas the main objectives of the work were defined as follows:

1. To identify if digital games can be used as a tool to increase Saudi students' Second Language Vocabulary Acquisition (SLVA).

2. To gain more insight into the challenges associated with cultural issues that Saudi learners face as well as their attitude when implementing a possible DGBLL teaching method.

3. To investigate if Saudi learners can manage to overcome certain problematic issues, such as those associated with culture and if so, how this is achieved.

4. To establish and evaluate the effectiveness of delivery of a DGBLL teaching approach.
5. Are there recommendations that can be made to improve DGBLL implementation into Saudi universities?

The thesis employed an empirical approach, introducing a digital game based curriculum of vocabulary acquisition into a Saudi third level classroom through the use of a range of digital games that introduced new vocabulary to the students. This case study approach which incorporated digital questionnaires, semi-structured voice recorded group interviews and pre- and post- vocabulary tests was designed to evaluate the experiences and outcomes of the introduction of a new style of curriculum based on DGBLL. Using a control and experimental group approach the results indicated that the DGBLL approach was not only popular with the students but led to increased longer term retention of target vocabulary. It was suggested that this was due to the vocabulary being presented in an interactive way and in a contextual setting that made it easier to determine and understand new words.

From a cultural perspective, which was one of the potential concerns with using DGBLL in a Saudi context, there were some issues raised. Notably with what were considered to be religiously and culturally inappropriate images of women. However, if these were removed, and the games selected for a curriculum were reviewed and edited where appropriate, there was a strong indication that the DGBLL approach could lead to an improvement in vocabulary acquisition for Saudi EFL students in third level education. The thesis has however identified that there may be additional work required in ensuring that culturally sensitive games are deployed in future classrooms.
# Table Of Contents

Abstract ...................................................................................................................................... ii  
Publication arising from this research ...................................................................................... iii  
Acknowledgments ..................................................................................................................... iv  
Declaration ................................................................................................................................. v  
Summary of Thesis ................................................................................................................... vi  
Table Of Contents .................................................................................................................. viii  
List of Tables ........................................................................................................................... xiii  
List of Figures ........................................................................................................................ xiv  
List of Samples ....................................................................................................................... xiv  
Abbreviations ......................................................................................................................... xv  
Chapter 1 - Introduction ............................................................................................................. 1  
1.1 Introduction ...................................................................................................................... 1  
1.2 Background of the study .................................................................................................. 2  
1.3 The Saudi Teaching Environment .................................................................................... 6  
1.4 The DGBLL Classroom ................................................................................................... 7  
1.5 Statement of the problem ................................................................................................. 7  
1.6 Focus of the Study and Research Questions .................................................................... 8  
1.7 Research Objectives ......................................................................................................... 9  
1.8 Rationale for the Study ................................................................................................... 9  
1.9 Organisation of the Study ............................................................................................... 10  
1.10 Summary ...................................................................................................................... 12  
Chapter 2 – Literature Review I – Theoretical Background .................................................... 13  
2.1 Introduction .................................................................................................................... 13  
2.2 SLA Strategies and Motivation ...................................................................................... 14  
2.2.1 Theories of L2 Learning .......................................................................................... 14  
2.2.2 Foreign Language or Second Language Learning ................................................... 14  
2.2.3 Communicative Competence ................................................................................... 15  
2.2.4 Definitions and Characteristics of Language Learning Strategies and Learning Styles ...................................................................................................................... 16  
2.2.5 Classifications of Language Learning Strategies ..................................................... 17  
2.2.6 Motivation Theories and Application to SLA ........................................................... 18  
2.2.6.1 Extrinsic Motivation ......................................................................................... 18
4.4 Specific Methodology and Mapping the Procedures .................................................66
  4.4.1 The Subjects ..................................................................................................67
    4.4.1.1 The Control Group ................................................................................68
    4.4.1.2 The Experimental Group .......................................................................68
4.5 Study Procedure .................................................................................................70
  4.5.1 Pre-Test ........................................................................................................71
  4.5.2 Course Plan ...................................................................................................71
  4.5.3 Post- test .......................................................................................................72
  4.5.4 Digital Survey Questionnaire ........................................................................72
4.6 The Design of the Material and Curriculum .......................................................73
  4.6.1 Control Group: Materials and Curriculum ......................................................75
  4.6.2 Experimental Group: Materials and Curriculum ............................................78
4.7 Gathering the Required Data .............................................................................85
  4.7.1 Vocabulary Pre- and Post-Tests: ..................................................................86
  4.7.2 The Questionnaire ........................................................................................88
  4.7.3 Semi-Structured Voice Recorded Group Interview .......................................89
4.8 Data Analysis .....................................................................................................90
4.9 Ethical Issues ...................................................................................................90
4.10 Summary .........................................................................................................91
Chapter 5 – Presentation of Results .........................................................................93
  5.1 Introduction .......................................................................................................93
  5.2 Control Group Vocabulary Test Results ............................................................94
  5.3 Experimental Group Vocabulary Test Results ..................................................95
  5.4 Comparing Control and Experimental Vocabulary Test Results .......................98
  5.5 Experimental Group Questionnaire Results ......................................................103
  5.6 Profile of Experimental Group ..........................................................................104
  5.7 Accepting Technology for Learning .................................................................105
  5.8 Accepting Digital Games for Learning ..............................................................108
  5.9 Pros and Cons of DGBLL in Saudi Arabia .......................................................109
  5.10 Experimental Group Responses to Open-Ended Questions .............................113
    5.10.1 Issues and Attitudes ..................................................................................113
    5.10.2 Motivation ................................................................................................116
    5.10.3 Cultural and Social Impacts ......................................................................118
List of Tables

Table 3.1 - Web Apps for Improving EFL Speaking Skills and lexical Improvement ...........55

Table 4.1 - Control Group Curriculum ....................................................................................76
Table 4.2 - Experimental Group Curriculum ...........................................................................78

Table 5.1 - Control Group Ranked Scores ...............................................................................96
Table 5.2 - Experimental Group Ranked Scores .......................................................................97
Table 5.3 - Control Group Paired Samples Statistics ...............................................................98
Table 5.4 - Control Group Paired Samples Correlations .........................................................98
Table 5.5 - Experimental Group Paired Samples Statistics ......................................................98
Table 5.6 - Experimental Group Paired Samples Correlations .................................................99
Table 5.7 - Vocabulary Pre-Test Group Statistics .................................................................99
Table 5.8 - Vocabulary Pre-Test Independent Samples Test ..................................................99
Table 5.9 - Vocabulary Post-Test Group Statistics ............................................................100
Table 5.10 - Vocabulary Post-Test Independent Samples Test ..........................................100
Table 5.11 - Control Group Vocabulary Pre-Test Paired Samples Test .............................101
Table 5.12 - Control Group Post-Test Paired Samples Test ..............................................101
Table 5.13 - Experimental Group Pre-Test Paired Samples Test ........................................101
Table 5.14 - Experimental Group Post-Test Paired Samples Test ......................................102
Table 5.15 - P-Values for Control and Experimental Groups .............................................102
Table 5.16 - Issues and Attitudes .........................................................................................114
Table 5.17 - Motivation to Use Digital Devices in Class ..................................................117
Table 5.18 - DGBLL Promotion of Learning .................................................................119
Table 5.19 - Pros and Cons of Using DGBLL .................................................................122
Table 5.20 - DGBLL and Traditional Teaching ...............................................................123
List of Figures

Figure 2.1 - Theories of Motivation ................................................................. 19
Figure 2.2 - Maslow's Hierarchy of Needs ...................................................... 19
Figure 2.3 - ERG Model of Motivational Drivers ............................................ 20
Figure 2.4 - Hofstede Scores for Saudi and UK ............................................. 27

Figure 5.1 - Control Group Pre- and Post-test Scores ..................................... 94
Figure 5.2 - Experimental Group Pre-and Post-Test Scores in Summary Graph Form .... 95
Figure 5.3 - Age of Experimental Group ...................................................... 104
Figure 5.4 - Years Studying English ............................................................. 105
Figure 5.5 - Length of Time Using Technology .......................................... 106
Figure 5.6 - Time spent using digital devices .............................................. 106
Figure 5.7 - Use of Mobile Devices .............................................................. 107
Figure 5.8 - Preferred Digital Device for Learning ....................................... 108
Figure 5.9 - Gaming Preferences ................................................................. 108
Figure 5.10 - Digital Games Make Classroom More Motivational .............. 112
Figure 5.11 - When are Digital Games Played ............................................ 112

List of Samples

Sample 4.1 - Vocabulary List for Control and Experimental Groups .............. 74
Sample 4.2 - Dream Sleuth: Hidden Objects by Nevosoft Inc. (Game 2 Dialogue) .......... 82
Sample 4.3 - Classroom Score Sheet ............................................................ 84
Sample 4.4 - Vocabulary Test ................................................................. 87
Abbreviations

These following terms, defined below, are used throughout this research.

BBM: Blackberry Messenger
BYOD: Bring Your Own Device
CALL: Computer Assisted Language Learning
PD: Continuing Professional Development
DGBT: Digital Game Based Testing
DGBL: Digital Game Based Learning
DGBLL: Digital Game Based Language Learning
DGBLT: Digital Game Based Language Test
DLC: Downloadable Content
EFL: English as a Foreign Language
GBL: Game Based Learning
GBLL: Game Based Language Learning
ICT: Information and Communication Technologies’
IDV: Individualism versus Collectivism
IND: Indulgence
IWS: Internet World Statistics
IELTS: International English Language Testing System
L2: Second Language
LTO: Long Term Orientation
MAS: Masculinity versus Femininity
M-learning: Mobile Learning
MMO: Massive Multiplayer Online Games
MMORPGs: Massive Multiplayer Online Role Playing Games
PDI: Power Distance

PPPS PfPSPfPduction

PYP: Preparatory Year Programme

SLVA: Second Language Vocabulary Acquisition

SPSS: Statistical Analysis Software from IBM

TOEFL: Test of English as a Foreign Language

UAI: Uncertainty Avoidance

e vS ee LTh ft m n CV T oU

UTAUT: Unified Theory of Acceptance and Use of Technology

e vS ee ol gOft vl coa oT eTm
Chapter 1 - Introduction

1.1 Introduction

The Saudi Arabian educational system has only recently embraced the use of technology. This trend continues into the classroom where there has been a slow adoption of technology by teachers (Alshumaimeri, 2008). The teaching patterns of most Saudi Arabian University teachers and lecturers have changed little in response to the availability of technology, in particular when it comes to teaching English. They still teach using traditional teaching methods with paper-based materials. Classrooms are usually teacher-centred with limited interaction between learners and teachers. It is standard practise for student education to focus almost entirely around listening, writing in their notebooks and memorising what the teachers say and impart to them (Nguyen & Khuat, 2003). This traditional way of teaching was very effective for previous generations of learners. However, as teaching methods around the world advance there is a need for Saudi Arabia to evolve its pedagogical practices.

As a result of the influence of technology, the current generation of learners have allegedly started to learn and even to think differently than previous generations of learners. Such a controversial claim about the millennials was made by Prensky (2001) and was later heavily critiqued by other researchers, see, for example, Benini (2015). In spite of this, technology does carry some impact upon all those who interact and use it and so produces a certain necessity to evaluate our contemporary methods of teaching and learning. This means that teachers may need to assess and possibly change their teaching strategies and use modern tools in conjunction with more up to date teaching methods in order to best engage the new generation of students (Isman et al., 2012). Other researchers have claimed that this generation of learners is in much need of more innovative ways of learning in order to keep them interested in a subject and that it is crucial that teachers refresh their teaching methods so as to keep students motivated while they are learning (Gee, 2007a). Given this, the aim of this work is to examine how 3rd Level male Saudi students react to DGBLL, as well as how effective the method is at educating them in their target language (L2).
1.2 Background of the study

Our study takes place in Saudi Arabia, which represents the largest Arab country located in Western Asia. Saudi Arabia is an Islamic country and is also known as “The land of Two Holy Mosques”, which refers to Al- Masjid Al- Hram in Mekkah and Al-Masjid Al-Nabawi in Medina. The Kingdom of Saudi Arabia is a monarchy whose constitution is based on the Quran (Koran), and Shariah Law. King Salaman is currently head of the government and the Council of Ministers, which are the executive and administrative bodies respectively. It must be stated that Saudi culture is primarily determined by the Islamic religion. Indeed, all aspects of social and cultural life are centred around the Muslim religion and Muslim religious identity. Within Saudi social life, religious morals are always prioritised. Islam covers all aspects of Saudis’ lives and sets great emphasis on education. Islam sees education as a religious duty for everyone, both males and females. Al-Salloom (1989) has remarked that:

“Islam dictates that learning is an obligation for every Muslim, man or woman. This obligation, which gives education the status of a religious duty, is the cornerstone of education in the Kingdom of Saudi Arabia. It is the foundation upon which the state builds its educational responsibilities, and in light of which, the citizen performs duties towards himself, his community, and his religion. The roots of education in Saudi Arabia therefore, go deep into the Islamic education which started in the mosque and led to the establishment of schools and universities around their pillars,” (p.37).

Such dominance of religious belief and the Islamic code of conduct is ubiquitous and it is therefore impossible to understand educational issues in Saudi Arabia without making some reference to them. It is especially important to understand that Islam awards a very high status to education. Religion and education are perceived as being intertwined and the purpose of education and the high reverence for those involved in teaching have their roots in religion. Therefore, in accordance with the Islamic law practiced in the country, female and male education is strictly and formally segregated at all levels in terms of school institutions and teaching staff. It must be remembered that for reasons of context and practicality, our research study was conducted within an all-male Saudi university (see Chapter 4).
English as Foreign Language (EFL) students sometimes feel bored in ‘vocabulary classes’, early language classes where vocabulary acquisition is taught formally. This is because their learning patterns and habits have become stagnant over time (Alsamadani, 2008). Examples of such static patterns include: writing new words on paper, trying to learn by memorising and a focus on primarily learning by listening to the teacher's comments (Nguyen & Khuat, 2003). Teachers of English understand that it is very important for students to constantly learn new vocabulary, as it is the foundation on which every new language is built. It also plays an important role in linking the four intralingual skills of listening, speaking, writing and reading. So, in order for university students who are willing to study at an English institution to understand and interact successfully, with both the institution and culture surrounding them, they must have an appropriately expansive vocabulary (Nation, 2013; Nation & Nation, 1990).

For EFL learners, the need to memorise a large number of new vocabulary items can be a challenge. It can also be daunting to try and recall these new words in an unfamiliar context, especially for those unaccustomed to operating primarily in their non-native language (Ghazal, 2007). To help the students remember these new words, they have to notice them when reading, writing, speaking and listening, and they also have to continue to practice them (Hulstijn & Laufer, 2001). Students can easily look up the meaning of a new word by using a dictionary, but the problem is often that they do not know how to use these new words in context. Students need to know the meaning of the word and other semantic alternatives for the word in order to have the correct usage in the right context (Hunt and Beglar, 2005). In this light, we may define ‘correct usage’ as employing the use of lexical items carrying appropriate semantic value in a particular communication that successfully conveys the desired message from sender to receiver. After a short period of time students may start to feel that learning new vocabulary items by only memorising them is not helping them sufficiently. As a result, students may start to think that they have bad memorisation skills and are not suited to learning English. This can lead to students becoming discouraged in their own abilities, and can compound the difficulties inherent in learning a new language (Oanh and Hien, 2006). Some researchers have observed that memorising by itself is not an effective way to study. It is proposed that the best way
to learn new vocabulary words is memorisation accompanied by understanding the
words through appropriate contextual utilisation (Vosniadou, 2007).

Many studies have focused on various key issues when it comes to Second Language
Vocabulary Acquisition (SLVA), such as what it means to a certain word, how native
speakers acquire words and how many they acquire, what words second language
learners and students need to know so that they can communicate and understand the
target language, and what learners can do to learn these words. These studies have
shown that in order to teach and learn vocabulary, a systematic and well-organised
method is needed (Nation, 2001, 2013; Nation & Nation, 1990; Schmitt, 2000; Taylor,
1990). The new generation of learners are in need of more relevant methods of
teaching that are more motivating as well as classes that are more effective at
engaging with them (Beck & Wade, 2006). Despite the present need for educational
innovation this new generation of learners are still being taught using traditional
methods of teaching with paper based materials (Klopfer, 2008; Prensky, 2001), this
increasingly anachronistic approach is especially prevalent in Saudi Arabia.
Implementing modern learning tools and using modern teaching methods may help
students to find language subjects, specifically vocabulary classes, fun and interesting.
It may also be possible to use digital games as another way to help students engage
with their second language. This is especially pertinent when trying to improve their
understanding and enjoyment of the language in question. (Schultz & Fisher, 1988).
In order for students to learn and understand new vocabulary items they have to
participate and interact in class. In order for them to participate they need to be
motivated and comfortable in the teaching environment. According to Prensky (2003),
it is difficult to stop a motivated learner. So by using a variety of free games, online or
offline, that focus on helping students to use words in different forms, understand the
words being presented to them, and to help them acknowledge that some words have
more than one meaning and can be substituted by another word, which can be an
alternative, students may well be encouraged to participate (Anderson et al, 2008). In
addition, these new words are more likely to be retained because students are
couraged to practice them in a more fun and enjoyable way. Rather than having to
force words into their memories, students are encouraged to discover and enjoy their
newfound vocabulary in a more entertaining and engaging way.
Historically, games as a single or social activity are fundamental to the human condition; they have been and always will be part of humanity. Games have often provided an arena for humans to practise and hone the skills they need to survive. Indeed, humans are first recorded as playing games as far back as 2000 BC (Mandziuk, 2010). Digital games have become an integral part of youth culture over the past two decades. So much so it has been estimated that many young people in this current generation will have played digital games for 10,000 hours by the time they reach the age of 21 (Prensky, 2003). The proliferation of digital games in the psyche of younger generations underlines their potential value as a learning tool (Anderson et al, 2008). In the past it was not as viable to utilise such teaching methods, as the resources were simply not prevalent enough. However, the widespread use of portable devices such as smartphones and laptops makes the inclusion of video technology in the classroom much more viable due to its increased accessibility (Golonka et al, 2014).

It has been proven that learning assisted by the use of mobile technology (M-learning) has great potential to expose L2 learners to the target language (Norbrook & Scott, 2003; Thornton & Houser, 2003, 2004, 2005). This level of exposure to a second language is what most English teaching: institutions, teachers and students strive for. There is potential that the implementation of such an approach in Saudi Arabia may make the teaching environment more fun and enjoyable for students. Therefore, it is important to investigate whether students can learn vocabulary through digital games and if so, how they learn it. According to Prensky (2001), people may want to play games for a number of reasons including development of creativity, increased motivation and attention. Solving the problems within a game helps to develop players' creativity and ingenuity. The challenging and rewarding nature of digital games means that players may be motivated to reach their goals. Principally amongst the reasons for using games to help improve educational practises is the fact that they are usually fun and effective at retaining interest on the part of the gamer.

For EFL learners, the crux of their education lies in the importance of learning and memorising a large quantity of English words, especially words that are linked to their academic studies (Vosniadou, 2007). However learners face some internal and external obstacles, which eventually prevent them from acquiring the required amount
of new vocabulary presented to them in and out of the classroom. One of these obstacles is the traditional way of teaching, where the teacher explains the meaning of a certain word or gives its definition, pronounces that word and gives the spelling and grammatical functions. In vocabulary classes that use such traditional methods, there is minimal interaction between the student and the teacher (Anderson et al, 2008). Another factor that prevents Saudi learners from acquiring the required amount of new vocabulary items is that they only rely on understanding the meaning of a new word while neglecting all the other functions of that particular new word. In the experience of this researcher, students usually gain new vocabulary items from their textbooks or their teacher during his or her class lessons. Students find a lot of new words in their textbooks and then they ask the teacher to give them the meanings and explain how and where to use these new words. While this is a practical way of learning a new word, it is not the most effective method for learning how to use a language. Another issue that both teachers and students have to deal with is limited class time. Some researchers have suggested that it is the students’ responsibility to study vocabulary by themselves at home and out of their classrooms due to limited class time (Grace, 1998). To understand how these challenges present themselves in the context of this study better a brief overview of the Saudi teaching environment is necessary.

1.3 The Saudi Teaching Environment
Understanding Saudi culture is important when it comes to implementing new teaching methods, especially if these methods have previously been integrated and implemented in non-Islamic countries. The culture of Saudi Arabia is shaped by Islam, which influences the teaching environment, teachers, learners and the whole Saudi teaching curriculum. As a result the Islamic culture plays a huge role in formulating teachers’ and students’ identities. Language teaching in this context has been described as being altered by the morals of the community and their values (Johnston, 2003). Since its inception the Saudi educational system and its practices, and thus both learners and teachers, has been influenced by the Arab and Saudi identity, an identity that conformed strictly to Islamic education and beliefs (Elyas & Picard, 2010). Therefore, it is necessary to understand Saudi pedagogy before adapting new teaching methods and tools.
Given the culture of the learning environment present in Saudi Arabia it is important that any teaching methods being introduced to it are fundamentally sound and effective. As such it is important to identify the value of the DGBLL classroom and how it can support learning.

1.4 The DGBLL Classroom
Digital games have been recognised as being an integral part of the lives of younger generations and despite initial views that they had no educational value, there is now a strong recognition of their value as an interactive learning tool (Golonka et al, 2014). As a result there is an increasing adoption of digital games as vehicles for learning with specific games being developed for the educational market and teachers adopting existing games and utilising them to motivate students. The games offer an interactive way of teaching vocabulary and other language constructs that engages students and encourages self-directed learning. The interactivity of digital game based learning also allows students to engage in active learning, as opposed to the more passive method of rote memorisation.

1.5 Statement of the problem
Many researchers have attempted to understand how to incorporate modern technology into different types of teaching methods. Researchers have studied teacher and student attitudes to new teaching methods that use modern technology (Lam, 2000). Studies have also focused on implementing game based learning (GBL) teaching methods using modern technology (Beck & Wade, 2006; Prensky, 2001). In addition, a large number of research projects have examined student engagement (Prensky, 2001; Van Eck, 2006), student collaboration and student motivation (De Freitas, 2006) when implementing GBL teaching and learning methods in a safe teaching environment as well as with regard to students’ ability to learn their second language. There has also been some exploration of how effective modern technology is when integrated into the learning process to help students expand their L2 vocabulary (Thornton & Houser, 2003, 2005).

There has been a significant increase in the amount of research surrounding the potential and realities of DGBLL (eg. see Thorne et al. 2012) using modern teaching tools. Despite this there have been no studies into the impact the culture of a country
has on how well received this method is. There have been no in depth studies that address how DGBLL will be received by the established educational system of the country it is enacted in. In countries where cultural identity is an integral part of the society, such as in many majority Islamic countries, the reception of DGBLL by the religious and cultural leaders of the nation is crucial in determining the effectiveness and potential of the method as a teaching tool. It is foreseeable that different cultures will receive this method of teaching languages in different ways, especially in countries where there is a cultural community as prevalent and dominant as Islam in Saudi Arabia.

This research therefore aims to explore the implementation of DGBLL as a modern teaching method in an Islamic country, Saudi Arabia.

1.6 Focus of the Study and Research Questions

The focus is on the use and potential integration of portable technologies such as smartphones and tablets for new vocabulary learning in a safe classroom environment and also taking into consideration elements of DGBLL that exist outside of the traditional teaching ecology. In this regard the following research questions are set for:

1. What effect does the use of digital games as a teaching method have on students’ attitude to learning new vocabulary?
2. What role can video games take in improving the vocabulary acquisition of Saudi students?
3. What internal and external factors influence and limit the use of DGBLL in Saudi universities with particular focus on historical and cultural factors?
4. What effect does Saudi culture have on the use and implementation of DGBLL as a teaching device on vocabulary acquisition?
5. Are there recommendations that can be made to support the implementation of DGBLL into Saudi universities?

These research questions were developed from a set of objectives that this researcher wishes to pursue and were identified as the following.
1.7 Research Objectives

1. To identify if digital games can be used as a tool to increase Saudi students' SLVA and to identify if there is a detrimental effect or beneficial effect on the learners performance and attitudes.

2. To gain more insight into the challenges associated with cultural issues that Saudi learners face as well as their attitude when implementing a possible DGBLL teaching method.

3. To investigate if Saudi learners can manage to overcome certain problematic issues, such as those associated with culture and if so, how this is achieved.

4. To establish and evaluate the effectiveness of delivery of a DGBLL teaching approach.

1.8 Rationale for the Study

The results of this study may improve understanding of Saudi students’ issues with and attitudes to DGBLL while using modern teaching tools as the medium. The results may also help by enhancing understanding of the Saudi culture. This could help to deal with the cultural interference experienced when using a new teaching method, such as DGBLL. Having gained a better understanding of Saudi culture, the findings suggest suitable games for the Saudi students in their teaching environment. They may also help with improving students’ learning strategies, approaches and techniques when using new learning tools and technology as well as raising their level of acceptance of the new tools and teaching methods. Using such teaching approaches when implementing DGBLL may help learners and teachers to understand the effectiveness of exploring new methods and tools using modern technology, such as smart phones and tablets, as well as raising their awareness of any possible limitations.

Following extensive research on the part of this researcher, and at the time of writing, most universities in Saudi Arabia are not yet aware of the potential benefits associated
with using DGBLL in language teaching and learning. This research hopes to provide some guidance to help Saudi teachers employ teaching methods that use modern technological tools in the future.

1.9 Organisation of the Study
Chapter 1: Introduction
Chapter one starts with a brief overview of the whole research. This Chapter begins with an introduction to the research. It gives a brief description of the Saudi English educational system and the teachers as well as the learners’ learning patterns. It also discusses the idea of introducing a new teaching method into the Saudi English teaching environment, which is the use of digital games and mobile technology as a teaching tool. This Chapter also explores the impact of Saudi cultural values when it comes to implementing new teaching methods.

Chapter 2: Literature Review I – Theoretical Background
This Chapter represents a review of the most salient and important research published in this area. It focuses on theories of language learning, and second language acquisition as well as learning strategies and learning styles. It also discusses curriculum and syllabus design with regards to the culture of Saudi Arabia. This Chapter goes on to discuss the impact of Saudi culture, beliefs and religion on the English education system in more depth, focusing on the theoretical and practical aspects of this system. It also highlights and explains the critically important relationship between Saudi society and the Islamic religion.

Chapter 3: Literature Review II – Technology and Learning
This second element of the literature focuses on the use of technology in language teaching and how digital devices and online sources can contribute to a more interactive and productive learning environment. Primarily, it focuses on previous studies that have explored teaching English vocabulary to L2 learners using modern teaching methods, such as GBL, (Games-Based Learning) GBLL (Game-Based Language Learning), DGBLL and Mobile Learning (M-learning), and modern teaching tools, such as mobiles, smartphones and tablets.

Chapter 4: Research Methodology
This Chapter focuses on how the researcher designed the required method, DGBLL, in order to implement it successfully with the participants, Saudi learners. It also explains in depth the reasons for choosing certain materials, specifically digital games, for this particular study. This Chapter also describes the methods used to gather the required data, a mixed-methods approach that combined qualitative and quantitative research. This research took the forms of a digital questionnaire, semi-structured voice recorded group interviews, and pre- and post- vocabulary tests on the course.

Chapter 5: Presentation of Results
This Chapter starts by reporting the findings of the vocabulary acquisition of both groups, experimental and control. To obtain the required results, a comparison of the vocabulary outcomes of the students’ in the two groups is made. This Chapter also explores the experimental group’s acceptance of DGBLL as a teaching method and the use of modern tools for their learning through analysing the learners’ responses in both the questionnaire and the semi-structured voice recorded group interview.

Chapter 6: Discussion
This Chapter discusses the findings of the previous Chapter. It reports the pre- and post-tests for both groups. It analyses and reports students in the experimental groups’ attitudes towards DGBLL and how they addressed such issues. This section also investigates the responses given during the semi-structured group interview regarding cultural acceptance and the potential for DGBLL in the conservative Saudi society.

Chapter 7: Limitations, Recommendations and Final Conclusions
This Chapter summarises the whole research. It describes the limitations that the researcher encountered as well as giving some recommendations and suggestions for further research involving the implementation of new teaching methods using modern tools in conservative cultures. Since no previous studies have explored cultural boundaries when implementing digital games in conservative societies, the researcher presents his personal view and comments in this Chapter. It also has a summary of the main findings of the research.
1.10 Summary
A brief summary of previous research conducted in different parts of the world on using DGBLL as a teaching method was presented in this Chapter. It was explained that despite some research having been conducted in this area, none has been done on the impact of local culture on the use of this method in teaching English, meaning that this research was both novel and necessary. The current English language-teaching situation in Saudi Arabia was described, especially in relation to teaching vocabulary, and the necessity to implement changes was discussed. Culture and religion as factors that influence teaching and learning were introduced. This Chapter also stated the problem and introduced the research questions and objectives. It finished by giving a brief description of each Chapter and explaining how this whole study was structured. The following Chapter (Chapter 2) will explore previous research on the history of the educational system in Saudi Arabia, language and culture.
Chapter 2 – Literature Review I – Theoretical Background

2.1 Introduction

The main aim of this research is to explore Saudi students’ attitudes towards Digital Game Based Language Learning (DGBLL). In addition, this research explores the potential of how the use of a DGBLL teaching method, devised by this researcher, combined with modern teaching tools increases 3rd level Saudi English language learners’ vocabulary size. This research aims to verify students’ reactions to DGBLL and examine what challenges these students might face. This study also investigates students’ acceptance of modern teaching tools, such as smartphones and tablets, in a safe teaching environment as well as their willingness to use new teaching and learning methods.

In relation to the research questions stated in the introductory Chapter (Chapter 1), this current Chapter contains a review of the literature pertaining to previous research on Second Language Acquisition (SLA), Second Language (L2) vocabulary learning, motivation in L2, language learning styles and learners’ strategies. A second literature review Chapter 3) presents a review of the literature related to Game Based Learning (GBL), cultural issues related to GBL, localisation and attitudes inter alia. In order to achieve a thorough understanding of the issues, this Chapter is divided into a number of sections that explore the issues in depth. The first section describes the key reasons for English teaching in Saudi Arabia as well as showing how English teaching began in the country and where it is now. This section also reveals how cultural identity and norms affect teachers, students and teaching practise. The second part of this literature review discusses how language and culture intertwine and work symbiotically. It also pursues an understanding of how language teaching materials, curricula and syllabuses are designed and discusses what to consider when designing these for students in countries where the target language is a foreign language. The third section begins by introducing the ways in which Computer Assisted Language Learning (CALL) can be used for both teaching and learning purposes. This section considers the obstacles that both teachers and learners face when implementing technology in teaching and learning. The final section gives notion to GBL and primarily focuses on how games can be utilised to promote SLVA. Before considering these however an overview of SLA and learning and motivation of students is considered.
2.2 SLA Strategies and Motivation

Within second language acquisition studies there is recognition that the motivation of the student and the strategies they adopt for their own learning can impact on how they learn and how they respond to teaching materials. Therefore, consideration of these aspects is also salient to the current work. However, before examining these, theories of second language learning need consideration.

2.2.1 Theories of L2 Learning

There are numerous theories about how individuals acquire second language. Krashen (1980) suggested that it is driven by comprehensible input, i.e. input that learners can understand. This contributed to teaching approaches based on rote learning and memorisation, but did not account for use of language in context. However, over the last two decades greater attention has been given to the cognitive and psychological aspects of language learning. In particular, the notion of Chomsky’s universal grammar which suggests that with stimulation additional language “switches” are turned on which supports ease of second language acquisition (Ellis, 1994). At the same time, there was an extension of Krashen’s notion of input which led to the view that language input and crucially in the context of DGBLL learning, interaction with the target language are what led to effective learning (Ellis, 2005). All of these theories do recognise the importance of exposure to the target language, usage and stimulation of interest in learning the language. They highlight the variety of approaches that need to be combined in order to produce the best results. For students being introduced to a L2 they need to develop a base knowledge of the language itself. However it is widely accepted that this is no longer enough to produce the best results. As such, it is necessary for students to take what they may have memorized and learn how to implement that in both an appropriate manner and correct context (see section 1.2).

2.2.2 Foreign Language or Second Language Learning

Baker (1998) indicates that frequently foreign and second language learning are used as interchangeable terms. However, there are some differences that could affect
motivation to learn and the strategies deployed by students. When a new language that is not the mother or native tongue is being learned as an additional language, it is a target language, which again could be classified as foreign or second. Richards (1985) suggests that the term “foreign language” is one taught at school but not with the intent of communication outside the classroom, in essence, one that is not used outside the country of residence of the student. A second language however is one learnt by individuals where the purpose of learning is to support communication and functioning within society, for example Saudi students wishing to study in England or in English at a Saudi university (Oxford, 1990). The key difference therefore is that the target language can be practiced outside the classroom. This offers a good indication of where self-directed learning with DGBLL can be used as an additional vocabulary learning tool. SLA therefore can be considered as the process of acquiring communicative competence in a target language, which is not the mother tongue. The term communicative competence has been given major exposure in the literature as one of the primary aims of any EFL classroom.

**2.2.3 Communicative Competence**

According to Chomsky (1965) grammatical competence refers to the knowledge and linguistic style common in native speakers of a target language, and suggests that this is different to language performed in a second or additional language. However, Hymes (1972) considered that this view was too narrow, as it did not take into account the ability of speakers (both second language and first language) to produce and comprehend utterances that were contextually, if not grammatically, appropriate. It was this view that led Hymes (1972) to identify the concept of communicative competence that may occur in four main ways:

i. what is formally possible,

ii. What is feasible?

iii. What is the social meaning and

iv. What actually occurs?

What this means is that language speakers, in order to be effective with their communication, need to have understanding and ability beyond simple grammatical
competence. Hymes (1972) asserted that it is not enough to understand the laws of a language, but it is also necessary to be familiar with how they are enacted by the native language users. This recognition had major implications for teaching practice and classroom resources as it began the notion of more learner centred strategies rather than passive repetition or memorisation of vocabulary in isolation. As Canale and Swain (1980) note, learner-centred interactive approaches lead to the ability to understand and appropriately utilise the sociolinguistic elements of language. By understanding the contextual implications of a language more thoroughly it can aid the development of communicative competence on the part of the non-native speaker. Similarly, Majhanovich and Hu (1995) indicate the foundations of communicative competence to be interactive and open communication. In this respect there is a potential value for the interactive technologies offered by digital games that encourage use of appropriate new vocabulary in a stimulating and contextually relevant way. In this way it is hoped that non-native language learners can marry the empirical nature of learning a foreign language to the emotional elements inherent in the use of a language by native speakers, thus improving the students ability to both understand and interact with the native speakers. At the same time how this competence is achieved is also impacted on by the learning strategies adopted by students and teachers.

2.2.4 Definitions and Characteristics of Language Learning Strategies and Learning Styles

Tarone (1983) suggests that language learning strategies are: “an attempt to develop linguistic and sociolinguistic competence in the target language - to incorporate these into one's interlanguage competence” (p. 67). Extending this, Rubin (1987) suggested that they are: “strategies which contribute to the development of the language system which the learner constructs and affect learning directly” (p. 22). This definition certainly indicates that there is high involvement from the student, and this is something the DGBLL approach can offer. This is because a level of autonomy and self-directed learning are key elements of increasing communicative competence. This is because there is a focus on active participation in the learning process by the student (O’Malley & Chamot, 1990; Liu & Chu, 2010). Strategies are therefore the
behaviours and techniques adopted by learners but may also be grounded in mental processes and thought patterns as a response to teaching stimulation.

How these strategies manifest themselves can be seen as the distinction between strategies and learning styles. This latter term refers to the learners normal means of learning such as how they structure their notes, or present the material used for learning. Essentially, learning styles are product oriented and learning strategies are process oriented (Graham, 1997). Learning styles, while an effective method of teaching in the past, have become out-dated in the modern arena. The processes based in rote memorisation are not as effective at either engaging students in the material, or at giving them the necessary tools to use this information in a native speaking context. By focussing on the process through learning strategies, teachers give their students the best opportunities to learn a language in a practical way. Fundamentally, language strategies provide the students more opportunities to interact with the target language than the learning styles of the past (Ellis, 2005). In this regard, as Hedge (2000) notes, learning strategies may be either cognitive (approaches for dealing with the L2 learning) or metacognitive (the ways in which the learner regulates their learning).

2.2.5 Classifications of Language Learning Strategies

Cognitive strategies may include repetition, resourcing, translation, memorisation, contextualisation, inference, and requesting clarification (Cook & Cook 1993). However, these do not take account of the greater interaction offered by digital games, which may stimulate a wider use of metacognitive strategies. As Victori and Lockhort (1995) assert, metacognitive strategies require the individual to think and reflect on their learning and how they maximise the benefit. In this respect there is a correlation to the processes of playing digital games, as the vocabulary used will determine the next stage. Therefore, as Snodin (2013) indicates there is a need for higher levels of motivation and involvement from the learner than that required for repetition, memorisation and other cognitive strategies. As such, understanding motivational theories also has salience for the current work.

Learning styles, however are related to the way in which an individual acquires knowledge. Kayes et al, (2005) establishes that learners may visual, verbal,
kinaesthetic or a combination of these when presented in an experiential setting and context. What this means is that learners who respond better to visual information (for example a digital game) may find it hard to learn a second language where the information is presented in a verbal, or written form. However, the same cognitive theories of language processing also identify that if the target language is focused on two areas of the brain (for example the visual and verbal cortex which is necessary in the use of digital games), then the effect of the learning is increased (Hitosugi et al, 2014).

2.2.6 Motivation Theories and Application to SLA
Motivation as a construct has been widely considered in a range of disciplines (Kiziltepe, 2008). This has resulted in a range of frameworks and theories that have attempted to explain and explore the construct. In general, the term refers, as Filson (1994) notes to a psychological perspective on movement as the result of internal (or intrinsic) and external (or extrinsic) stimulation or drivers that lead to an action.

2.2.6.1 Extrinsic Motivation
Extrinsic motivation is gratification of needs via indirect or external means (Osterloh & Frey, 2000), this indicates that it can be controlled by others (Huczynski & Buchanan, 2001). In terms of L2 learning motivation these can refer to the desire to achieve and demonstrate the achievement to others, or a longer-term external driver such as the desire to study English abroad or work in a field where English is necessary.

2.2.6.2 Intrinsic Motivation
This type of driver has a more internal focus as Spector (2003) notes and incorporates a sense direction, intensity and persistent behaviour that are aimed at goal achievement. This may be, in the context of SLA, a desire for increased ability through personal efforts for example. Understanding what drives motivation is however most likely a combination of both internal and external factors, which is recognised by the key theories in the field, which are shown in the figure below.
One of the most widely recognised theories is that of Maslow (1968). The approach suggests that once lower order needs such as a safe and secure environment are met then the individual can move forward to deal with achievement and self-actualisation and improvement as shown in the figure below.

In the context of second language learning the motivation to learn is driven by the need to achieve personal growth. However, Alderfer (1972) suggested that the step
by step approach is not accurate and that there is a continuous and overlapping need for movement. His existence-relatedness approach thus suggests that if the higher levels of growth are being achieved, this can outweigh the need to meet security needs. In this regard as Jennifer (2008) notes there is a relationship between existence and growth as shown in the figure below.

**Figure 2.3 - ERG Model of Motivational Drivers**

Whilst this model shows a wider perspective than that of Maslow (1968), McClelland (1961) also suggested that there are four basic needs driving motivations, i.e. need for achievement, for power, for affiliation and for autonomy. In this respect there is an indication that satisfaction, which may be the ultimate aim of any action driven by motivation, may be achieved through learning and thus has relevance for the learning motivations of SLA learners.

Similarly, Herzberg (1966) indicates through his two factor theory that achievement and recognition are important and satisfied once motivation has been stimulated, a view also echoed later by Mullins (2002). For L2 learners this recognition and achievement can be considered as being related to being able to communicate effectively, i.e. having communicative competence as noted above. The factors are thus recognition of ability and the social and learning environment as well as how this contributes to the development of communicative competence. The value of Herzberg’s (1966) theory is that it recognises the relationship between intrinsic and extrinsic motivational factors and how they contribute together to produce satisfaction on the part of the learner. In the context of EFL learning, this satisfaction is the ability to communicate effectively and in contextually appropriate ways. There are
however other factors, which affect how individuals learn and acquire language based on where and how the language is taught, specifically the cultural context in which a language is learnt. It is pertinent to understand both the cultural implications of the country in which the language is being taught as well as the cultural implications of the language itself when determining the potential drivers of motivation for learning it. Therefore, consideration is given to the teaching of English in the context of Saudi Arabian schools.

2.3 English Teaching in Saudi Arabia

The culture of Saudi Arabia is shaped by Islam, which influences all aspects of Saudi society, including the educational system and the way that the curriculum is delivered by teachers to students (Prokop, 2003). The main reason for education and learning in Saudi Arabia is to enable learners to fully understand the Islamic religion in order that they can ‘spread the word’ and increase the number of those following the religion. The purpose of education in Saudi Arabia is also to create useful members of society who are able to build an economically and culturally stable country (Ur Rahman & Alhaisoni, 2013). As a result of these factors, culture and religion play a huge role in establishing teachers’ and students’ identities. This research is, therefore, compelled to explore both cultural identities and socio-cultural issues in its quest to introduce new teaching methods and tools into the Saudi education system.

In regards to culture and identify, there have been studies undertaken on the effects of local morality on education (Morgan, 1998). It has been claimed that language teaching can be affected by the morals of the local community and its values (Johnston, 2003). However, the impact of politics on English as a L2 has only recently been acknowledged (Pennycook, 1999; Phillipson, 2009). This recognition of the realities of learning English in relation to politics and moral values in Saudi Arabia has raised doubts around the Saudi Arabian teaching and learning practices. Following the incident of September 2011 in America, the Western media raised huge concerns about the Saudi educational system, blaming it for the incident (Karmani, 2005). As a result of these criticisms and the government and Monarchy’s desire to improve the educational standards across the whole country (Elyas & Picard, 2010), Saudi Arabia and most of the Gulf countries changed their teaching practices. They did this by:
reforming the curriculum, adopting the (mainly American) curricula of Western universities, as well as putting aside to some extent learners’ needs from a moral or religious context, specifically in relation to traditional Islamic teaching. (Mazawi, 2005). Naturally and understandably, this had a major impact on English teaching practices and consequently, on how students learned to speak English as a second language in the Gulf countries.

The Saudi educational system has long been influenced by the Arab, specifically Saudi, identity combined with the Islamic religion and associated beliefs. This has impacted on educational practices for both learners and teachers in the Saudi system (Elyas & Picard, 2010). Given this, it is important to have a thorough understanding of Saudi teaching practices and their background before adapting or implementing new teaching methods, learning tools, materials and curricula that are discussed in detail later in this literature review. To ensure that such adaptations and implementations work successfully in the Saudi teaching and learning environment it is also necessary to understand the historical background of English teaching in Saudi Arabia.

2.3.1 Past and Present

In Saudi Arabia, English language teaching has been for a long time and remains for the most part, teacher centred (Fareh, 2010). As a result of this, the student’s role is secondary. The practice of teachers having the main role in the classroom is deeply rooted in the Arabic culture and in people’s Arabic identity. This teacher-student hierarchy is reflected in the Arabic proverb, ‘He who taught me a letter became my master’ (Elyas & Picard, 2010). This maxim is so prevalent throughout Arabic culture and it is frequently seen on the inner and outer walls of Saudi schools, on school buses and in schoolbooks. It is further integrated into the psyche and attitudes of Saudi students by their parents who typically will often quote the saying, as they acknowledge the important role their children’s teachers play in their development.

The proverb also indicates how students must participate in this culture, where they have to follow certain rules, regulations and guidelines. One of these rules is that the teacher imparts the necessary information and knowledge and the students acquire it.
by listening to what the teacher says and writing it down. This is how Saudi teachers prefer to teach (Jamjoom, 2010). Learners then usually memorise what they were taught in the classroom. In other words, the teaching and learning environment depends upon rote learning, whereby students only learn by memorising without any connection with previous knowledge (Novak, 1998). Unfortunately, such a method of language learning has been showed to only be effective as a short term learning tool (Novak, 2010). Novak (1998) believed that education is an art form rather than a science and that values, feelings and personal judgments should always be considered in the learning and teaching process. As such, in order to construct a meaningful learning experience, students need to feel, think and relate to what they have learned. In this regard, again, the potential for interactive technology to encourage motivation and involvement in the learning being undertaken becomes apparent. Given the increased use of technology by younger generations, it also suggests that incorporating these widely available tools could provide a potential platform for incorporating new approaches into the Saudi EFL education system.

At the same time, it is also important to understand how Muslim teachers are viewed and indeed how they view themselves. Muslims believe that the Prophet Mohammed is the ultimate teacher of values and morals and this core belief enhances the teacher’s role and status in the Arab Muslim community. This is because Muslims consider teachers to be representatives of the Prophet Mohammed (Elyas, 2008). This is one of the reasons that Saudi culture emphasises teachers as figures of absolute authority in the classroom. Therefore, it is no surprise that Saudi teachers and lecturers prefer teacher centred teaching methods and a teacher centred teaching environment as a whole since their high status within society is reinforced by their authoritative position in their classrooms.

This does not however mean that there is no interaction between teachers and students within the Saudi teaching environment. With some limitations, discussion forums can play a role in the Saudi teaching environment (Jamjoom, 2010). However, within Saudi classrooms there are certain topics and subjects that should not be questioned. The established culture focuses on teachers being the only ones to answer questions and the teacher should give the required information. The students have to be convinced that the answers are valid and correct by the teacher. In other words, there
are certain values and beliefs that students need to acknowledge and understand in order for them to fully adapt themselves to their classrooms. This is underlined by the impact of Saudi values and beliefs in relation to learning and teaching English.

2.3.2 Values and Beliefs
There has been some resistance to incorporating the teaching of English and other languages into the Saudi educational system (Elyas & Picard, 2010). In the early days, English was taught at a limited number of high schools for a few hours per week (Szyliowicz, 1973). However, teaching English as a Foreign Language (TEFL) was recently introduced as a formal part of the Saudi educational curriculum, largely due to international pressure in 2003 (Elyas, 2008) and the State’s recognition of the need for reform (Elyas and Picard, 2010). As a result, English language tuition is now mandatory in all Saudi public schools. This is despite public fear that integrating English language into the Saudi educational curriculum would lead to a reduction in religious Islamic faith teaching (Azuri, 2006). There was also a concern that the integrity of the Arabic language might be affected by the presence of another language in schools, colleges and society in general. However, it has been suggested that the Arabic language has such a strong identity that exposure to other languages will not affect it or weaken it in any way (Abuhamdia, 1988). Thus, it was felt that the presence of the English language in the Saudi educational curriculum would not be detrimental so long as it remained in a secondary position to Islamic and Arabic instruction. At the same time the State wishes to increase its presence on the international stage and reduce its reliance on expatriate and foreign workers. In order to do this and improve the employability of Saudi citizens, there is recognition of the need for effective English speaking skills (Mahboob & Elyas, 2014). This has further raised the importance and profile on teachers in the Saudi system.

A teacher can be a massive influence on students, encouraging them to collaborate with each other and share beliefs, understandings and assumptions. Unfortunately, Saudi English teachers tend not to take advantage of this ability to influence students in this way, instead relying on religious beliefs and their national identity to maintain their position as a figure of authority rather than a mentor and facilitator (Elyas &
Picard, 2010). This fundamentally hierarchical structure manifests itself throughout the educational system in Saudi Arabia.

In the English institution at any university in Saudi Arabia, teachers operate and work within a certain system depending on their position in the educational hierarchy. At the top of the hierarchy are the dean and vice-dean, through whom almost every single piece of information, the course curricula and all teaching plans must pass. These are then forwarded to the head of the English department followed by the department committee and then, finally, the teachers and lecturers. The responsibility of the teachers is then to pass the information on to their students. This hierarchy was formed to contribute to nationalism and Islamic religious values by the Ministry of Higher Education, which aims to produce young, proud, educated Muslims (Elyas & Picard, 2010).

It has been suggested that the teaching methods used by Saudi Arabian teachers are not well suited to the current modern generation (Elyas, 2008). The main teaching methods are as already noted; typically teacher-centred and lacking in many opportunities for the students to think critically, solve problems and find solutions. They also maintain the maxim that all learning must be led by the teacher, as a result they fail to promote an understanding amongst the students that they are personally responsible for their own learning. This reduces the potential for the development of metacognitive strategies for learning language and ultimately communicative competence as the focus is on rote learning and memorisation for test and exam achievement. This practise goes against the established academic ideas on the most practical methods for developing communicative competence. Specifically regarding getting students to develop their cultural and contextual understanding of a language alongside their empirical understanding of the languages vocabulary. At the same time, there are variations between the culture and the use of language in sociolinguistic respect between English and Arabic. These differences, along with the failure to acknowledge said differences, can affect the fluency and competence of the students. Therefore these areas need consideration before evaluating the potential of computer games as a teaching aid.
2.4 Language and Culture

In order to communicate well with others in their language, it is important to understand and respect their culture (Byram & Nichols, 2001). Thus, it is not enough to merely learn the phonology, grammar and lexis of the target language; it is extremely important to also understand the culture associated with that language. While language taken out of context can be viewed and considered objectively by those wishing to use it, speech, and therefore the active use of language, is intrinsically subjective. In other words, communicating effectively internationally means communicating inter-culturally (Shemshadsara, 2012a). It is almost impossible to separate language and culture because they are intertwined with each other and reflect one another (Brown, 2007; Brown & 吳一安, 2000; Tang, 1999). Given how it is the verbal expression of a native speakers culture, language has been determined to be a reflection of said culture (Brown, 2007).

After understanding what language is in terms of what it represents and its relationship to culture, it is important to also understand what culture actually is. To accurately define ‘culture’ is extremely difficult. Culture usually reflects what people value and certain attitudes (Graves, 1996). Brown (2007) defined culture as “a way of life. It is the context within which we exist, think, feel and relate to others. It is the glue that binds a group of people together” (P. 188). Inevitably, in order to thoroughly learn the targeted language, it is clearly necessary to have an understanding of the related culture. To try and learn a language without learning about the culture attached to it is to try and memorise something without fully understanding it (Shemshadsara, 2012a). Bearing in mind that language and culture cannot be separated, it is important to verify whether L2 learners in Saudi Arabia can cope with the socio-cultural differences of the target language to their own language and whether they can adjust to such cultural and language input via English teaching and learning. In this respect therefore, there is a need to address the nature and content of English materials and course books in the current Saudi classrooms. However, this needs to be preceded by an examination of cultural variations between Saudi Arabia and England.

A number of approaches have been used to study the effect of culture on individuals and on societies as a whole. One of the most popular approaches used to measure the
cultural dimensions was that of Hofstede (1980, 2001). A number of researchers have adapted Hofstede’s (1980) cultural dimensions to explore cultural acceptance when it comes to using technology (Straub, Keil & Brenner, 1997). Hofstede’s most common dimensions are power distance (PDI), uncertainty avoidance (UAI), individualism versus collectivism (IDV), masculinity versus femininity (MAS) and long-term orientation (LTO). A subsequent score for indulgence versus restraint (IND) has also been added. Power distance is people’s acceptance of the hierarchal levels in their society. In other words, people accept their place in society and the workplace. Power distance is defined as “the extent to which the less powerful numbers of institutions and organizations within a country expect and accept that power is distributed equally” (Hofstede, 1997: 28). The scores for the UK and Saudi are shown in the figure below and it is clear that there are some major differences.

**Figure 2.4 - Hofstede Scores for Saudi and UK**

Source: Hofstede (2016)

There are some clear and obvious differences highlighted by the figure above. In terms of power distance, Saudi scores 95 against the UK’s 35. This indicates that Saudi people accept the unequal hierarchal levels in their society and require no justification for them. For example, the teacher’s hierarchal level is higher than the students, so students are expected to believe what their teachers say with no questions asked. As established earlier in the literature review, the hierarchy of the Saudi
classroom is sacrosanct, as it is enshrined in the Islamic faith. The lower the PDI score, the greater the equality amongst people in a certain society. Therefore, people are more comfortable with each other in a low PDI society such as England and communication between individuals is usually informal. This vast gap between these scores indicates the potential for their to be an inherent difference between how someone raised in Saudi Arabia would speak compared to how someone raised in the UK would speak. Therefore recognising and understanding the English language’s potential for informality is crucial for students wishing to utilise it in a native speaking context. However, as indicated by the above PDI score, this is a cultural difference that it can be presumed will be quite difficult for Saudi learners to adapt to.

Individualism versus collectivism is defined as “the degree of interdependence a society maintains among its members” (Hofstede, 1984: 84). Saudi Arabia scores low in this dimension, with only 25 compared to the 89 achieved for the UK. This means that Saudi people are connected with each other within their society. Saudi people believe that they are a group rather than individuals. This indicates that Saudi people feel that as individuals they represent the whole of Saudi society, whereas the focus for UK citizens is their own individual achievement. In Saudi Arabia each person in a single group is seen as a representative of the whole group. In other words, a single person in Saudi society is a reflection of the whole group. Therefore, Saudi people are very concerned about being loyal to each other, and strong relationships between members of the whole society are their highest priority. Thus, the relationship between Saudi people is viewed as a long-term commitment. According to Hofstede (1980), the higher the IDV score, the more individualistic the society. People in an individualistic society look out for their closest family as well as for themselves but are not linked to any group members whatsoever. In other words, members of individualistic societies are closely bonded to their close relatives but not wider society. Loyalty in a collectivist society is key, and it is important to form successful relationships and bonds (Hofstede, 1980). In brief, Saudi people are more committed to other members of their society because they reflect each other.

Masculinity versus femininity (MAS) is a dimension relating to the competitiveness of the society. The higher the score the society gets, the more competitive it is. In other words, a low score in this dimension reflects a society in which competition
between individuals is not seen as needed or important and personal values and caring for each other are more dominant cultural traits. Therefore, the higher the score, the more masculine the society is, and the lower the score, the more feminine it is. In this dimension, Saudi Arabia scores 60 which indicates that Saudi society is to some extent driven by competition, which is similar to that of the UK and therefore the higher the hierarchal level a person has, the more decisive he or she needs to be. This is one of the few parameters in which the two cultures are closely positioned. As such it shows some potential for being a bridging point between the two cultures.

Uncertainty avoidance (UAI) deals with a society’s reaction to future ambiguity. In some societies not knowing the future makes members feel threatened and anxious. Saudi Arabia scored 80 in this dimension, indicating that Saudi Arabians do their best to avoid future ambiguity. In contrast to this people in the UK have less need of rules, guidelines and regulations in order to minimise future ambiguity. This difference in attitude reflects a key cultural separation between Saudi Arabians and people from the UK. Along with the more individualistic nature of denizens of the UK, this variation in UAI indicates the potential for how the use of language by someone from the UK would differ from the use of language by a Saudi Arabian.

Long-term orientation (LTO) deals with future rewards. The Saudi score of 36 suggests they have a strong respect for tradition and history and this is reflected in the way that society operates, and critically for this research, how education and teaching are managed. Saudi Arabia’s score indicates that they have a focus on short-term orientation. This focus on tradition, maintaining the current social hierarchy and fulfilling your social obligations correlates with Saudi’s results in the other parameters. As such it presents some potential difficulty in getting the culture of Saudi Arabia to welcome the new teaching methods being proposed in this study.

The final score, which refers to indulgence, refers to how well those in society manage their desires and impulses (for example purchasing the latest technology, even if an upgrade is not required). Saudi has a mid-range score that suggests that the society may be evolving to be closer to that of the UK, which has a high IND score. Although Saudi Arabia’s lower IND score also suggests that there is a greater balance
and control over impulses in their culture, something that is frequently seen in a collective society.

In summary in regards to culture it can be seen that the Saudi culture is focused on tradition, rules and a strong hierarchy with achievements being focused on the good of society. This should therefore be reflected in the teaching materials utilised in the classroom, whether they are traditional course books or more interactive technologies. What this leads to is the need to consider the teaching and learning materials being utilised in more depth.

2.4.1 Language Learning Materials

It has been indicated that anything that facilitates language learning can be called language learning material (Tomlinson, 2011). Tomlinson (2011) said: “Materials could obviously be videos, DVDs, emails, YouTube, dictionaries, readers, workbooks or photocopied exercises. They could also be newspapers, food packages, photographs, live talks by invited native speakers, instructions given by a teacher, tasks written on cards or discussions between learners. In other words, they can be anything which is deliberately used to increase the learners’ knowledge and/or experience of the language,” (P.1).

The majority of the English language materials and textbooks that are provided to Saudi universities are designed and published in English speaking countries. These materials reflect the culture that they were published in, and this could represent a challenge since some of them do not comply with Islamic identity and culture. As such the cultural difference inherent in teaching methods adopted by the books could be an issue for both learners and teachers (Fareh, 2010). Conservative teachers may therefore find some of these designed materials; mainly the textbooks, challenging to teach as well as the students, who may be uncomfortable with them themselves. Some of the course textbooks contain Chapters and units that do not reflect Arabic and Islamic identity, and some do not comply with Islamic and University regulations. As a solution to this issue, some teachers skip these Chapters altogether, while others just read the title of the unit and explain to the students that this topic is not fit for the class or the course as a whole due to it not complying with Islamic regulations and Arabic
identity. By ignoring some of the information contained within the textbooks it is understandable that the students are not getting as full a description of the language they are learning as is available. In response to this issue in recent years there has been a move to incorporate more culturally appropriate textbooks and materials. One notable example being the FullBlast 4 series which is developed specifically for Saudi Arabia and is sanctioned and approved by the government (Golam, 2016). This offers culturally appropriate lessons and referencing as part of the materials. However, the work does not always offer interaction and still relies on the teacher centred approach. As such, while it is a positive step, it can be seen as insufficient in the context of contemporary language learning research.

In order to deal with the challenges of the teaching materials, both teachers and L2 learners may need to recognise cultural differences when learning or teaching the targeted language. It has been argued that it is the teacher’s responsibility to expose his/her students to such cultural differences as part of educating them on the language they are studying (Shemshadsara, 2012a). Teachers can expose students to the L2 native environment and make them aware of the differences between the culture of the L2 and their own culture beyond the course book material in a number of ways. They can use photographs, posters and videos (Pulverness, 2003, 2004). They can also use videos, which enable learners to listen to conversations between native speakers and see them react within such conversations. Thus, teachers in this situation act as intercultural mediators. Based on this researchers’ own pedagogical experience this is a particular thing to do in Saudi Arabia, as alluded to above, the position of some teachers is that it is inappropriate to teach students things that do not reflect the Arabic and Islamic culture as well as the Saudi identity.

One of the issues that teachers also need to consider is that while learning the culture of the targeted language can be beneficial to some L2 learners, others do not benefit (Shemshadsara, 2012a). As such, it is also important that teachers always consider the values of the learners in order to not demotivate them (Cakir, 2006). In this regard, Cakir (2006) suggests that prior to teaching the targeted language, teachers should break down such cultural differences. Therefore, culture should always be put into perspective (Gairns & Redmen, 1986,1993). To achieve this, teachers might try to ‘localise’ the materials given to them, making them applicable to their students and
the cultural values of those students. Localisation is the process of taking a teaching method and tailoring it to the culture in which you are hoping to incept the new educational approach (Stambach, 2016). This is done in the hopes of making the material more palatable to the students, who are trying to familiarise themselves with something that can be jarringly foreign at times (Anastasiou & Schäler, 2010). It is important to examine whether such localising of teaching methods and/or materials affects the learning outcome, and this is an issue that is highly pertinent to this researcher’s work. In addition, material developers should keep in mind that the native language is learned along with the norms and attitudes of the society attached to said language (Shemshadsara, 2012b). Therefore, this also has an impact on the curricula and syllabi that are developed with cross-cultural materials as part of their content.

2.4.2 Curriculum and Syllabus Design

To design a solid curriculum, it is important to have a good grasp of what a curriculum is and to identify what it is expected to achieve. It is also necessary to know the difference between a 'curriculum' and a 'syllabus' and to understand how they work hand in hand. This was essential for this researcher when composing, creating, designing, implementing and delivering my own DGBLL teaching method, which is described in depth in Chapter 4. Whatever is taught or learned in a school is one of the simplest definitions of a curriculum (Kelly & Melograno, 2004), while a syllabus is simply seen as a structured map that outlines what learners should learn and what teachers should teach (Luke, Woods, & Weir, 2013; Woods, Luke, & Weir, 2010). However, for this research, a more detailed definition is necessary. Luke, Woods and Weir (2013) define curriculum as: “the sum total of resources - intellectual, and scientific, cognitive and linguistic, text book and adjunct resources and materials, official and unofficial - that are brought together for teaching and learning by teachers, students and in the best case community,”(P.10). On the other hand, some researchers see a syllabus as a guide to use when building a curriculum (Connelly, He, & Phillion, 2008), whilst other researchers believe that a syllabus is actually a curriculum in a written form that teachers can use as a tool in their teaching process (Schwartz, 2006). Regardless of structured definitions, it can be seen that ideally curricula and syllabuses work in a synchronous way to build the perfect tool or
guide for both teachers and learners. However, at the same time neither should be so detailed that they restrict learning or teaching processes.

They should not dictate the teaching methods, which should be left to the teacher’s own personal judgment (Fullan, 2008; Luke et al., 2013). In other words, the main reason for designing a curriculum is to professionally improve teachers while putting learners’ educational needs into perspective.

Having learnt how both the curriculum and the syllabus work hand in hand with the desired teaching material to produce professional teachers, it is also important to understand how and what to consider when designing them. When planning a syllabus, L2 teachers need to consider the age of the learners and their interests since these should guide the choice of topics (McDonough & Shaw, 2012). Other factors that should also be considered are the L2 learners’ English proficiency and the type of methods they prefer to learn through (Long, 2005). These important factors should influence L2 teachers when choosing the appropriate materials and teaching methods for their learners as well as designing a curriculum and syllabus. All of these elements are internal to the learner. However, teachers also need to acknowledge external factors.

These factors are out of the teacher’s hands, and thus they need to adapt and adjust their curricula accordingly. One of the key external factors in the Saudi context is the role of the English language in schools and in the country as a whole (McDonough & Shaw, 2012). As highlighted above, schools in Saudi Arabia recently established English as a compulsory subject in the curriculum whilst acknowledging that the national language in the country is Arabic. Thus schools in Saudi Arabia use Arabic as the medium of instruction. As a result, the students’ main goal is to pass their English course while not necessarily understanding the global benefits of that course (Ur Rahman & Alhaisoni, 2013) or achieving communicative competence. Another major factor that also needs to be addressed is the management of who makes the final decision regarding whether the designed curriculum is accepted or rejected (McDonough & Shaw, 2012). In Saudi Arabia, the highest authorities that dictate the general aims of English language teaching and learning are The Ministry of Education for public schools and the Ministry of Higher Education for colleges and universities.
According to the Ministry of Education, the main goal for English teaching in Saudi Arabia is that learners have a basic knowledge of the four major skills and are aware of their necessity in international interactions (Ur Rahman & Alhaisoni, 2013). Choosing applicable materials is also a concern when it comes to curriculum design and development. The choice of material, be it a textbook or educational technology, for teaching can have a direct effect on the teaching process (Hedge, 2001).

Finally, in this section of the literature review, it is necessary to present the main methods used for data elicitation in this research. Chapter 4 presents the methodology in greater detail but it can be noted here that various methods were assessed and in the end Action Research and a mixed methods approach were adopted. Action Research has been defined as: “the systematic collection and analysis of data relating to the improvement of some aspect of professional practice” (Wallace, 1998: 1), which adopts a reflective cycle composed of: “planning, acting, observing, and reflecting…and then re-planning, further implementation, observing and reflecting” (Cohen et al., 2011: 347). It is widely acknowledged by researchers that the key characteristics of Action Research lie in the fact that it is firstly conducted by practitioners, and secondly that it is utilised in the pursuit of improving the practise itself. (Cohen et al., 2011: 344; McNiff, 2002). The first characteristic determines the fact that the research project involved in Action Research is carried out by individuals who are not limited to being “outside researchers” (Nunan, 1992: 17) but who in fact themselves take part in the observed study. In this doctoral research, I was both the researcher and the teacher implementing a new teaching method using digital games as a language learning tool in the curriculum for the purpose of enhancing students’ SLA. I was also aiming to gain an insight into the students’ receptiveness to the contextually inaugural methods themselves. As a result, I was personally involved in the observed study. The second characteristic is specifically focussed around evaluating results, and identifying the issues that arose during the study of the practise, and in doing so aiming to learn more about the practise itself (McNiff & Whitehead, 2010). Some researchers also make the point that Action Research is collaborative in nature (Kemmis & McTaggart, 1988; Cohen et al., 2011). While there are several proponents of this theory, it is not one that has gained a complete consensus of support. Nunan (1992) explains that while collaboration is highly appropriate, it should not be a requisite; the aim of Action Research is not intrinsically
to conduct collaborative research, but rather practitioners who are not conducting collaborative research but are aiming to improve the practice they are engaged in may be considered as Action Researchers (see also Chapter 4). I conducted this doctoral study on my own as teacher and principal investigator. Within the context of this study Action Research was used to help elicit data regarding DGBLL, as such it is necessary to examine the use of this method with regard to CALL.

Beatty (2003), who specialises in Action Research using CALL, suggests a three-stage model which itself draws on McLean’s (1995) model. Similar to Action Research in a general educational environment, Beatty’s (2003) model comprises a planning phase (“conceptualization”), an acting phase (“implementation”), and a reflecting phase (“interpretation”). Beatty’s (2003) Action Research model is notably pertinent to this research as it focuses on not just the final outcomes of the practise, but it also investigates the learning process that obtained them. Furthermore, it leaves room for the researcher to prepare for and inspect unanticipated results, a freedom that is a useful and important aspect of successful Action Research.

The mixed method approach to data gathering has been widely employed for many years now. This incorporates both quantitative and qualitative methods for eliciting relevant data for analysis. This research was undertaken with regard towards the five philosophical assumptions: ‘ontological’, ‘epistemological’, ‘axiological’, ‘rhetorical’ and ‘methodological’ (Creswell 2012). These assumptions are discussed in greater depth in Chapter 4.

According to Rahman and Alhaisoni (2013), “Saudi Arabia is one of the few countries in the world which provides all the modern technologies in English language teaching classrooms. But, until or unless the teachers use it properly, teaching of English language cannot be fruitful. So, ensuring proper use of technology is very important,” (P.117). In other words, the educational system in Saudi Arabia acknowledges the importance of educational technology in improving L2 learner’s language proficiency but also recognises the reticence of teachers to fully incorporate it into the classroom. Therefore, it is important and relevant to this research to identify whether or not the implementation of modern technology while using modern teaching methods
improves the language skills of L2 learners as well as to assess the ability of L2 learners to adapt to such changes should they be implemented.

Having understood the importance of curriculum and syllabus design as well as choosing the right teaching materials in terms of producing better learning outcomes, the second stage of the literature review discusses in detail the importance of using modern resources, teaching methods and educational technology to improve L2 learner’s language proficiency.

2.5 Summary

This literature review has discussed the place English language teaching has within the Saudi educational system and how and why it has been introduced. It went into detail about the important role education plays in Saudi Arabia, as well as its intrinsic link to the religion of the Kingdom. Given the power and relevancy the Islamic faith and its teachings have in Saudi Arabia, it affects almost every avenue of life in the country. This Chapter discussed how cultural identity and norms affect the teaching, teachers and students in Saudi Arabia. This was followed by a discussion on what to take into account when designing language teaching materials, curricula and syllabuses for students in countries where the target language is a foreign language. The crucial investigation of established research undertaken in this Chapter surrounds the role Islam plays in Saudi culture as it pertains to the objectives and actions of this research. It is the primary identifier for the vast majority of the people who live in Saudi Arabia, including all the participants involved in this study (see Chapter 4). As such this Chapter clarified the influence that both Islam, and the culture of the Saudi people had on the conduction of this research. This has laid the foundation for the second part of the literature review, which focuses on technology and its role in SLA and DGBLL in particular.
Chapter 3 – Literature Review II – Technology and Learning

3.1 Introduction

This second Literature Review Chapter concentrates on presenting some theoretical background on technology and learning. In particular, it explores obstacles to and acceptance of technology use and issues related to games and language learning with a main focus on using digital games for vocabulary acquisition. The notion of incorporating technology into learning, particularly in an EFL context is not a new phenomenon. However, with the advent of the Internet and the rise in free apps, downloads and potential for interaction, it is increasingly recognised that there may be wider potential in a variety of cultural settings. Technology use has reached a near-ubiquitous state and we cannot ignore its existence, this Chapter seeks to show a background to technology use and language acquisition with a focus on digital games as language learning tools.

3.2 Language Teaching and Technology

Language teachers and L2 learners can easily access ample educational resources through computer-assisted language learning (CALL). CALL first emerged in the early 1960s, but the benefits of CALL techniques and practices were more fully recognised and realised in the 1990s when the Internet evolved and became widely available, meaning that teachers and learners were able to access a wide range of resources easily (Boswood, 1997; Levy, 1997). This is a prime example of technology helping with the development of education. Learners are now able to explore language and learning in a more independent manner due to ready access to an array of learning materials. Learners are also encouraged to take risks by experimenting with language using different applications on their computers, smart phones and tablets, which may require both learners and teachers to have certain skills. It is important that both teachers and learners understand that the ability to use technology varies from one person to another. However, even with limited experience and knowledge these tools can still be implemented and used by most in a safe teaching environment.

The Internet is now the foremost tool when it comes to locating and accessing different types of language resources, such as texts, videos, audios and games, which
can easily be integrated into a safe generic CALL teaching environment (Goodfellow, 1993). According to the Internet World Stats (IWS) website internetworldstats.com the percentage of individuals with internet access in Saudi Arabia has risen from 0.9% of the population (n=200,000) in the year 2000 up to 64.7% (n=20,813,695) in the year 2016. In Chapters 5 and 6 of this thesis, this researcher reports similar findings of high technology use amongst the student respondents to his questionnaire. A number of studies have integrated technology into the L2 classroom to improve learner’s skills (Goodfellow, 1995). For example, Schcolnik and Heymans (1997) used digital magazines and newspapers to improve the reading skills of learners. Other studies have examined their value in areas such as grammar, vocabulary development and increasing student motivation (Mathew & Alidat, 2013; Alsied & Pathan, 2013; Razmi, Pourali & Nozad, 2014; Goodfellow & Powell 1994). It is important to test whether the implementation of modern tools in such a manner will raise any issues from a cultural or social perspective and indeed that is one of the aims of this research. The majority of published studies have focused on the integration of technology into classrooms in non-conservative societies. This research aims to see if such resources are acceptable and can be successfully integrated into a conservative society, such as that of Saudi Arabia.

It is hard to underestimate the importance of digital technology in people’s daily lives. This can easily be seen on any university campus today. The majority of students, teachers and other staff members on campus nowadays are using mobile and portable devices, such as laptops, mobile phones, smartphones and tablets. Most own and use more than one of these devices. Today, students, teachers and staff members on campus can be seen tapping on their mobiles, silently texting or even emailing, or engaged in a voice or video conversation. Mobile or portable devices have been a key aspect of students’ lives for some time now. Indeed, smartphones had already outnumbered computers by 2011 (Alto, 2012). Students have easily adapted to using this modern technology on a daily basis, and thanks to telecommunication and the Internet it has made their lives much easier. Given the popularity of modern technology, researchers have been keen to use it in the educational system, especially for teaching purposes.
An extensive range of computer, smartphone and tablet programs as well as software applications that can be repurposed are now used to improve and reinforce learners’ major study skills. To name a few that are now used within the teaching environment, *Microsoft Word* is used to develop learners’ writing skills (Boswood, 1997), *Microsoft PowerPoint* slides are used to improve speaking skills and applications such as *Twitter, Facebook, BlackBerry Messenger* (BBM) and *WhatsApp* are all put to use in the modern language classroom (Godwin-Jones, 2011). Other applications are also employed by both learners and teachers, for example the electronic ‘dictionary’ or the ‘thesaurus’, which are used as tools to expand students’ vocabularies, and electronic editing applications, which students can use to edit and revise their worksheets, collaborating in groups of two or more. Some researchers have suggested that learning assisted by mobile technology (M-learning) has a high potential to help L2 learners since it exposes them to the target language as well as being a form of ubiquitous learning, and research evidence has been provided to support these claims (Norbrook & Scott, 2003; Thornton & Houser, 2004, 2005). Indeed, with the assistance of mobile technology, L2 learners can learn at anytime, anywhere once provided with the right materials.

Whilst recognising the benefits of using technology to develop students’ language skills, it is important to acknowledge that there are some drawbacks to the use of technology for both teachers and learners. The implementation of digital technology in environments with established teaching and learning patterns could be problematic and affect the students’ progress.

### 3.2.1 Issues and Attitudes to the Use of Technology in the EFL Classroom

In many institutions, there is a plethora of modern teaching resources that can be used to improve learning and teaching. However, not all teachers are open to the idea of integrating these tools into their teaching environment and are reluctant to change their teaching approaches (Marcinkiewicz, 1994; Prensky, 2007; Barr, 2004; Barr & Gillespie, 2002), and many have been slow to integrate these tools into their teaching, regardless of their development (Kramarski & Michalsky, 2015; Swan & Mitrani, 1993). Some researchers have investigated the use of teaching methods that employ modern educational technology, such as using digital games, specifically asking what
actually motivates both learners and teachers to use them or avoid them (Gee, 2004, Prensky, 2001, 2003, 2006).

Many teachers do understand the importance of incorporating modern teaching tools into their teaching plans and making them part of the teaching curriculum (Dupagne & Krendl, 1992). However, unfortunately, there are obstacles, both external and internal, that prevent both learners and teachers from using modern tools in their teaching and learning. Examples of external obstacles are: lack of time, limited experience using modern technology, insufficient training and support (Ertmer, 1999) as well as cultural influences (Al-Alwani, 2005; Al-Gahtani, Hubona, & Wang, 2007). Examples of internal obstacles are: being unable to accept change, negative personal beliefs about teaching and learning using modern technology (Al-Alwani, 2005; Ringstaff & Kelley, 2002), lack of confidence and negative experiences of using modern teaching tools (Ely, 1990).

3.2.1.1 External Obstacles
Teachers and learners need to be encouraged to use technology resources from the elementary school level (see Marcinkiewicz, 1994) up to 3rd level university environments (see Barr, 2004). One way of doing this is to provide them with the necessary training (Albirini, 2006; Sadik, 2008; Schrum, 1999). Whilst training courses are one way teachers might learn how to use new technology, they may also teach themselves, attend conferences and workshops or learn from colleagues. Both teachers and learners need to make an effort to learn the required skills and be prepared to invest some time as well. According to an important study, two of the biggest problems that teachers face are a lack of time and in-service training to learn how to use these modern technology resources due to large class numbers and a lack of assistance (Brand, 1998; Collinson & Cook, 2001; Prensky, 2007). However, there are no guarantees that teachers and learners will use technology resources even when these external obstacles are removed and they are given the required training and modern teaching and learning tools (Marcinkiewicz, 1994; Prensky, 2007).
3.2.1.2 Internal Obstacles

It is important that both learners and teachers know how to use modern technology resources. They can learn how to do this on their own or with the assistance of a specialist (Dusick, 1998). Some specific internal obstacles that prevent both learners and teachers from using modern technology resources are as follows: not accepting new changes, anxiety, uncertainty and personal and cultural beliefs (Al-Alwani, 2005; Albirini, 2006).

To successfully use modern technology resources, both teachers and learners need to observe successful use of these technologies. They also need some encouragement when attending courses or tutorials. According to Marcinkiewicz (1994), those with low self-competence need to use technology as much as possible to become more competent and they need to be given opportunities to develop the ability to use technology resources successfully. He suggests that the more technology resources individuals use, the more encouraged they are to use them and that in order for teachers to implement these technology resources, they need to spend more time and make more effort learning how to use them. Unfortunately, even if they do, there is no guarantee that they will integrate technology into their teaching method.

In depth research on the willingness of both learners and teachers to change when it comes to using new technological tools has been carried out, and researchers believe that there is a strong connection between the effect of technology on learners and the willingness of teachers to change (Baylor & Ritchie, 2002; Selim, 2007). It is thought that teachers who are more open to change in their teaching environment are more innovative when it comes to applying new teaching methods and using modern teaching tools. The manner in which teachers use these technological tools is important. Modern teaching tools will not improve learning on their own but can certainly be important when integrated with modern teaching and learning methods, depending on the way they are integrated.

Therefore, it is important to understand that there is a strong relationship between teachers’ experience with technology and their own self-competence and beliefs when using technology in their teaching (Albion, 1999). This is referred to as the levels of technology acceptance of an individual teacher or student.
3.3 Technology Acceptance

The Unified Theory of Acceptance and Use of Technology (UTAUT) relates to people’s acceptance and use of all types of technology (Venkatesh, Morris, Davis, & Davis, 2003). This theory has been tested in a number of Western countries, societies and cultures, where people are reportedly open-minded and willing to accept using new innovations and technologies (Al-Gahtani et al, 2007). Other cultures might have a different level of acceptance when it comes to using new technology as well as different reactions to it.

It has been suggested that the cultural beliefs of Arabs have a huge impact on their acceptance of new technology and that their social and cultural norms greatly affect their willingness to adapt to this technology and implement it into their daily lives (Loch, Straub, & Kamel, 2003). However, the high adoption of social media and purchase of mobile phones in Saudi Arabia in particular can be seen in the following figures: 58% of the population own a mobile phone, and of these 80% own smartphones according to a recent GS Main Intelligence report (2015). According to Nielsen (2014), nearly 67% of Saudi mobile phone users are over 16 years old. The percentage of ownership amongst the young is reportedly even higher, with 73% of owners being under 15 years old. These trends indicate that future students will be more familiar with using technology in their daily lives and they, presumably, will have developed certain preconceptions and expectations of said technology. As such, it may be presumed to a certain extent that students who are comfortable and familiar with technology pervading their everyday life will be more receptive to its implementation in the classroom. While there is no way to know for certain given the unique cultural situation, the continued propagation of technology in societies worldwide, especially with the younger generations, is an indicator of the integral role modern technology plays, and could continue to play in the future, in society (Degennaro, 2008). This underlines again the potential value that exists in incorporating technology into EFL classrooms in the country. Given the potential these new technologies have for improving the standard of learning, combined with their clear proliferation throughout the younger members of the society, it is feasible that the inception of digital based language learning will receive an enthusiastic
welcome in their respective teaching environments. However, there remain some issues regarding culture and its impact on teaching practices.

Reviewing the role of culture in Saudi Arabia and evaluating this against the cultural facets of Saudi society and teaching practices in the country have indicated that there is a potential to ‘localise’ and adapt certain technologies and teaching methods (Anastasiou & Schäler, 2010) and possibly how they can be implemented. However, this requires an understanding and evaluation of the process of using technology in the EFL classroom, which is now considered in the following section.

3.4 Games and Learning

The current generation of school and university pupils has grown up with information and communication technology (ICT). Nowadays, learners connect to and communicate with each other digitally on a daily basis using modern technology tools, such as computers, laptops, mobile phones, smartphones and tablets, all of which can be connected to the Internet. Using these efficient modern technology tools students can easily collaborate and interact with each other, via either texting, emailing or face-to-face video communication, and they can also easily exchange data (Jenkins, Klopfer, Squire, & Tan, 2003). Learners also enjoy using new technology because it satisfies their need to learn through collaborating with others, get fast responses and interact socially with each other (Oblinger & Oblinger, 2005). Therefore, it is no surprise that introducing video games, computer games or digital games to learners is now much easier than it used to be and that these games may be considered more efficient than traditional teaching methods (Gee, 2003, 2004, 2007a). Learning through playing games has been seen as representing a natural evolving approach to learning rather than learning in a traditional classroom environment (Aldrich, 2009; Cornillie, et al, 2012). According to Aldrich (2009), all intelligent species, human beings and animals, learn through playing games. The earliest discovery of humans playing games was before 2000 BC (Mandziuk, 2010) and play contributes to social bonding in all societies through various developmental stages.

The main purpose of playing digital games, as inferred from their design and marketing, is seen as being to have fun. The new generation of learners, believed to
have ‘digital wisdom’, are usually motivated to continue playing a digital game by the positive immediate feedback and interaction that the game has the potential to give them (Prensky, 2001 and 2011). One of the reasons for making this claim is that players have the right to make choices within the game and suffer the consequences if they make the wrong choice. As human beings, we are always curious as to what will happen if we do a certain thing and what the results will be after a certain choice has been made. Of course, it must be accepted that not all learners would be willing gamers, nor carry a positive attitude to employing games in their learning (Cornillie et al, 2012). However, games may enable learners to satisfy their curiosity by allowing them to experiment with new things, and the desire to see what they have achieved also helps to keep them motivated (Peterson, 2010). In other words, for the learners to win a game, they need to find the right solution. When they do find the correct solution to winning, they will remember what is required from them for a long period of time because they are motivated and emotionally connected to the game (Ebner & Holzinger, 2007).

Gee (2007) has presented us with 36 learning principles related to video games (which are also readily accessible from the website: http://edurate.wikidot.com/the-36-learning-principles). From the 36 principles, there are many which carry some degree of relevance to this research. However, the researcher selected 10 of them with particular pertinence to this researcher’s study. They are the following:

1. Active, Critical Learning Principle. [Learners/gamers develop critical thinking skills]
2. “Psychosocial Moratorium” Principle. [Learners/gamers can take risks with no affiliation to real-world consequences].
3. Affinity Group Principle [Learners/gamers tend to bond when collaborating and playing together].
4. Self-Knowledge Principle. [Learners/gamers learn about themselves]
5. Achievement Principle. [Learners/gamers obtain a sense of achievement]
6. Practice Principle. [Learners/gamers spend lots of time on the task at hand]
7. Discovery Principle. [Learners/gamers have the opportunities to make new discoveries]
8. Cultural Models about the World Principle. [Learners/gamers come to consciously reflect upon their cultural models within the real world]
9. Cultural Models about Learning Principle. [Learners/gamers come to consciously reflect upon their cultural models within the real world as learners]

10. Insider Principle [Learners/gamers are not only consumers because they can customise their learning practice as they see fit].

The principles mentioned above did provide some motivation for this researcher in carrying out his study in Saudi Arabia, especially where references are made to the cultural aspects and sensitivities. These 10 relevant principles helped to build many of his ideas in choosing the appropriate game materials in conjunction with Hofstede’s (1980, 2001) cultural dimensions (see section 4.6.2).

A game should have certain characteristics to make it a good, enjoyable and successful game that people can play. These characteristics are primarily fantasy, challenge and curiosity (Malone, 1980). In a classroom environment, learners need to be challenged which aims to keep them motivated. The more motivated students are in the classroom, the closer they arrive at achieving their goals, eventually resulting in positive outcomes, for example improved communicative competence and increased vocabulary and overall language knowledge. Therefore, there exists an understandable potential to expose a new generation of learners to new methods of teaching that they find intriguing and enjoyable as a way of keeping them motivated in the classroom.

The main reason for integrating digital games into a safe teaching environment therefore is to keep students motivated. This does not mean that the teacher’s role is diminished. Instead, games can be used as a tool to improve the learning process. Prensky (2003) believes that when learners are motivated, they cannot be stopped. Unfortunately, the new generation of learners are still being predominantly educated using traditional methods of teaching, using paper based materials (Beck & Wade, 2006; Klopfer, 2008; Prensky, 2001). In a traditional teaching environment students may thus feel bored, alienated and lack motivation (Hellerman, 2008) due to playing a passive role, learning from their teachers and attending lecturers in which they use their notebooks to write comments, notes, questions and thoughts. The outcome of their work is revealed to them via the results from their mid-term exams and finals.
In other words, the current generation of learners lacks a sense of motivation and a personal achievement from the established forms of teaching, which has the tendency to place the weight of motivating their students on the personal style and technique of the teacher as opposed to academic goals, (Guilloteaux & Dörnyei, 2008) such as communicative competence. At the same time, teachers cannot be sure that their students are actually actively engaged in the learning process in or out of the classroom. However, when it comes to game based learning, students must actually take an active role, due to the intrinsic nature of gameplay. They choose to play the game, and for each choice they make in the game, they get immediate results and see the consequences of their choices.

Understanding learners’ educational needs may help teachers improve their teaching methods. Most learners today play digital games more than previous generations, and most of them use computers or other devices (Beck & Wade, 2006). Therefore, this generation of learners is very different from the previous one. Their positive attitude towards digital games and their motivation for engaging with the technology that delivers the games can easily be recognised amongst those who play the digital games themselves. As evidence of the popularity of digital games in parts of Saudi communities in 2016 Saudi Arabia was the 21st most lucrative video game marketplace in the world, with an approximated sales revenue (in US dollars) of 501,793,000 (Newzoo, 2016). Unfortunately, there is little co-ordination between student’s interests in school and their interests in video games in many parts of the world. This tends to be born out of a lack of engagement and motivation on the part of the student with regard to the less interactive elements of education (Yazzie-Mintz, 2007). Teachers strive to get their students to be as enthusiastic in the classroom when learning as they are when playing digital games.

Teachers would like their students to look for information, be active, challenged and always feel interested (Prensky, 2001). It has been estimated that young people will have played digital games for 10,000 hours by the time they reach the age of 21 (Prensky, 2003). According to Prensky (2003), what attracts a lot of learners to playing games is not the type of game nor the subject but what they can learn from the game. Therefore, it makes a lot of sense to combine digital games with teaching and learning. It is important to put this speculation to the test in a Saudi context,
taking into consideration cultural norms as highlighted in the Hofstede (2016) scores and evaluation of the Saudi education system. Different fields, such as aviation training and medicine, are now using DGBL as a better alternative to traditional teaching (Chowdhary, 2008), highlighting their value as an instructional tool. It has been suggested that by using DGBL learners are able to learn new skills in a safe and controlled environment (Chowdhary, 2010). In addition, learners using digital games have complete control over their own learning progress. According to Chowdhary (2010), one of the greatest advantages of using digital games as a learning tool is that learners do not realise that they are actually learning something, in other words, this is incidental and effective learning in practice.

This digital era has changed learners’ ways of learning. Therefore, it is important to also re-examine teachers’ approaches when teaching. According to some researchers, such as Prensky (2001), the neuroplasticity in the brains of the new generation of ‘digital natives’ is developing differently from those of earlier generations and thus they function differently than those of the previous generation and are easily able to cope with the new technologies that they spend so much time using and exploring. Prensky (2001) has been criticised subsequently for this imposed and somewhat erroneous dichotomy (see Benini, 2015) and has recognised this over-generalisation. Prensky (2009) has since then reformulated his original ideas and prefers to speak about the ‘digital wisdom’ of younger learners. They appear to be much quicker when it comes to making decisions, and they are also very good at multitasking (Green & Bavelier, 2003). They see life in a slightly different way to previous generations since they grew up using technology, which is currently so embedded in their lives. This does not necessarily mean they are ‘tech savvy’ with deep computer programming skills, for instance, but rather they are ‘tech comfy’; they know how to use technologies and more particularly apps and they are comfortable with using them, but they may not have reached a level whereby they can use it for effective and successful learning (Dudeney & Hockly, 2016).

When it comes to GBL, the majority of researchers usually focus on the learners’ engagement with games and their motivation for using them (Ebner & Holzinger, 2007). This is due to the primary aim of refining and reflecting the methods of GBL itself, as opposed to its reception by certain cultures. Despite this, culture remains an
invasive variable and as such it almost inevitably exerts a degree of influence over GBL (Gee, 2007). According to some researchers, when learners begin to play a game that they are interested in, they become completely focused on the game. They will feel challenged to achieve their goals while trying to reach new ones, try to overcome their failures and continuously ask more of themselves (see, for example the ‘linguistic-pedagogical attributes of mini-games’ and the ‘game attributes of mini-games’ listed by Cornillie & Desmet, 2016, pp.436-7). They may feel completely isolated from the real world, playing for a long period of time non-stop, unaware of their surroundings and losing track of time (Beck & Wade, 2006; Prensky, 2007). At this stage, players start to feel that they are leaving the real world and entering the digital world of gaming. So, it is no surprise that some researchers believe that a virtual environment is a safe one for learning (Beauvois, 1992; Hudson & Bruckman, 2002; Rankin, Gold, & Gooch, 2006).

Most studies on GBL have been performed in societies that are open to changes. The issue of cultural acceptance of digital games in conservative societies, such as Saudi Arabia, has not been addressed. This is true at the time of writing this thesis and follows extensive research article searches. As previously mentioned in this Chapter, whilst games are seen as a type of teaching material and can be localised to fit certain classrooms, whether such learning and teaching methods are acceptable in conservative societies is unclear and remains for the most part, untested. The cultural challenges facing this research are addressed extensively in Chapters 2 & 4. Culture is a defining aspect of this research, but it is not the only one. Ultimately culture only determines a part of the effectiveness of new teaching methods, the success of educational methodologies are determined by a number of other factors, primarily among them, the individuals being educated themselves.

When individuals are engaged in digital game play, they may be in a state of ‘flow’. ‘Flow’ is when a person is completely emerged in an activity and totally absorbed by the task given to him or her while enjoying what he or she is doing (Csikszentmihalyi, 1990). People in this state feel that what they are doing is worthwhile even if they do not have a goal to reach because they are having fun (Nakamura & Csikszentmihalyi, 2014). Flow theory is a combination of challenges and the skills needed to face these challenges. It has been suggested that for people
to experience ‘flow’, they need to be challenged (Csikszentmihalyi, 1997). Therefore, a good game could help learners reach a level of ‘flow’ experience.

It is no surprise that every teacher’s wish is to have continually motivated learners, especially when they are learning a new language. Therefore, understanding the effect that ‘flow’ might have on learners could be a key factor in identifying how to motivate them, especially when it comes to giving specific and detailed instructions (Watson, 2007). The easiest way to describe motivated learners is as deeply focused and highly enthusiastic individuals engaged in a specific activity. When learners are motivated, they will enjoy what they do and it can easily be seen that they are interested in it (Garris, Ahlers, & Driskell, 2002). Learners are prompted to learn by themselves and kept motivated by seven individual factors: being in control, unrestricted imagination, the feeling of being challenged, being acknowledged and accepted, being in a competitive atmosphere, always being interested and the desire to know and collaborate with others (Malone & Lepper, 1987). Games can also help to trigger a number of these factors (Garris et al., 2002; Prensky, 2001).

According to Csikszentmihalyi (1997), in order to obtain the full experience of ‘flow’, three elements must work together simultaneously: interest, concentration and enjoyment. Once teachers have an understanding of flow, they are able to choose appropriate challenges for their students to help them enhance and improve their skills. According to Nakamura and Csikszentmihalyi (2014), choosing the appropriate challenge could actually help in nurturing students’ mental growth because as soon as learners master certain challenges their skill level starts to rise. Therefore, they look for more comprehensive challenges that match their newly developed skills.

It has further been suggested that using GBL as a teaching approach can actually lead to learners mixing fantasy with reality (Schwabe & Göth, 2005). This may provide learners with a learning experience that is highly motivating. Researchers rigorously debate the ability of the game itself to help learners improve regardless of the role that motivation plays (Hays, 2005; Mitchell & Savill-Smith, 2004). Nevertheless, some researchers do believe that learning via the use of games can actually help to prepare learners for real life situations (Chowdhary, 2009).
Due to the differing views researchers have regarding GBL as a teaching tool, it has never been so important to investigate the effectiveness of these tools than it is today. Therefore, an in-depth investigation into the effectiveness of language learning through games is discussed in the following section of this Chapter.

3.4.1 Games and Language Learning
As reported by Gee (2003, 2004, 2007a), the use of games as an educational tool has been widely criticised. Digital games have been viewed as merely a tool for personal enjoyment with no educational value. Others believe the total opposite and view digital games as an effective instrument for learning (Aldrich, 2009; Gee, 2003, 2004, 2007a; Green & Bavelier, 2003; Prensky, 2003, 2006; Rankin et al., 2006). According to some researchers, digital games can be an effective tool used to improve learners’ L2 skills since they mimic real life situations, thus enhancing the learning experience (Rankin et al., 2006). They argue that this occurs because texts are displayed on the screen during a game, and the meaning of words can easily be understood due to the visual context of the game, which eventually helps learners with their vocabulary acquisition. In order to play successfully a game full of enjoyment, learners need to learn the language used for the game. Therefore, it is no surprise that games can successfully provide learners with a good environment for language learning. Some researchers have also established that digital games help all levels of language learners, beginners, intermediate and advanced, in all settings, school, college and university, to acquire language (Gee, 2003, 2004).

Researchers have tested the use of Massive Multiplayer Online Role Playing Games (MMORPGs) on L2 learners and concluded that these games have a great positive potential in terms of improving outcomes in L2 learning development (Peterson, 2010; Thorne, Black, & Sykes, 2009). In MMORPGs all of the players are required to communicate and collaborate with each other in order to succeed in the game and advance to the next level. Researchers have explored the potential of these collaborations amongst players and found that it is a necessity for players to learn the targeted language in order for them to succeed and advance in the game (Gee, 2007b). Thus, digital games are beneficial for learners since they provide them with
authentic contexts at the right time through dialogues, written or spoken, giving them immediate feedback and direct results regarding their achievements. According to Peterson (2010), a digital game improves learners’ L2 due to the direct interaction between learners and native speakers of the target language. Language learners are encouraged to participate in cultural practices that are related to the target language they are learning (Krashen, 1981, 2003). Thus, any digital, computer or video game that provides and combines motivation, direct feedback and native speakers of the target language can improve learners’ SLA.

Digital games have been proven to be a successful tool for language acquisition (see, for example, Cornillie, 2012), this researcher will move on to focus on another key aspect of DGBLL, which is vocabulary acquisition in a game-based context.

3.4.2 Game Based Vocabulary Acquisition

Vocabulary is seen as impacting on all four of the language skills: writing, reading, listening and speaking. As such, a wide and extensive vocabulary in a target language is often perceived as being the key to learning, understanding and communicating in any language. For this to be successful, learners need to acquire words then understand how to put them in the right order to make correct and comprehensible sentences. In other words, they have to understand how to use these words in their correct grammatical form. Therefore, it is important to test and evaluate L2 learners’ vocabulary size in the targeted language, English, and the impact it has on their language proficiency. In other words, without having access to a basic vocabulary, learners will find it extremely difficult to develop in all the skills (Bahadorfar, 2013). According to researchers, EFL learners must have a basic vocabulary of 5000 English words in order to understand normal English texts (Laufer, 1997; Nation & Nation 1990). Given that the base level of vocabulary required is so high, it is apparent that a thorough knowledge and understanding of these words is key to the success of EFL learners (O’Dell, 1997). When students lack the requisite vocabulary to participate, or even understand, a conversation or comprehension in their L2 despite a concentrated effort to do so it can be discouraging, and even in some cases disengaging. Initial research indicated that 95% coverage of the known items in a written text was required for a student to be
able successful when trying to read text written in their L2. (Laufer, 1989) This was later raised this percentage to 98% in a study that sought to deeper examine Laufer’s results (Hu & Nation, 2000). In terms of understanding a conversation the expected required levels of understanding drop somewhat to 90% for a learner to comfortably be able to follow the conversation they are engaged in. Though the figure would fluctuate somewhat based on the formality of the conversation (Adolph’s & Schmidt, 2004) All of this research highlights the crucial role vocabulary acquisition plays in being able to understand and implement a second language in both reading, and verbal contexts.

Numerous studies have suggested that high school students in Saudi Arabia only have a vocabulary of approximately 1,000 English words when they graduate (Al-Bogami, 1995; Al-Hazemi, 1993; Alsaif & Milton, 2012). A vocabulary test was conducted on high school graduates using X_lex (Meara & Milton, 2003), and the results revealed that the average score was 890 words (Alsaif & Milton, 2012). Another vocabulary test, focused on the 2,000 English words provided by the Ministry of Education in Saudi Arabia (MoED), was also conducted on high school graduates. The average score in this test was a disappointing 340 words (Alsaif & Milton, 2012). These scores are relatively low for high school graduates since they have been studying and taking English classes for over 6 years (Al-Haq & Smadi, 1996; Al-Seghayer, 2005). These results show that Saudi students learn only 1 word per hour. In other words, students learn 1 word per English class they take. These rates of learning have also been reported in other studies (Laufer & Ravenhorst-Kalovski, 2010; Milton, 2009).

Saudi teachers of English usually ask students to memorise English words and texts before the midterm and final exams (Elyas, 2008). This basically is testing students’ memory skills rather than their English skills. For EFL learners, the need to memorise new words can be challenging, but recalling these new words can be even more daunting. To help the students remember the new words, they have to notice them when reading, writing, speaking and listening, and they also have to continue to practice these new words (Hulstijn & Laufer, 2001). Therefore, learners will start to automatically retrieve what they have learned with enough practice and exposure (Genesee, 2000).
Achieving successful communicative competence may be seen as one of the aims of language learners. But what might still interfere with EFL students’ progress in learning English vocabulary is that class time is limited. So, teachers have to make difficult choices due to time limitations and minimal opportunities to communicate with their students using the target language, English, in order to promote it. So, it is the EFL learner’s responsibility to study words and learn them by him/herself in or out of the classroom in order to increase his/her vocabulary size (Sanaoui, 1995).

A near-unlimited and vast amount of resources can be used to increase L2 learners’ English vocabulary, and these resources are easy to find. Such resources are the World Wide Web, English music, English movies, video, computer and digital games, etc. However, this does not mean that L2 learners are exposing themselves to these resources and using them correctly. According to Alsaif and Milton (2012), the only resource that students in Saudi Arabia use in order to be exposed to the target language and thus gain the required vocabulary is their English text books that have been provided to them by the Ministry of Education (MoED).

A large body of research claims that an English language text book is not necessary to provide L2 learners with the necessary vocabulary to be able to actively engage in a conversation in English. One study suggests that a small amount of vocabulary is learned through direct instruction teaching (Harris & Snow, 2004), whilst another piece of research suggests that L2 learners gain their SLVA incidentally through oral input (Ellis, 1994). Some researchers have also suggested that vocabulary text books should be abandoned (Meddings & Thornbury, 2001). The driving denominator of these propositions is that there are effective alternatives to expanding a vocabulary outside of relying on textbooks. One of the crucial influencers of this idea is the use of incidental language learning to help build vocabulary as it matches the way we learn our first language. Specifically through experience and input as opposed to the more direct instruction provided by textbooks (Krashen, 1989) from Given this, it is necessary to identify other alternatives in order for learners to increase their vocabulary as well as expose them to the target language, English.
A number of studies has shown that playing digital games promotes L2 proficiency (Peterson, 2012; Sundqvist, 2011). Other studies have been more specific and suggest that playing digital games actually helps improve learners’ vocabulary acquisition and, therefore, see digital games as a useful tool (Persson, 2011; Sundqvist, 2013). Mobile devices and digital games have the potential to play a major role in promoting language learning, and this research aims to explore this area. Combining GBLL with M-learning could help increase learners’ opportunities to acquire the target language. When it comes to using this new method of teaching and learning in Saudi Arabia, DGBLL, cultural barriers and boundaries may be an issue. However, it will be argued in Chapters 6 & 7 that the use of digital games in teaching and learning makes these barriers and boundaries less significant. This research also aims to explore and validate this belief.

In the specific context of games for improving vocabulary, there are a wide range of these games available. All are based on what Siemens (2005) indicates is a connectivist approach to learning. This is based on 8 principles:

1. Learning and knowledge rests in diversity of opinions.
2. Learning is a process of connecting.
3. Learning may reside in non-human appliances.
4. Capacity to know more is more critical than what is currently known.
5. Nurturing and maintaining connections is needed for continual learning.
6. Ability to see connections between fields, ideas, and concepts is a core skill.
7. Accurate, up-to-date knowledge is the aim of all connectivist learning.
8. Decision-making is a learning process. What we know today may change tomorrow. The right decision today may be the wrong decision tomorrow.

In an EFL / Vocabulary acquisition context, what this means is that students can utilise game based online applications to learn and practice new vocabulary through engaging in interactive activities that allow them to see and use the vocabulary in a natural context rather than in isolated lists. What is important is that traditional theories and approaches should not be replaced but rather augmented by the use of technology (Alm, 2009). This does not however mean that traditional theories of
language learning do not have a place. Rather, as Alm (2009) notes that knowledge is achieved through active engagement with the language content and coupled with support and advice from the teacher. At the same time teachers can work with these games and programmes to add new dimensions and structures to their class activities, reinforcing rather than replacing teaching practices. The table below illustrates three free web-based apps that can be used to extend and encourage vocabulary knowledge.

Table 3.1 - Web Apps for Improving EFL Speaking Skills and lexical Improvement

<table>
<thead>
<tr>
<th>App Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FluentU (free app)</td>
<td>The programme takes real world videos (music, commercials, cartoons and talks) and sorts them by skill level and contains built in lessons with questions and answers such as multi-media flash cards and fill in the blanks exercises. Students can watch their favourite programmes in English. The value is that not only are the students gaining access to native English examples but their understanding of English culture is also increasing. Students can add words to their own vocabulary lists, based on annotations in the videos and search options to see how new vocabulary is used in other videos. With interactive captions and in-context definitions posted on screen, students can learn at their own pace.</td>
</tr>
<tr>
<td>Duolingo (free app)</td>
<td>Videos are presented to the viewer and there is an integration of conversation, vocabulary, speaking and listening skills. After each section the user is tested and given indications of where they are doing well, and where more practice is required. From a speaking perspective this allows students to test their pronunciation and speaking skills in private or in the classroom in an interactive way.</td>
</tr>
<tr>
<td>Speak English (free app)</td>
<td>In this app, the student can listen to recordings of English speakers talking about a range of topics, these may be job interviews, customer service or even reviews of films. After listening to it as many times as they wish to, the student then records themselves repeating the conversations or phrase. A comparison is then made between the student’s speech and that of the native speaker which can support understanding and development of speaking skills.</td>
</tr>
</tbody>
</table>

These are educationally focused apps. However, other games, not necessarily those designed primarily for educational use can also be valuable and it is these which this research is focused on. Seeing vocabulary learnt from traditional processes used in a contextually relevant, interesting and engaging way can thus support the development of the students’ own ability to manipulate and generalise what they have learnt in the classroom and thus leads to improved communicative competence.
3.5 Summary

This section of the literature review began by introducing the ways in which CALL can be used for both teaching and learning purposes. This section considered the obstacles that both teachers and learners face when implementing technology in teaching and learning. The literature review also highlighted most of the challenges that Saudi teachers face when teaching an L2. The final section gave notion to GBL and primarily focused on how games can be utilised to promote SLVA.

This research focuses on implementing digital technology in the teaching and learning of an L2, and thus the literature review has referred to a large number of studies that have investigated the impact of DGBLL teaching methods on motivation and engagement. However, none, to this researcher’s knowledge has explored cultural barriers and boundaries when implementing such new methods in a culturally sensitive country that is Saudi Arabia. Hence, this research aims to explore this area. The following Chapter 4 will describe and report the methods of inquiry used to do this as well as what was considered when employing and adopting these methods in order to achieve accurate results.
Chapter 4 – Research Methodology

4.1 Introduction

This Chapter describes the mixed methods and Action Research approach that the researcher employed in order to address the main research questions as revealed earlier in Chapter 1. In addition, Chapter 4 describes the development of the actual course plan and how it was delivered and tested by the participants in the study. Finally, it provides information on the detailed course plan used and how it informs the development of the proposed DGBLL teaching method. This specifically addresses Research Question number 5, as stated in Chapter 1.

The first part of the Chapter covers the theoretical underpinnings of the research decisions made at the various stages of the study’s design and conduct before providing the specific detail of the work undertaken. The Chapter commences by explaining the five philosophical theories that characterise both qualitative and quantitative models. It is also important to note that this study is based on a mixed methods approach, whereby both qualitative and quantitative models are combined.

The second section justifies the reason for implementing both the DGBLL delivery and teaching method and Action Research and explains how the participants were chosen. It is also important to note that due to the researcher taking part in this study as the lecturer and the main examiner, issues regarding this research's ethicality had been considered and these are indicated and highlighted for clarity. This section also portrays the use of the DGBLL method and its relevance to the research questions. The second part also explains and verifies the reasons for utilising both a control (traditionally taught) and an experimental (digital game taught) group. It goes on to present the rationale behind choosing particular digital games for the experimental group. Also described is the detailed curriculum used for the experimental group and lists the terminology used to interact with the participants in both groups.

The third section of this Chapter gives some brief information about Saudi Universities, in particular Imam University, as relevant to the choice and adoption of the appropriate methodology to use in such a research setting. This section also lists a number of data collection methods that were employed in order to obtain extensive
such an elicitation method included the use of: a pre-test, a post-test, a voice recorded group interview, a questionnaire and a classroom observation. Finally, this section presents a detailed description of the type of games used in the experimental group because this is the key element of the research and the original catalyst in driving the research questions. All subsequent data emanated from this source.

4.2 Methods of Inquiry

This section focuses on the various methods of inquiry that this research refers to: discussing the quantitative or rationalistic model, the qualitative or naturalistic model and the mixed methods model, which is a combination of both models. To begin with, the relationship between each of these models and the techniques is described by identifying the most credible models, and the five philosophical assumptions that guide them are also identified (Schwandt, 2007). In addition to what has been said previously, the researcher also explains the reasons behind his decision to combine both qualitative and quantitative models with an emphasis on qualitative analysis in order to illustrate the participants’ very subjective perspective of their experience using digital games to improve their SLVA and on quantitative analysis to highlight the results more objectively.

4.2.1 Quantitative vs. Qualitative

A noticeable distinction between qualitative methodology and quantitative methodology is the kind of information that is gathered for purposes of analysis. Scientists often describe quantitative data as ‘numeric data’ and qualitative data as ‘non-numeric’ data in the form of words (Schwandt, 2007). Having said that, this perspective is often viewed as being too basic (Rolph, 2006) and extra divergences have been introduced to represent other differences between the two methods of inquiry. Researchers have recognised five features or philosophical assumptions that are still acknowledged to this day, and they are: ‘ontology’, ‘epistemology’, ‘axiology’, ‘rhetoric’ and ‘methodology’ (Creswell, 1998; Creswell, 2012).
4.2.1.1 The Five Philosophical Assumptions
The five philosophical assumptions offer recommendations to researchers on how to carry out their study: “researchers approach their studies with a certain paradigm or worldview, a basic set of beliefs or assumptions that guide their inquiries” (Creswell, 1998: 74). These assumptions are centred on the characteristics of the ‘knowable’ truth (ontological feature), the connection between the researcher and the one being investigated (epistemological feature), the element of value (axiological feature), analysis terminology (rhetorical feature) and how knowledge is gathered by the researcher (methodological feature), (Cresswell, 1998; Lincoln & Guba, 1985; Lincoln, Lynham, & Guba, 2011).

4.2.1.1.1 The Characteristics of Truth (Ontological Feature)
The quantitative model depends on positivism (Sale, Lohfeld, & Brazil, 2002), according to which real truth is derived solely from an individual’s psychological design (Schwandt, 2001). According to Schwandt (2001): “There is an independently existing world of subjective reality that has a determinate nature that can be discovered” (p.176). On the other hand, the qualitative model depends on interpretivism (Sale et al., 2002) and constructivism (Guba & Lincoln, 1994).

Qualitative researchers consider truth to be the product of individual psychological design as a result of understanding the public world: people comprehend reality through a pair of conceptual glasses that are shaded in accordance with their previous values and experiences (Holt, 2002). As a result, several realities could exist (Leedy & Ormrod, 2005). In brief, reality is created or very subjective because it is seen through our personal perspectives (Wallace, 1998). Therefore, effective analysis requires researchers to get mentally close to the investigated members or elements in order to comprehend their perspectives. This can be carried out through thorough observation for an extended period, for example, engaging in the subject’s lifestyle as in anthropology or researching classroom methods as in Action Research. It should be noted here that this researcher employed an ongoing classroom observation technique which allowed him to note any pedagogical or technical difficulties that the participants would encounter for immediate response and resolution (see also Chapter 5, 6 & 7).
4.2.1.1.2 The Connection Between the Researcher and the Investigated (Epistemological Feature)

At this level, quantitative researchers maintain remoteness from those being investigated, whilst qualitative researchers make an effort to stay close to their participants. Quantitative researchers attempt to understand the real world through observation, trying to stay distant from their subjects to prevent disturbance (Guba, 1990; Guba & Lincoln, 1994). However, qualitative researchers typically work together with their participants and spend time with them in the field. In other words, qualitative researchers become ‘insiders’. In short, qualitative researchers try to reduce the distance between themselves and the people being investigated (Lincoln & Guba, 1986).

4.2.1.1.3 The Element of Value (Axiological Feature)

In the quantitative model, researchers believe that reality can be assessed objectively. Therefore, they do not interfere with the data that has been collected or let their personal values affect the analysis process. It should be noted here that this complete objectivity is considered to be an appropriate concept in the rationalistic tradition of enquiry. On the other hand, qualitative tendencies are recognised as being present, and people may be affected by the experience of being investigated. It is, therefore, the responsibility of the researcher to reduce this impact by trying to be as discreet as possible (Creswell, 2012).

4.2.1.1.4 Analysis Terminology (Rhetorical Feature)

Quantitative and qualitative researchers usually review their results using various scenarios and procedures as a result of using different ontological, epistemological, and axiological techniques. In an attempt to be objective during the data collection period, quantitative researchers are more likely to be formal, whilst qualitative researchers may use informal terminology, such as the first-person pronoun (Creswell, 2012). Also, compared with quantitative researchers, it is not uncommon for qualitative researchers to make use of new terminology to identify styles or describe
new frameworks based on the suggestions and phenomena that have been presented to them during the research. For example, ‘generisability’ and ‘internal validity’ are quantitative terms which would not arise in qualitative studies; qualitative terminology, such as ‘conformability’ or ‘credibility’ may be preferred as an alternative (Sale et al., 2002).

4.2.1.5 Data Gathering (Methodological Feature)

In the quantitative model, the methods used to collect the required data are chosen to retain neutrality. On the other hand, the qualitative way of collecting the required data aims to catch numerous facts. To be more specific, the quantitative method is deductive and the outcome that it generates can be modified into numerical data, which can be analysed statistically, whereas the qualitative method, in contrast, is inductive and builds theories that are seen as narratives (Leedy & Ormrod, 2005). It is also important to note that quantitative researchers put emphasis on a previously chosen method to be followed and then examine any speculations or theories (Becker, 1996). On the other hand, qualitative researchers are more versatile in their approach because they may concentrate on inquiries that require replies to answers. In other words, they start with questions, continue with their studies and then present their new theories or validate prior ones. Finally, analysing quantitative data generates results which may be seen as statistically generalisable, while analysing qualitative data may result in theories that are seen as purely theoretical (Creswell, 2013).

4.2.1.2 The Importance of Mixed Methods

As mentioned previously, the difference between quantitative and qualitative study is highlighted by an understanding that both paradigms are portrayed as being the most credible styles. Guba (1990:19) stated: “paradigms are human constructions, and hence subject to all the errors and foibles that inevitably accompany human endeavours”. Additionally, the notion of two distinct research methods may be outdated (Becker, 1996; Pavlidou, 2011) as the methods have been “interbreeding” (Pavlidou, 2011: 92), allowing for the birth of mixed methods. According to Wallace (1998), quantitative data can expose elements of qualitative results that were not apparent before, and: “there need [be] no real opposition or contradiction between the
“two approaches” (p.38). This perspective is also emphasised in more recent articles (Cohen, Manion, & Morrison, 2011; Denzin, 2008; Gorard & Smith, 2006; Johnson & Onwuegbuzie, 2004), which point out that mixed methods research is needed now more than ever. Thus, the ‘paradigm wars’ that have separated researchers who swore by either one or the other should be ended (Gage, 1989).

After understanding the need to use a mixed method approach, a choice had to be made as to which methods were most appropriate for the different parts and purposes of this research. Since this research is unique in terms of the culture in which it was conducted, the researcher had to adopt a number of methods to test students SLVA and check their acceptance of the DGBLL teaching method. An undertaking that was conducted in the context of students using resources that were relatively new to them since they were more accustomed to a traditional (paper and pencil) teaching method. The main focus is on the students’ vocabulary acquisition when using quantitative methods, while evaluating their reaction to and acceptance of DGBLL requires the use of qualitative methods. Therefore, a mix method approach is needed.

This research began with a set of questions to be answered in a questionnaire format and tried to comprehend the participants’ views on the use of the DGBLL teaching method and obtaining an in-depth knowledge of their opinions on this teaching technique. Some of the main concerns of this doctorate research are: to identify which digital games are the most effective and the most suitable for improving learners’ vocabulary acquisition, how learners respond to and interact with said digital games, what encourages and motivates learners when using digital games for vocabulary acquisition and what can be learned from this research into the nature and practicalities of DGBLL.

4.2.2 The Qualitative Research Methodology
Since the decision was made to primarily adopt a qualitative research methodology, it was essential to take notice of and adhere to the requirements of this tradition in order to perform a reliable research study. Four requirements have been recognised by researchers (Lincoln and Guba, 1985; Seale, 2002) to ensure quality standards of quantitative research which will in turn inform our qualitative approach:
1. Truth value: How can one establish confidence in the ‘truth’ of the findings of a particular inquiry for the subjects (respondents) and the legitimacy of the context in which the inquiry was carried out?

2. Applicability: How can one determine the extent to which the findings of a particular inquiry have applicability in other contexts or with other subjects (respondents)?

3. Consistency: How can one determine whether the findings of an inquiry would be repeated if the inquiry were replicated with the same (or similar) subjects (respondents) in the same (or similar) context?

4. Neutrality: How can one establish the degree to which the findings of an inquiry are determined by the subjects (respondents) and conditions of the inquiry and not by the biases, motivations, interests, or perspectives of the inquirer?

Seale (2002: 104)

In reaction to these quantitative research standards, similar phrases more appropriate to qualitative research have been proposed. ‘Credibility’ is recommended as a substitute for the phrase ‘truth value’, and ‘transferability’ is used as an alternative to ‘applicability’. ‘Dependability’ is the third requirement, and the fourth qualitative standard is ‘conformability’ (Lincoln and Guba, 1985). These standards do more than merely improve qualitative research; they establish the rules for conducting a study that is strong and reliable. Reliability and credibility can be obtained in a variety of ways, one of which is through: “a prolonged engagement in the field and persistent observation” (Seale, 2002: 314). While agreeing with Seal’s (2002) point, it is reasonable to question the consistency of the findings when applied to language learning since learners evolve in terms of language development. As a result, this could be an issue for this research’s credibility regarding learners SLVA. Taking into account learner’s language development and in order to overcome such an issue, at
the end of this research project a semi-structured voice recorded group interview was conducted, which will be explained in more detail later in this Chapter. Another way is by being familiar with the surroundings in which the research is performed over an identified time frame. We can say with some empirical certainty that, when data is gathered over an extended time, the practitioner is: “in a better position to distinguish situational perceptions from more constituent trends” (Cohen et al., 2000: 139).

For this research project, the duration of participation in this area of study was a full academic semester, 12 weeks, in a second language learning classroom at a Saudi University. The researcher was part of this research project as he was interacting, directing and teaching with the L2 learners, as a result of his position in the classroom he had an excellent opportunity to carefully observe his subjects’ interaction with the digital games being played.

4.3 Constructing the Appropriate Method for the Given Environment.

This section shows the design of the research method used to collect the required data, which eventually structured this study, drawing in particular from Action Research (McNiff, 2013) with its emphasis on learning processes and problem-solving elements (Patton, 2002). Indeed, this also strongly informs the design and implementation of the lesson plan, curriculum and materials that were needed in this study, as will be seen later in this Chapter. This section also explains the reasons for using: a control and an experimental group, the strategies needed to sample both groups, the issues raised by being both the primary researcher and the lecturer for both groups and the necessity to use the students’ first language (Arabic) in the questionnaire to gather the required data from the experimental group.

As previously mentioned in the literature review, rote learning (see Skinner, 1957 and for a critique see Ellis, 1994 pp.299-300) is the dominant teaching and learning method in Saudi Arabia, as described by Yamani, (2000) and later confirmed by Smith & Abouammoh (2013). Indeed, rote learning has a high prevalence of practice in all levels of Saudi education, from schools to universities as a whole (Elyas & Picard, 2010). Thus, using a new method of learning such as DGBLL, that learners are not used to might be correctly presumed to be challenging and have a negative impact
on them. As first revealed in the literature review (Chapter 2), Action Research, was chosen because it appeared to be the most effective and appropriate for this researcher’s pedagogical approach and research ecology. Action Research is a widely known method used by teachers to observe their students and identify what issues they face and problems they encounter in their learning regimes. It aims to solve these problems by collecting data through continued observation, problem-solving techniques (testing, in our case), and interviews, *inter alia* (McNiff, 2013).

In the following section, and before mapping the procedures to the Action Research framework, it is necessary to provide a more detailed picture of the conservative research environment in which the study was conducted.

### 4.3.1 Saudi University in which the study took place: Background and Process

The main focus of this research is on Saudi male students in the College of English and Translation at Imam University in Saudi Arabia. Before Saudi students can enter the College of English and Translation at Imam University, they need to take an English placement test. This test was specially designed for this college to test students’ English proficiency. Students take grammar, vocabulary, writing, reading, and listening tests. They are then given a score out of 100. Students who score 59 or below are immediately disqualified from entering the English and Translation College and are asked to apply to a different college. Students who score 80 or above are automatically allowed to enter the English and Translation College, and become an English senior student. Students who score between 60 and 79 have to take an English proficiency course. This course takes place twice a year and lasts for a full Saudi University semester, about fourteen to sixteen weeks, excluding holidays. This was the course in which this researcher’s study took place. In actual fact, the researcher was given two groups at the same level from a total of nine groups, for teaching and research purposes. Taking this course does not entitle students to enter the English College, and they still need to take the English placement test again after they finish their English course. At that point, they have to score 80 or above in order to enter the College of English and Translation. In other words, students who score 80 or above on their first or second placement test, earn a place at the College of English and Translation.
The College of English and Translation at Imam University has designed a course to teach learners English subjects, which draws heavily upon generic CALL materials, e.g. such as, Microsoft Word. Generic CALL materials are represented and taught in English in order to promote L2 learners acquisition of English. Every week, learners have twenty hours of traditional pen-and-paper based English courses as well as two hours of generic CALL use. The English courses or subjects that these students need to take are: grammar, reading, listening, speaking and vocabulary. The main goal of this course is to develop L2 students’ English language competence and qualify them to enter the College of English and Translation. It also aims to help Saudi learners understand how to use computers to develop their English language skills. This shows that universities in Saudi Arabia are adopting new teaching and learning methods using various new technologies. This makes Saudi learners suitable candidates for this type of research project which goes beyond the simple adaptation and integration of generic CALL programmes.

Acknowledging the importance of the proficiency course for both students and the English college, this research focuses on L2 students’ vocabulary acquisition using the DGBLL method and their reaction to this teaching approach. As mentioned earlier in the Chapter, Action Research (McNiff, 2013), whereby the researcher is actively involved in the delivery of the course teaching whilst at the same time also conducting the research project, has been suggested as a suitable and effective model for this type of study.

4.4 Specific Methodology and Mapping the Procedures

The research method applied in this study began with the researcher designing the entire course plan. The researcher chose the materials and digital games and then designed a syllabus which will be explained in more details later in this Chapter. In order to understand whether learners’ vocabulary knowledge improved or not, or was in any way negatively impacted upon, two types of tests were employed with two groups of subjects: a vocabulary pre-test and a vocabulary post-test. To verify if DGBLL had a positive or indeed a negative effect on Saudi learners SLVA, the results of the vocabulary tests were compared (see Chapter 5 and 6 for presentation and later analysis of the results).
It should be noted at this point that this researcher is a lecturer at the university (Imam University) since 2007 with over 8 years of teaching experience where this research was conducted. This allowed him access to the participants at Imam University. Due to the nature of this radical new teaching method (DGBLL), the researcher had to ask for personal favours from the Dean of the College of English and Translation to employ this method. He had to ensure that whatever teaching methods were employed complied with both Islamic and Imam University regulations. As part of the agreement with the university the researcher has to assume all accountability in the event of his research overstepping the established parameters of the university. The method, curricula and materials used for DGBLL will be discussed in detail later in this Chapter.

To gain an in-depth understanding of Saudi learners’ reaction to the DGBLL teaching method, a digital survey questionnaire using Google Form was used as well as a semi-structured voice recorded group interview as will be seen later in this Chapter.

4.4.1 The Subjects
The subjects in this study were all 3rd level male Saudi students studying English at the college of English and Translation in Imam Mohamed Bin Saud University in Saudi Arabia. They were identified as preparatory year students (PYPs). The college assigned a number of classrooms (9) for the PYP students for the first semester of the year 2014. The researcher was assigned with 2 groups for his research project. The researcher then chose one group for experimental research and one group for control. It can be stated due to the College of English and Translation entry requirements that all the participants were at a relatively similar level in terms of language proficiency. Each of the classes were limited to a maximum size of between 20 to 30 students. With these initial participants identified, there were two groups in separate classrooms: an experimental group and a control group. The control group was taught using traditional teaching methods, using paper-based materials, such as text books and dictionaries. In keeping with standard teaching practice the teacher/researcher was at the centre of the teaching process, where he acted as the primary source of the student’s information. On the other hand, the experimental group used the DGBLL teaching method, were the teacher/researcher role is an observer and the participants
are in control of their classroom using portable devices, such as mobiles, smartphones and tablets as a medium for learning.

4.4.1.1 The Control Group
Since rote learning is the most common teaching method in Saudi Arabia (Fareh, 2010), this group was taught using paper based materials. As previously explained in the literature review, in Saudi Arabia the teacher is the centre of the classroom and the teaching environment (Fareh, 2010). As a result, learners are the receivers of the information given to them by the teacher. In other words, the teaching environment is teacher-centred and the students’ role is generally considered to be secondary. Thus, learners in the control group needed to follow a structured curriculum that was designed by the College of English and Translation. The course curriculum as well as the syllabus were handed to them in their first vocabulary class. The teacher explained in detail what these students needed to do in order to pass this course. They were also given detailed instructions about the design of their course book and what type of subjects they should expect to take and finish by the end of the semester. As part of their course, they were also given weekly assignments. Having understood what was expected from the control group, it is also important to understand what was expected from the experimental group, and the following section explains this in detail.

4.4.1.2 The Experimental Group
Students in the experimental group used specifically chosen digital games (these games and the reasons for their inclusion are described in detail later in this Chapter) for vocabulary learning while using their personal mobile devices, such as tablets and smartphones, as the medium for learning. As a result of the students bringing their own devices (BYOD) to the classroom, training to use mobile devices was not necessary.

The materials for this group were specifically designed by the researcher, as were the curriculum and the games chosen, ensuring that all of the materials, games and curriculum were well suited to and fitted to the Saudi Islamic culture as well as remaining compliant with Saudi and Imam University regulations. In order to achieve
that, the curriculum and syllabus were formulated and designed based upon a thorough understanding of the Saudi culture (Hofstede, 1980, 2001). In addition, this researcher spent many days and hours playing the final list of games to ensure that the lexical items presented in the games covered the same lexical items as were needed to be studied and acquired in the vocabulary text book assigned by the college of English and Translation. At the start of the first semester, the students were given the designed materials as well as the curriculum. What they should expect and what they might gain from the course was explained verbally to them and written down in detail (see Appendix 1).

As previously mentioned in Chapter 3, for the purpose of this research it was important to familiarise the students with this new teaching method without forcing it upon them. So, they were all given a chance to explore the chosen games in and out of the classroom. This was done on the first week before the actual course started. It is also important to note that all the participants were handed a consent form explaining the purpose of this research and asking their permission to be the test subjects for this research. All of the students agreed to participate in the research in full compliance with the University of Limerick (UL) ethics committee guidelines (see Appendix 1). After acknowledging what to expect from both groups, it is pertinent to explain in detail the materials chosen for both groups and what was considered when they were chosen.

The number of students in each group depended on the physical capacity of the classroom provided by the university. The control group was taught a number of new words chosen from the textbook that is part of their course curriculum. The control group was taught in a normal and traditional classroom environment, where the teacher teaches the required words and the students memorise, define and take notes on these new words. Typically, it followed the classic PPP method of Presentation-Practice-Production, where much drilling-and-practice with materials occurred in class (for further information on the PPP method, see Bax, 2003; Richards & Rodgers, 2014). The experimental group was taught the same new words through a DGBLL teaching approach using modern portable devices. The same teacher taught both groups of students in order to minimise any potential impact on the results due to different teaching styles. When it came to the students' vocabulary knowledge, their
level of English capability and their English educational background was considered equal based on the results of the admission test that was given to them by the College of English and Translation. The test checks if the applying student’s English proficiency is fit to study at the college, following Imam University policy. The subjects are Saudi males because Saudi universities do not have mixed gender classes, which is one of the policies provided by the Ministry of Higher Education.

4.5 Study Procedure

As mentioned earlier, the duration of the first academic semester for PYPs in Saudi Arabia is 14 weeks. The first week is usually an introductory week. Students during this week start to adapt themselves to a new atmosphere of teaching and are given tours around the university campus to be familiarized with its facilities. Teaching starts from week 1 to week 12. The final two weeks (week 13 and 14), represent a transition period during which students receive their test results and prepare for the next stage of their college programme.

The procedure used in this experiment required a number of steps to obtain the most accurate results possible. The first step was conducted during the first week with both groups having a vocabulary pre-test, followed by a twelve week vocabulary course for each group, both experimental and control. On the tenth week, both groups had a vocabulary post-test. According to the curricula (see Table 4.1 and 4.2) week 10 is the mid-term exam. So, both groups had to take the pre- and post- vocabulary tests during that week. The results of the pre- and post-tests are presented in the next Chapter.

After these tests and in order to understand the cultural issues’ that the experimental group faced and how they managed to deal with them, a digital survey questionnaire was sent to them using Google Form. To gain more insight, the experimental group partook in a voice recorded group interview. The words selected for the tests can be found in the Appendices and were taken directly from the chosen games for the experimental group and also from the book originally assigned by Imam University and used with the control group. As mentioned earlier, to ensure validity the researcher played all the games to confirm that the words in the game were also identifiable in the book. The number of words assigned from the various book Chapters totalled 687, however this large number could not be managed within the timeframe for the work and thus a total of 30 words were randomly selected for each
of the pre- and post-tests, delivering a final total of 60 lexical items for the study, all of which can be found in the Appendices.

4.5.1 Pre-Test
Both of the groups were asked to take a vocabulary pre-test. Both groups were given the same amount of time to finish the tests, and they had to take it and finish it in a classroom under the supervision of a teacher. The students were given multiple questions to answer. These questions focused on words that were suitable for both groups as they could be found in both the selected free digital games and the English vocabulary course textbook.

4.5.2 Course Plan
Based upon the curriculum (see Table 4.1 and 4.2), the traditionally taught control group studied two to three units a week. On the other hand, for the experimental group that was taught using digital games, the first week was an introductory and exploratory week. In this week learners started to play the games suggested by the researcher in order to adapt themselves to this method of learning, individually or in groups, in or outside of the classroom. This also helped students to understand how to get the words they needed from the game in order to play the game successfully. In the first two weeks, the teacher helped the students and guided them if necessary. The teacher also observed this group and how they were coping with this teaching method. During the third and fourth week, the students played the presented game freely. The lesson was mainly student driven. In other words, they were in control. The teacher's role in the third and fourth week was to observe the students’ development and interactions when using digital games as a tool for learning new words and to be sure that they were on the right track. The teacher also helped the students when asked so that they did not misunderstand the meaning and usage of these words. In order that the students learned the target vocabulary, this procedure was followed:

1. The teacher started by presenting the Saudi students with a detailed course plan that was designed by the researcher specifically for the experimental group. This course plan contained a syllabus, the materials and score sheets
amongst other items. The rationale behind this course plan was to afford equal opportunities for all the students to potentially acquire as many lexical items as possible.

2. A number of activities were given to the participants in the experimental group. These activities were designed in order for the researcher to observe the participant’s progress during the entire course. Each student was asked to fill in a score sheet for each game they played. It was intended that this activity would help the students to be more active in class and make progress. The students could use any dictionary they pleased, digital or paper, as well as ask their peers to find the meaning of some of the new words mentioned in the game.

4.5.3 Post-test
The most important thing before the vocabulary post-test was that the teacher had to cover all the targeted words found in both experimental and control group materials. Both groups were given a vocabulary post-test during week 10 of the course. It is important to note that the structure of the vocabulary post-test is similar to the vocabulary pre-test but with a different set of words.

4.5.4 Digital Survey Questionnaire
After the vocabulary post-test, papers were gathered from both the control and experimental groups, the experimental group were asked to fill in a digital survey questionnaire that was done using Google Form. Since this is a digital questionnaire a web link to the survey (https://docs.google.com/forms/d/e/1FAIpQLSChbhwQFHx00nerg97VFo6zPqLTKCDSNn0v9_3u6edjPgRxg/viewform?usp=send_form) was sent to them via email and mobile text messages. This survey was designed in order to evaluate the effectiveness of using digital games combined with modern technologies as a tool for teaching and learning new words. The students could also give their own opinions on using digital games combined with modern technology as a tool for teaching as well as describe the issues that they faced while using the DGBLL teaching and learning method. To
ensure that the students gave their own opinion and expressed it freely, they did not write their names on the survey questionnaire in order to remain anonymous (more will be discussed in details later in this Chapter).

4.6 The Design of the Material and Curriculum

Having gained an understanding of how both groups were taught, it is important to be aware of the materials that were used to teach them. The traditionally taught control group used the second edition elementary level of a book called *English Vocabulary in Use* by Michael McCarthy and Felicity O'Dell (see Appendix 2). This book was used by the College of English and Translation at Imam University to enhance the students’ vocabulary knowledge. On the other hand, the DGBLL experimental group used a different type of material which was specifically designed to be as close as possible to the control group’s material in order to be able to make an authentic comparison between the vocabulary acquisition of both groups. To be more specific, according to the control group’s material and curriculum, the students needed to gain 687 basic English vocabulary words through the course during the semester. Thus, the designed curriculum and the materials chosen for the experimental group needed to contain a similar number and type of words as the control group in order to make a justifiable comparison. A sample of these lexical items can be seen below in (Sample 4.1), and for a full list of the lexical items see Appendix 3.
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<th>C</th>
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<td>Coffee</td>
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<td>Congratulations</td>
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</tbody>
</table>
The following section will explain in detail the materials and curriculum used for both groups and show how reliable and valid these materials were for this research.

### 4.6.1 Control Group: Materials and Curriculum

This group was taught in a traditional manner using the previously mentioned vocabulary book. This book contains sixty units. Each unit has different subjects and various titles followed by a number of exercises. According to the curriculum, only the first thirty units were chosen for this group, skipping unit 24 ‘Music and Musical Instruments’ since it does not comply with either the Islamic culture or the University Regulations (see Table 4.1). As mentioned in the literature review, in order to 'localise' (Anastasiou & Schäler, 2010) this book for our particular needs and
purposes, the faculty and the teacher had to adapt it by designing a curriculum that broke neither Islamic nor university rules.

In the first week, which was an introductory week, the teacher/researcher introduced the name of the book and handed out the curriculum to the students. He then explained to them in detail what to expect from a vocabulary class. The same week, the students started to take their first actual vocabulary class. Each week the students were expected to complete three units. On their 10th week, the students were expected to finish twenty-three units. Thus, they fully revised all of these units, and this was followed by a mid-term test on week 10, which is the vocabulary post-test in this research.

Table 4.1 - Control Group Curriculum

<table>
<thead>
<tr>
<th>WEEKS</th>
<th>DATE</th>
<th>TEACHING PLAN</th>
</tr>
</thead>
</table>
|       | 26/01/2014 | 1) Introducing Teacher and Name of Book.  
                              2) Giving out the curriculum and explain it to students.  
                              3) Vocabulary Pre-Test.  
                              4) Teaching Unit 1 (The Family).  
                              5) Teaching Unit 2 (Birth, Marriage and Death).  
                              6) Home Work.                                                   |
| Week 1|            | 1) Teaching Unit 3 (Parts of the Body).  
                              2) Teaching Unit 4 (Clothes).  
                              3) Teaching Unit 5 (Describing People).  
                              4) Home Work.                                                   |
| Week 2| 02/02/2014 | 1) Teaching Unit 6 (Health and Illness).  
                              2) Teaching Unit 7 (Feelings).  
                              3) Teaching Unit 8 (Conversation 1: Greetings).  
                              4) Home Work                                                     |
| Week 3| 09/02/2014 | 1) Teaching Unit 9 (Conversation 2: Expressions).  
                              2) Teaching Unit 10 (Food and Drink).  
                              3) Teaching Unit 11 (In the Kitchen).  
                              4) Home Work                                                     |
| Week 4| 16/02/2014 | 1) Teaching Unit 12 (In the Bedroom).  
                              2) Teaching Unit 13 (In the Living Room).  
                              3) Teaching Unit 14 (In the Living Room).  
                              4) Home Work.                                                   |
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 5</td>
<td>23/02/2014</td>
<td>3) Teaching Unit 14 (Jobs).</td>
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<tr>
<td></td>
<td></td>
<td>4) Home Work.</td>
</tr>
<tr>
<td>Week 6</td>
<td>30/02/2014</td>
<td>1) Teaching Unit 15 (At School).</td>
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<tr>
<td></td>
<td></td>
<td>2) Teaching Unit 16 (Communications).</td>
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<tr>
<td></td>
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<td>3) Teaching Unit 17 (Holidays).</td>
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<tr>
<td></td>
<td></td>
<td>4) Home Work.</td>
</tr>
<tr>
<td>Week 7</td>
<td>09/03/2014</td>
<td>1) Teaching Unit 18 (Shops and Shopping).</td>
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<td></td>
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<td>2) Teaching Unit 19 (In a Hotel).</td>
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<td>3) Teaching Unit 20 (Eating Out).</td>
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<tr>
<td></td>
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<td>4) Home Work.</td>
</tr>
<tr>
<td>Week 8</td>
<td>16/03/2014</td>
<td>1) Teaching Unit 21 (Sports).</td>
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<tr>
<td></td>
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<td>2) Teaching Unit 22 (Cinema).</td>
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<td>3) Teaching Unit 23 (Free Time).</td>
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<td></td>
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<td>4) Home Work.</td>
</tr>
<tr>
<td>Week 9</td>
<td>23/03/2014</td>
<td><strong>Mid-Term Break</strong></td>
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<tr>
<td>Week 10</td>
<td>30/03/2014</td>
<td>1) Revision.</td>
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<tr>
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<td></td>
<td>2) Vocabulary Post-Test.</td>
</tr>
<tr>
<td>Week 11</td>
<td>06/04/2014</td>
<td>1) Teaching Unit 25 (Countries and Nationalities).</td>
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<tr>
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<td>2) Teaching Unit 26 (Weather).</td>
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<td>3) Teaching Unit 27 (In the Town).</td>
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<tr>
<td></td>
<td></td>
<td>4) Home Work.</td>
</tr>
<tr>
<td>Week 12</td>
<td>13/04/2014</td>
<td>1) Teaching Unit 28 (In the Countryside).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2) Teaching Unit 29 (Animals).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3) Teaching Unit 30 (Traveling).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4) Home Work.</td>
</tr>
<tr>
<td>Week 13-14</td>
<td>20/04/2014</td>
<td><strong>Transitional Phase</strong></td>
</tr>
</tbody>
</table>

The following section explains the curriculum and materials designed for the experimental group in order to compare them with the teaching methods, curriculum and materials used for the control group.
4.6.2 Experimental Group: Materials and Curriculum

The researcher designed the whole curriculum and syllabus for the experimental group based upon a number of factors. First, the researcher considered as many cultural issues as possible that could affect the Saudi participants through having an understanding of Hofstede’s (1980) cultural dimensions (see section 2.4) and also based on this Action Researcher’s own pedagogic experiences of 8 years teaching as a native Saudi. Second, the researcher drew heavily upon 10 of Gee’s (2007) 36 general learning principles which apply to the use of digital games. In particular, this researcher focussed on those principles relevant to cultural sensitivities and cultural awareness in the real world (see section 3.4). In sum, the curriculum was designed in order to move learners from being ‘tech comfy’ to ‘tech savvy’ (Dudeney, 2011; Hockly, 2013) by giving them all the necessary instructions and guidelines, as will be seen later in this Chapter.

As stated earlier, the materials for this group were repurposed to ensure that the number of words was as close as possible to the number used with the control group. In order to achieve that, a number of games were chosen. These chosen games are Commercial Off The Shelf (COTS) games, they were free to be downloaded and can be used with all mobile devices, smartphones and tablets. To see the students’ reactions to this method of teaching, a variety of games as well as different game genres were chosen. The material consisted of four obligatory games that were necessary for this research project in order to have approximately the same number of words as the control group. In addition to these four obligatory games, two optional ones were added while mobile phones, specifically BYOD, were used as a medium for learning.

The four obligatory games were mainly ‘find the object’ and ‘mystery games’, while the two optional games were left for the students to choose from a list of games suggested by them as will be seen later in his Chapter. Following the curriculum that was designed for this group by the researcher and in order to maintain consistency with the control group, both groups had the same timeframe of 12 weeks to finish the course but with different teaching and learning approaches.

Table 4.2 - Experimental Group Curriculum
<table>
<thead>
<tr>
<th>WEEKS</th>
<th>DATE</th>
<th>TEACHING PLAN</th>
</tr>
</thead>
</table>
| Week 1 | 26/01/2014 | 1) Introducing Teacher.  
2) Giving out the curriculum and explain it to students.  
3) What is GBLL?  
4) Introduce the suggested GAMES.  
5) Give students the right to withdraw from this teaching method.  
6) Vocabulary Pre-Test. |
| Week 2 | 02/02/2014 | 1) Explore the suggested (obligatory) GAMES.  
2) Can play individually or in Groups.  
3) Teacher influence is kept to the minimum.  
4) Students should communicate with each other in English in the classroom. |
| Week 3 | 09/02/2014 | 1) Play the suggested (obligatory) GAMES.  
2) Can play individually or in Groups.  
3) Teacher influence is kept to a minimum.  
4) Students should communicate with each other in English in the classroom. |
| Week 4 | 16/02/2014 | 1) Ask the students to choose their own Digital Games.  
2) Teacher chooses 1 - 3 games that he sees fit.  
3) Play the suggested (obligatory) GAMES.  
4) Students should communicate with each other in English in the classroom. |
| Week 5 | 23/02/2014 | 1) Play the suggested GAMES for 2 classes.  
2) Can play individually or in Groups.  
3) Teacher influence is kept to a minimum.  
4) Explore the new Games for 2 classes.  
5) Students should communicate with each other in English in the classroom. |
| Week 6 | 30/02/2014 | 1) Play the suggested GAMES for 2 classes.  
2) Can play individually or in Groups.  
3) Teacher influence is kept to a minimum.  
4) Play the additional Games for 2 classes.  
5) Students should communicate with each other in English in the classroom. |
| Week 7 | 09/03/2014 | 1) Play the suggested GAMES for 2 classes.  
2) Can play individually or in Groups.  
3) Teacher influence is kept to a minimum.  
4) Play the additional Games for 2 classes.  
5) Students should communicate with each other in English in the classroom. |
Since the first week was an exploratory week, the students were able to explore the four obligatory games that were chosen for them by the researcher. It is also important to note that the first week was an introductory week. This week was important for a number of reasons. First, the students were able to understand the curriculum due to the teacher verbally explaining it to them. They could also read the instructions that were written in their materials, which also described the features of each game suggested (see Appendix 4). Second, they were encouraged to explore the suggested games before investigating the actual subject. Thus, the participating students were encouraged to feel at ease with this new teaching and delivery method and were afforded opportunities to ask questions, interact and finally adjust themselves to what, for them, was a very different teaching and learning paradigm.

The first obligatory game in the materials was ‘find the object’. The name of the game in question was *Hidden Objects* by TOBI APPS (http://www.hiddenobjectgames.com/). This game was specifically chosen to be played on the second week of the curriculum and was chosen as the first game to be played by the students for a number of reasons. First and foremost, it was easy to play. As previously mentioned in the literature review, in order for students to engage with the desired material, the suggested games, they needed to feel at ease as well as

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Activity</th>
</tr>
</thead>
</table>
| Week 8   | 16/03/2014 | 1) Play the suggested (obligatory) GAMES.  
2) Can play individually or in Groups.  
3) Teacher influence is kept to a minimum.  
4) Play the additional Games for 2 classes.  
5) Students should communicate with each other in English in the classroom. |
| Week 9   | 23/03/2014 | Mid-Term Brake                    |
| Week 10  | 30/03/2014 | Vocabulary Post-Test.             |
| Week 11  | 06/04/2014 | 1) Recorded group interview.  
2) Survey Questioner. (Students Reaction to GBLL). |
| Week 12  | 13/04/2014 | Data Gathering                    |
| Week 13 - 14 | 20/04/2014 | Transitional Phase                |
challenged (Chowdhary, 2009; Malone, 1980; Prensky, 2003). This game is easy to play because students need only to locate and understand the meaning of the words provided within the game and then click on the object that refers to the suggested word. The objects are mainly images, such as a bird, a dog, a letter, etc., which are relatively easy to identify. Second, this game has more than fifty levels. As a result, it has more words and takes more time to finish successfully. Third, it contains most of the words required for this course. Finally, students can play this game individually or in pairs at their own pace. In other words, students are in control of their own learning progress. So, students in this group are at the centre of the teaching process rather than the teacher. As a result, the teacher’s influence on the students is kept to a minimum.

The second game, which is a detective story with a movie plot, is called Dream Sleuth: Hidden Objects by Nevosoft Inc. (http://www.nevosoft.com/review/game-Dream_Sleuth/platform-android). This game also has a spoken and written dialogue between different characters. A sample of this dialogue can be seen below (Sample 4.2), while the full dialogue can be seen in Appendix 5. This game also provides a large number of hidden objects, a number of mini puzzle games and a challenging free three ‘Chapters’ or levels trial game. Therefore, if learners would like to continue to play the full game, they can purchase it online, but they are not required to do so for this research study. This game can also be played individually or in groups, and it is family and child friendly.

The main reason for choosing this game was that in order to progress to the next level the students needed to listen to and read the dialogue in the game. Thus, the students needed to engage closely with the game. To achieve this, the students took the role of the main character, a detective trying to solve a crime. The focus of this game is the main character solving riddles, answering questions and finding objects. Each level in this game has multiple dialogues with multiple characters. This game is relatively short with only three Chapters or levels for students to finish. This game could only be played when the students were finished with the prior obligatory game that was suggested to them.
As previously mentioned in the literature review, in order for learners to remain motivated, they need to be challenged (Chowdhary, 2009; Malone, 1980; Prensky, 2003). The third game was chosen for this reason and to contribute to the first obligatory game. This game is called Hidden Objects Mystery Guardian by Big Bear Entertainment (http://hidden-object-mystery-guardian.soft112.com/). The main feature of this game is that it contains thirty levels, each of which the player has to conquer in only two minutes in order to proceed to the next level. Therefore, one of the challenges that players of this game face is limited time. This game also has different modes (word and picture) and a large number of vocabulary items. This game is relatively close to the first main obligatory game with one major difference, which is the time limitation. Students in this game need to be fast and thorough to finish each level. Therefore, this game is not only challenging because there are time limitations but it also tests students’ vocabulary acquisition as well as their speed in recalling the words that they have previously acquired.

The fourth and last obligatory game that was prescribed by the researcher also promotes the second obligatory mystery game. This game is called Mysteryville: Detective Story by Nevosoft Inc.
It is relatively close to the second obligatory game and has almost the same features with one key difference, which is that all the dialogue in this game is in written form (see Appendix 6). In addition to becoming familiar with all the obligatory games and understanding how these games complement one another as well as why they were chosen, it is also important to recognise the necessity of the two optional games that were left for the students to choose.

The two optional games that were chosen by the students were used in this research after the majority of the students had finished all the obligatory games. The researcher tested both of the optional games in order to see if they were culturally acceptable based upon Hofstede’s (1980, 2001) cultural dimensions and compliant with Imam University’s regulations. One of the reasons for the use of the optional games was to give the students an opportunity to contribute to their own lesson plan and control their own learning process. Another reason was to try to identify the types of games that students would prefer and their attitudes towards DGBLL. The first optional game that was proposed and used was *FIFA 14* by EA Sports. This is a sport game based on soccer, which students can play with each other online as well as individually with the computer. The majority of the students had already played this game, so they did not need to explore it for the purposes of the course. The vocabulary items in this game were relatively useful for this course since it focuses on one specific genre, which is sports, and this was one of the subject titles suggested for the control group. The second game is a Massive Multiplayer Online strategy game (MMO) called *Clash of Clans* by Supercell, which is mainly about military tactics. This game can only be played online, and one of its main features is that players can chat online and interact with other players, in the students’ case in English, as well as in their native language, Arabic.

To allow the researcher to keep track of the students’ progress and development and also so the students could see their own vocabulary development and achievements, each game used had its own classroom score sheet. To make using the classroom scoring sheet easy, each game had its own logo, game developer and game features (see Sample 4.3 and for the full score sheet see Appendices 4 and 7). Since all of the games were played in and out of the classroom, there was also a homework score
Finally, an optional personal score sheet recognised student engagement in gaming for personal pleasure, the type of games that Saudi students are interested in and prefer, when they play these games, and how long they play them on the particular devices that they elected to use.

**Sample 4.3 - Classroom Score Sheet**

![Game Image]

Game Features:

3. Up to 3 players can play individually.
4. 50 free trial levels.
5. Large number of vocabulary words.

4) Each level is scored and timed.

**Classroom Score Sheet**

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Time in min</th>
<th>Score</th>
<th>Hints</th>
<th>Level/Chapter</th>
<th>Misses</th>
<th>Duration Played</th>
</tr>
</thead>
</table>

The score sheet was also important because if the students were not sufficiently acquainted with the games being presented or the teaching method, the teacher/researcher could modify the teaching process in order to help the students improve. This is, of course, one of the main responsibilities of every teacher.

In detail, the score sheets were mainly boxes that the students needed to fill in and were designed to be simple enough that the students would not encounter difficulty doing so. Given the importance of the accuracy of these score sheets it was explained to the students in detail how to fill these boxes in (see Appendix 7). The classroom score sheet consisted of:

1. The day and date the game was played.
2. How long it took to progress from one level to the next level.
3. The score of each level played.
4. How many hints were used in order for them to progress to the next level.
5. What level or Chapter they had reached.
6. How many mistakes they made on each level.
7. How long they played the required game as a whole.

While the homework score sheet consisted of:

1. The day they played the game.
2. Their total score.
3. What level or Chapter they had reached.
4. The duration of each level.
5. The total time played.
6. A box that could only be filled in by the teacher, which was for their grades.

Since the personal score sheet was optional, in order to encourage the students to fill it in there were fewer boxes to make it less arduous (see Appendix 7).

Since two games contained spoken dialogues that could be a challenge to some students, who might miss out on what was said, to be fair to all the students a full written copy of the dialogues was added as part of the material (see Appendices 5 and 6). A vocabulary list was also added as part of the material (see Appendix 3). For the purpose of this research, designing and localising the materials specifically for the Saudi students was extremely important. The following section will discuss in detail the relationship between the materials and the process needed to gather the required data.

4.7 Gathering the Required Data

In order to adequately address and satisfy the research questions and objectives, the required data was divided into two parts. The purpose of the first part was to compare both groups’ SLVA. Thus, students in both groups took the vocabulary pre- and post-tests. The second part was specifically designed for the experimental DGBLL group. In order to gather the students’ reactions and attitudes to DGBLL, this group filled in a digital questionnaire and took part in a voice recorded group interview.
Since this research project aims to explore how DGBLL works with Saudi language learners as well as assess its impact on their SLVA, certain measures were used. First, both groups took identical vocabulary pre- and post-tests. Second, both had a detailed course plan, curriculum and materials. The following section explains in detail the methods used to gather the required data for this research.

4.7.1 Vocabulary Pre- and Post-Tests:
To test both groups’ vocabulary acquisition and measure it accurately, the researcher adapted both X_Lex (Meara & Milton, 2003) and the Vocabulary Level Test (VLT) (Nation 2001, Nation & Nation, 1990). However, it is important to note that whilst there is no perfect vocabulary test, both of the above have been proven to lead to reliable and valid results (Milton, 2009). Matching the words with their correct synonyms or short definition was adopted from the VLT (Nation 2001, Nation & Nation, 1990) while the check list method was adopted from the X_Lex (P. M. Meara & J. L. Milton, 2003).

Before the vocabulary test began, the students were given a brief explanation of the test’s structure in order for them to answer the questions accurately. The structure of the test was explained to the students verbally in Arabic, their L1, and it was written in English on the first page of the test (see Appendices 8 and 9). The vocabulary test was designed in a multiple-choice format. Each test consisted of thirty multiple choice questions, with each question having four possible answers, only one of which was correct. Thus, the students had a 25% chance of answering the questions correctly if they were guessing.

In more detail, each test had thirty words that the students needed to understand in order for them to answer each question correctly. Thus, each question on both tests contained one word written in a bold font. Below is a sample sentence that included that a word in bold font written in capital letters. Finally, there were four possible answers to choose from. A sample of this test can be seen below (Sample 4.4), while the full tests can be seen in Appendices 8 and 9. The test was scored out of thirty as each correct answer was worth one point.
Sample 4.4 - Vocabulary Test

**Toys**

I used to break my **TOYS** when I was a kid.

- Something used for writing.
- Something used for reading.
- Something used for playing.
- Something used fixing.

**Teacher**

I like my English **teacher**.

- Someone who teaches.
- Something old.
- Something big.
- Few.

The key difference between the vocabulary tests was that the pre-test established a benchmark and examined the students’ previous English vocabulary knowledge acquired through the English classes that they had taken during their school years, while the post-test examined the students’ vocabulary acquisition during the vocabulary classes they were taking at the University. In other words, the pre-test focused on acquisition before the English vocabulary course and the post-test was part of the vocabulary course.

For the purpose of this research, both groups were tested on the same day and had the same timeframe. Each test lasted only sixty minutes. Thus, students had two minutes to answer each vocabulary question on each test. It is also important to note that during this research project, all the participants remained anonymous while gathering the required vocabulary data. The main reason for performing these tests was to check the results of the group as a whole and not of single individuals, and so anonymity was acceptable. Indeed, as will be seen in the test results presented in the next Chapter the results are thus given as ‘Participant Ranked Scores’.
After testing both groups’ vocabulary acquisition, the experimental group was asked for feedback and their personal reaction to DGBLL. To gather such feedback an online digital questionnaire was used. The following section discusses in detail the methods used to gather such details as well as the measures that were taken when designing this questionnaire.

4.7.2 The Questionnaire
When designing this questionnaire with the aim of gathering as much data and information from the participants as possible, a number of issues were put into perspective and considered (Dörnyei & Taguchi 2009). Due to the unprecedented nature of this study, it was unfortunately not feasible to carry out a pilot test of the questionnaire. Instead the researcher resolved to construct the most ideal questionnaire along established guidelines.

First, the questionnaire needed to be easily accessible. Thus, the questionnaire was submitted to the students digitally using Google Forms. A web link (https://docs.google.com/forms/d/e/1FAIpQLSchtbhwQFHx00nerg97VFo6zPqLTKCDSNn0v9_3u6edijRgRxg/viewform?usp=send_form) to the questionnaire was sent to the participants via email and mobile text message. In this particular situation and since they already used their own devices, the participants had the opportunity to access and submit the questionnaire using any device they chose, for example, smartphones, tablets or computers. As mentioned earlier in this Chapter the students would be answering the questionnaire anonymously and in their own time. This was done to try and provide the students with enough autonomy as to facilitate complete honesty when answering the questionnaire. The second issue that also needed to be addressed was that the digital questionnaire needed to be written in a way that the participants could easily understand. Thus, the questionnaire was written in the participants’ first language, Arabic (see Appendix 10A). The questionnaire was designed to be straight forward and comprehensive, without requiring an excessive amount of time to complete. Thus, it was designed and structured in a multiple choice format, chose more than one answer and with only 3 open ended questions. The number of questions that the participants needed to answer was only 30. Each question is required to be answered in order to answer the following question. In the
open ended questions, the participants were asked to write freely and honestly in Arabic.

The questionnaire was divided into two sections but was written on a single form. The purpose of the first part was to profile the participants. Their age, gender, technology use and background, devices used and owned and English learning history were all part of the profiling section. The second part was constructed in order to see and verify their reactions to, attitudes toward and acceptance of the use of DGBLL. In order to get the best answers to the questionnaire the students were invited to complete it in their own time.

To confirm the students’ reactions to DGBLL, a group interview was conducted to gather more data. The following section explains in more detail the necessity for the group interview and what was considered when students were interviewed for this research project.

4.7.3 Semi-Structured Voice Recorded Group Interview

To gather more data from the participants, a group interview was conducted. So, after the participants had finished the questionnaire, they were asked to attend a voice recorded group interview following the vocabulary lecture. This allowed them some time to think about the answers they had given to the open ended questions in the questionnaire because the same open ended questions were asked in this group interview. It is essential to note here that using a negative question is part of the Saudi culture and this approach was adopted to ensure the participants felt comfortable (Danielewicz-Betz, 2016). By way of further explanation, it is a common Saudi cultural norm to employ negative questioning in everyday life e.g. a typical opening conversation gambit would be the following “How are you? Are you not feeling well?” In addition, the three questions posed were the same as those that were posed in the individual survey. However, it was felt that adopting a voice recorded group interview process would also contribute to a richer level of data. By conducting the interviews as a group session where any participant could respond and be involved, it was felt that a more open and honest discussion of the various reactions to the new approach to teaching could be achieved. The role of the researcher was to facilitate the discussion and ensure it stayed on topic but with recognition that any comments or
questions from the researcher were not leading the participants to biased viewpoints. This was in order to maintain the validity and reliability of the work overall. Moreover, the researcher’s role during the interviews was to ensure that all those who wished to voice an opinion were given the time and space to do so, rather than letting everyone speak at one which can be confusing to record and subsequently analyse.

At this juncture, it must be reported that as a definite measure to protect learners’ anonymity, each recorded response was numbered on an individual bases. This researcher, adapted the convention of using ‘StX’ were ‘St’ means statement and ‘X’ means the number of the statement presented in chronological order during the recording of the actual semi-structured group interview. This convention was used to only refer to the participants responses e.g. St38 means the thirty eighth statement recorded from respondents. As part of this convention ‘Res’ was used to identify the researcher/interviewer’s questions.

4.8 Data Analysis

The approach adopted for data analysis was to input the pre- and post-tests conducted on each of the groups into SPSS. In addition, specific t-tests were undertaken to examine the variations between the groups in terms of statistical results. The value of this is that it allows for comparison tests to be undertaken against improvements or changes in knowledge along with the responses across the groups. The content and responses from the questionnaires and recorded group interviews were reviewed and analysed for common threads to identify whether the students viewed the process as positive and contributing to an improvement in their motivation to learn and overall communicative competence.

4.9 Ethical Issues

As already noted there was an ethical issue raised over the fact that the researcher was already a teacher at the university and as such their production of the research materials could be biased (Kamberelis & Dimitriadis 2013). To ensure the objectivity and validity of the work an informal pilot study was conducted. A draft of the questionnaire was circulated among colleagues prior to the study for feedback purposes only. This will help to ensure clarity of process and coherence of research
design. In addition, all the participants were given clear information on the purpose of the study, what their involvement would require and how their information would be utilised. This ensured that informed consent was gained not only from the university to conduct the work, but also from the individual participants themselves and ethical approval was sought and approved by the University of Limerick’s Ethics Committee (see Appendix 1). In addition, all the participants were advised that no personally identifying information would be requested or used in the presentation and analysis of their participation to ensure retention of anonymity and confidentiality.

4.10 Summary

This Chapter explained the methods for this research. The first part started by explaining the five philosophical theories that characterise both qualitative and quantitative models. Also, the choice of a mixed methods approach, whereby both qualitative and quantitative models are combined, was justified. The second part explained why both the DGBLL method and Action Research were implemented and also how the participants were chosen. It is also important to note that due to the researcher taking part in this study as the lecturer and the main examiner, issues regarding this research's ethicality have been considered. This section also discussed how the DGBLL method was used and its relevance to the research questions. The second part also explained and verified the reasons for having both a control and an experimental group, presented the rationale behind choosing particular digital games for the experimental group, described the detailed curriculum used for the experimental group and listed the terminology used to interact with the participants in both groups. The third section of this Chapter provided some information about Saudi Universities, in particular Imam University, where this research was conducted. This section also described the data collection methods that were employed, namely a pre-test, a post-test, a recorded group interview, a questionnaire and class observations. This section also presented a detailed description of the type of games used with the experimental group. Having explained the methods implemented for both groups, control and experimental, the following Chapter (Chapter 5) will objectively report the results of the research and in turn will be followed by Chapter 6 which will discuss, analyse, comment upon and critically examine the original findings of the
study in conjunction with other theoretical frameworks and relevant findings presented elsewhere in previous research.
Chapter 5 – Presentation of Results

5.1 Introduction

This Chapter focuses on the objective presentation of the data gathered from the two groups utilised in this study, namely the control group and the experimental group. It describes the five primary sources used for eliciting the data from these groups, precisely: pre- and post-tests, a survey questionnaire, a voice recorded group interview and on-going classroom observations. The gathered data was analysed using the statistics program called SPSS, as will be seen in the next Chapter. The first data grouping to be presented here was the students' SLVA. This was analysed quantitatively in order to see if each group had gained a significant number of words during the twelve week course (see Chapter 4). The second data grouping to be presented focused on the experimental group’s reaction to DGBLL. In order to gain more insight into the experimental group’s reactions as well as to keep the participants anonymous during this study, a digital questionnaire was sent to the students via email and mobile text messages. The data for this questionnaire was gathered and extracted digitally from Google Form, this was done due to the straightforward nature of transferring data from the programme to SPSS.

This Chapter starts by presenting the results of each group’s vocabulary pre- and post-tests. The purpose of the vocabulary pre-test was to draw a base line for the participants’ vocabulary knowledge. This was important for the experimental group in order to verify the possible impact of using new methods of learning on Saudi students’ vocabulary acquisition. The second section focuses on the students in the experimental group’s reactions to DGBLL by presenting the questionnaire results. The findings reveal the students’ attitudes to the new and radical teaching and learning methods as well as the issues they face; such as culture, past English language learning experiences and acceptance of new methods of learning and teaching. Saudi Arabia is a conservative society where learning and teaching is highly influenced by the local cultural norms and where L2 learners have, typically, minimal exposure to English (Elyas & Picard, 2010; Fareh, 2010). These might act as barriers when using DGBLL. The results also reveal salient comments regarding this teaching method and how it may help learners to localise digital games and adapt them to fit the Saudi culture, and these same points are discussed and explored in more detail in
Chapter 6. The third section focuses on presenting the interview results from the participants in the experimental group.

5.2 Control Group Vocabulary Test Results

Twenty-one Saudi students participated in the vocabulary pre-test, whilst twenty students participated in the vocabulary post-test. Thus, only one participant did not see this research project through. However, his results for the vocabulary pre-test were analysed and used in this research.

As mentioned previously in Chapter 4, all of the participants were Saudi male students in the college of English and Translation at Imam University, Saudi Arabia. In keeping with the parameters of the research, the participants were given this test on their first week (see Table 4.1 in the previous Chapter). As mentioned in Chapter 4, in order to draw a valid base line for the students’ vocabulary pre-knowledge, learners needed to take the vocabulary pre-test before they were exposed to any vocabulary through any of the English subjects or English courses. This was done because delivering the test at the appropriate time was crucial to ensuring the validity of its findings.

The vocabulary pre-test consisted of thirty multiple-choice questions and was an adaptation of two other vocabulary tests. Since there were thirty multiple-choice questions the final score is mapped out of thirty. The summative graph below shows the percentage scores achieved by the participants in this group.

Figure 5.1 - Control Group Pre- and Post-test Scores
As the figure above indicates in nearly all cases there was an overall improvement in scores. In average terms this raised the group average score from 65% to 74% after the intervention. These important results will be discussed in greater depth later in the next Chapter. The focus of the research was to identify if a DGBLL approach would improve test scores and not harm them, the next stage is to present the results of the experimental group’s pre- and post-test scores.

5.3 Experimental Group Vocabulary Test Results

There were 23 L2 learners who participated in the vocabulary pre-test, while twenty-two participated in the vocabulary post-test. Thus, as with the control group, only one student did not continue to participate in this research. However, his results were still considered in the pre-test, though of course there were none to consider for the post-test. The experimental group underwent the same procedures for the pre-test as the control group to allow for consistency and reliability. In addition, both groups were tested on the same day with the same time constraints (1 hour in duration).

Figure 5.2 below shows that again there was improvement in the results, but the gap between the pre- and post-test scores was greater than that seen in the control group, with the average rising from 57% to 68%. This is an increase of 11 percentage points compared to the 9 percentage points for the control group.

Figure 5.2 - Experimental Group Pre- and Post-Test Scores in Summary Graph Form
The full listings of the pre- and post-test participant ranked scores, are given in the following Tables 5.1 and 5.2:

**Table 5.1 - Control Group Ranked Scores**

<table>
<thead>
<tr>
<th>Participant Ranked Score</th>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>29</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>4</td>
<td>26</td>
<td>29</td>
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<tr>
<td>5</td>
<td>25</td>
<td>29</td>
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<tr>
<td>6</td>
<td>25</td>
<td>29</td>
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<tr>
<td>7</td>
<td>24</td>
<td>28</td>
</tr>
<tr>
<td>8</td>
<td>24</td>
<td>28</td>
</tr>
<tr>
<td>9</td>
<td>23</td>
<td>27</td>
</tr>
<tr>
<td>10</td>
<td>22</td>
<td>26</td>
</tr>
<tr>
<td>11</td>
<td>21</td>
<td>26</td>
</tr>
<tr>
<td>12</td>
<td>20</td>
<td>25</td>
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<tr>
<td>13</td>
<td>19</td>
<td>23</td>
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<tr>
<td>14</td>
<td>18</td>
<td>23</td>
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<tr>
<td>15</td>
<td>17</td>
<td>21</td>
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<tr>
<td>16</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>17</td>
<td>14</td>
<td>17</td>
</tr>
<tr>
<td>18</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>19</td>
<td>10</td>
<td>9</td>
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<tr>
<td>20</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>21</td>
<td>6</td>
<td>---</td>
</tr>
</tbody>
</table>
Table 5.2 - Experimental Group Ranked Scores

<table>
<thead>
<tr>
<th>Participant Ranked Score</th>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>28</td>
<td>29</td>
</tr>
<tr>
<td>3</td>
<td>28</td>
<td>29</td>
</tr>
<tr>
<td>4</td>
<td>26</td>
<td>29</td>
</tr>
<tr>
<td>5</td>
<td>25</td>
<td>28</td>
</tr>
<tr>
<td>6</td>
<td>25</td>
<td>28</td>
</tr>
<tr>
<td>7</td>
<td>24</td>
<td>27</td>
</tr>
<tr>
<td>8</td>
<td>23</td>
<td>27</td>
</tr>
<tr>
<td>9</td>
<td>20</td>
<td>27</td>
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<tr>
<td>10</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>11</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>12</td>
<td>17</td>
<td>21</td>
</tr>
<tr>
<td>13</td>
<td>16</td>
<td>21</td>
</tr>
<tr>
<td>14</td>
<td>15</td>
<td>20</td>
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<tr>
<td>15</td>
<td>14</td>
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</tr>
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<td>16</td>
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<tr>
<td>17</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>18</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>19</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>20</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>21</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>22</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>23</td>
<td>4</td>
<td>---</td>
</tr>
</tbody>
</table>
5.4 Comparing Control and Experimental Vocabulary Test Results

This section presents a comparison between the results from the control group and the experimental group’s vocabulary test scores. In Tables 5.3, 5.4, 5.5 and 5.6 we present the test score comparisons with descriptive statistics and include values for standard deviation:

Table 5.3 Control pre: M = 20.45, SD = 6.53. Control post: M = 23.7, SD = 6.53

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>20.4500</td>
<td>20</td>
<td>6.52505</td>
<td>1.45905</td>
</tr>
<tr>
<td>Post</td>
<td>23.7000</td>
<td>20</td>
<td>6.53009</td>
<td>1.46017</td>
</tr>
</tbody>
</table>

Table 5.4 - Control Group Paired Samples Correlations

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Correlation</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>20</td>
<td>.954</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 5.5 Experimental pre: M = 17.86, SD = 7.6. Experimental post: M = 20.77, SD = 7.83

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>17.8636</td>
<td>22</td>
<td>7.59884</td>
<td>1.62008</td>
</tr>
<tr>
<td>Post</td>
<td>20.7727</td>
<td>22</td>
<td>7.83115</td>
<td>1.66961</td>
</tr>
</tbody>
</table>
Table 5.6 - Experimental Group Paired Samples Correlations

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Correlation</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 Pre &amp; Post</td>
<td>22</td>
<td>.972</td>
<td>.000</td>
</tr>
</tbody>
</table>

In Tables 5.7, 5.8, 5.9 and 5.10 we show the results from when an independent t-test was carried out to determine if there was a difference between the control and experimental groups before exposure to the games and afterwards. No difference was found before \((t(42) = 1.095, p = .280)\) or after \((t(40) = 1.308, p = .198)\).

Table 5.7 - Vocabulary Pre-Test Group Statistics

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Control</td>
<td>21</td>
<td>19.7619</td>
<td>7.09862</td>
<td>1.54905</td>
</tr>
<tr>
<td>Experimental</td>
<td>23</td>
<td>17.2609</td>
<td>7.96708</td>
<td>1.66125</td>
</tr>
</tbody>
</table>

Table 5.8 - Vocabulary Pre-Test Independent Samples Test

<table>
<thead>
<tr>
<th>Equal variances assumed</th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
<td>t</td>
</tr>
<tr>
<td>Pre</td>
<td>.72</td>
<td>.40</td>
<td>1.09</td>
</tr>
</tbody>
</table>

99
Table 5.9 - Vocabulary Post-Test Group Statistics

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post Control</td>
<td>20</td>
<td>23.7000</td>
<td>6.53009</td>
<td>1.46017</td>
</tr>
<tr>
<td>Experimental</td>
<td>22</td>
<td>20.7727</td>
<td>7.83115</td>
<td>1.66961</td>
</tr>
</tbody>
</table>

Table 5.10 - Vocabulary Post-Test Independent Samples Test

<table>
<thead>
<tr>
<th>Equal variances</th>
<th>F</th>
<th>Sig.</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal variances assumed</td>
<td>1.51</td>
<td>.22</td>
<td>1.30</td>
<td>40</td>
<td>.198</td>
<td>2.92727</td>
<td>2.23758</td>
<td>-1.59504 to 7.44958</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>1.32</td>
<td>.04</td>
<td>39.72</td>
<td>4</td>
<td>.194</td>
<td>2.92727</td>
<td>2.21804</td>
<td>-1.55652 to 7.41106</td>
</tr>
</tbody>
</table>

The Tables 5.11 and 5.12 show the results from when a paired samples t-test was carried out to determine if there was a difference between pre- and post-test scores for the control group. A difference was found ($t(19) = -7.377, p < .001, d = 1.61$). Scores
increased in the post-test (M = 20.45, SD = 6.53 pre-exposure, M = 23.7, SD = 6.53 post-test).

**Table 5.11 - Control Group Vocabulary Pre-Test Paired Samples Test**

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 Pre - Post</td>
<td>-3.25000</td>
<td>1.97017</td>
<td>.44054</td>
<td>Lower -4.17207, Upper -2.32793</td>
</tr>
</tbody>
</table>

**Table 5.12 - Control Group Post-Test Paired Samples Test**

<table>
<thead>
<tr>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 Pre - Post</td>
<td>-7.377</td>
<td>19</td>
</tr>
</tbody>
</table>

The key Tables 5.13 and 5.14 show the results from when a paired samples t-test was carried out to determine if there was a difference between pre- and post-exposure scores for the experimental group. A difference was found (t(22) = -7.378, p < .001, d = 1.54). Scores increased following exposure to the games (M = 17.86, SD = 7.6 pre-exposure, Experimental post: M = 20.77, SD = 7.83 post-exposure).

**Table 5.13 - Experimental Group Pre-Test Paired Samples Test**

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lower</td>
<td>Upper</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------</td>
<td>-------</td>
<td>--------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pair 1</td>
<td>1.84930</td>
<td>-2.08916</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre - Post</td>
<td>.39427</td>
<td>-3.72902</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 5.14 - Experimental Group Post-Test Paired Samples Test**

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>-7.378</td>
<td>21</td>
<td>.000</td>
</tr>
<tr>
<td>Pre - Post</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The Table 5.15 shows that for all the t-tests, we attempted to give exact p-values, using three decimals. The alpha level used for statistical significance was p < .05 and for the paired samples t-tests, p values are reported as < .001, to avoid a value of .000 when reporting to three decimal places. Here stated in bold:

**Table 5.15 - P-Values for Control and Experimental Groups**

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>-7.378</td>
<td>21</td>
<td>.000</td>
</tr>
<tr>
<td>Pre - Post</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Finally, for this section, the effect sizes were not calculated for these independent t-tests, as no significant effects were found. Large effect sizes were found for both paired t-tests (d > .8); and these effect sizes were calculated using Cohen’s $d$ (MeanD/Sd).
Having presented the results of both groups of students’ vocabulary pre- and post-tests, it is now necessary to present the results from the experimental group questionnaire.

5.5 Experimental Group Questionnaire Results

As mentioned previously in Chapter 1, one of the main aims of this research is to gain a thorough understanding of Saudi learners’ reactions to DGBLL, (within it must be remembered, a deeply conservative society), through participant reflections on this type of learning and teaching method. In order to do so, the participants of the experimental group were given a digital questionnaire to answer and were asked to take part in a voice recorded group interview. After the experimental group had finished and received the results of their vocabulary post-test, they were asked to fill in a questionnaire that consisted of thirty questions. The questionnaires were given to them digitally through Google Form since they were all using personal digital devices, for example, smartphones and tablets. The total number of respondents was 21 (for additional details, see the previous Chapter). For authenticity’s sake, all of the participants were told that they would remain anonymous throughout the whole research project, including when they filled in the thirty questions on the questionnaire. In other words, their results would be very private and no one, not even the researcher, would know who answered any of the questions provided. This was done in accordance with the guidelines indicated by the University of Limerick (UL) Ethics Committee when research approval was given to the researcher/teacher (see Appendix 1).

It is also important to note that all of the participants answered the questionnaire as freely and openly as could be hoped given the frankness of their responses. To facilitate such openness in the responses, this questionnaire was delivered in Arabic, the students’ L1. In addition, they were asked to answer the open-ended questions in any form of Arabic they pleased, classical or slang (see Appendices 10A and 10B). This was done to best conform to the best standards for results as was identified by the Hofstede (2016) scores for power, distance and uncertainty avoidance. Culturally it is typical that Saudis do not feel comfortable with vagueness and avoid anything of which they are uncertain. In summary, in order to promote greater participation, clarity and to remove any uncertainties, an attempt was made to make the participants feel at ease and comfortable when answering the questions. One final point, the questionnaire was delivered online, as mentioned earlier, and the student respondents were free to complete or not complete the questionnaire. As such it was a welcome finding that 21 out of a possible total of 22 students filled in the questionnaire.
5.6 Profile of Experimental Group

In terms of demographics, age and gender were requested but no other personally identifying information. All 21 were male as already indicated due to the gender segregation that exists in the Saudi education system. In terms of age, as the figure below indicates, the majority were aged between 18 and 19, and all had graduated from high school.

Figure 5.3 - Age of Experimental Group

When asked how long they had been studying English, the majority of the group (13 individuals) had studied English for 6 to 7 years as the figure below illustrates. In other words, the main contributors who had helped them gain their English language were English teachers at public and government schools (see Chapter 3). The learners’ ages also suggest that the majority of the participants had minimum experience of academic language learning. Even though these results are on a small scale, it is possible to state that most Saudi students learn the English language for between 6 and 7 years prior to entering university based on the standard of Saudi Arabian public schools (Al-Haq & Smadi, 1996; Al-Seghayer, 2005).
A further demographic detail of relevance was whether or not the participants played video games in their own free time. The entire group indicated that they did so, which reinforces the enjoyment factor of video games and their potential value in the EFL classroom. Furthermore, 81% indicated that their preference was to play in groups, with friends. This suggests that there is strong evidence for a preference for collaborative play to achieve goals, which is not surprising given the collective nature of Saudi society. The potential for the relevancy of this trait is also reinforced when the Hofstede (2016) scale identifies it through the scores for culture that Saudi Arabia received.

The results also show that 76.2% (n=16) of respondents also enjoy playing individually, indicating that they may learn individually or with others. On the other hand, 23.8% (n=5) of the participants play with people they do not know. This shows that Saudi students may prefer to play either alone or with someone they know. The next section of the questionnaire considered the levels of technology acceptance amongst the learners in the study.

5.7 Accepting Technology for Learning

Further in the questionnaire, the participants were asked to identify their level of usage of digital devices such as: computers, smartphones and tablets. All 21 participants in the experimental group who completed the questionnaire indicated that
they were currently using at least one of these devices. However, as the Figure 5.5 below indicates, there was a varied length of usage.

**Figure 5.5 - Length of Time Using Technology**

The largest percentage, 38.1% (n=8), had only been using digital devices for 2-4 years. This highlights the growth of the popularity and usage of these devices in Saudi Arabia as well as their potential in the classroom. In essence, the participants were all technologically aware and confident in the use of digital devices (Dudeney, 2011; Hockly, 2013).

This is further underlined when the participants were asked about the time they spent using their devices. As the Figure 5.6 below shows the majority, 52.4% (n=11), spent more than 4 hours per day using their devices.

**Figure 5.6 - Time spent using digital devices**
This level of usage indicates that not only do the students have a wide experience of using technology but also that they are keen to do so. This deals with one of the concerns raised by teachers regarding lack of technology acceptance (Ertmer, 1999) and suggests that the students are positive about using digital devices in and out of the classroom. What was also identified was the type of usage that was favoured by the group, which is shown in the Figure 5.7 below.

**Figure 5.7 - Use of Mobile Devices**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Dictionaries</td>
<td>57.1%</td>
</tr>
<tr>
<td>Playing Games</td>
<td>81%</td>
</tr>
<tr>
<td>Learning and Studing</td>
<td>33.3%</td>
</tr>
<tr>
<td>Chatting</td>
<td>95.2%</td>
</tr>
<tr>
<td>Web Browsing</td>
<td>95.2%</td>
</tr>
<tr>
<td>Reading and Writing</td>
<td>57.1%</td>
</tr>
</tbody>
</table>

What is of particular relevance for this work is that 81% (n=17) used it for playing games but also just under 60% (n=12) utilised their devices for accessing online dictionaries. This highlights the concordance between vocabulary learning, game playing and digital devices that can be transferred to the classroom environment.

Having established that the group was comfortable with using the devices for learning, there was a recognition that effective implementation in the classroom might be grounded in preference for specific devices. The participants were given more than one digital device to choose from on a list in the questionnaire, and the results were interesting. The results, which can be seen in Figure 5.8 below, indicate that for 76.2% (n=16) of the participants the preferred device was a mobile device, presumably because they are portable, easy to use and personal. As such it was
determined that mobile devices can easily be seen as the logical digital tool to be implemented by teachers since the majority Saudi learners already use them.

**Figure 5.8 - Preferred Digital Device for Learning**

<table>
<thead>
<tr>
<th>Device</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tablets</td>
<td>(n=13)</td>
</tr>
<tr>
<td>Smartphones</td>
<td>(n=16)</td>
</tr>
<tr>
<td>Laptop</td>
<td>(n=5)</td>
</tr>
<tr>
<td>Desktop</td>
<td>(n=1)</td>
</tr>
</tbody>
</table>

With the learners’ acceptance of technology confirmed, their approach to gaming as a learning tool was then reviewed.

**5.8 Accepting Digital Games for Learning**

The majority of participants had already indicated that they did play digital games regularly on their mobile devices, and that mobile devices would be their preferred type of device to use as a learning tool. This underlines a clear potential for DGBLL to be effective within a classroom environment. However, to ensure its effectiveness it was felt necessary to identify what type of games the learners would prefer, and thus be most motivated by. As the Figure 5.9 below indicates, 90.5% (n=19) preferred adventure games, although 76.2% (n=16) indicated a preference for sports games as well.

**Figure 5.9 - Gaming Preferences**

<table>
<thead>
<tr>
<th>Genre</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adventure</td>
<td>(n=16)</td>
</tr>
<tr>
<td>Sports</td>
<td>(n=19)</td>
</tr>
<tr>
<td>Horror</td>
<td>(n=9)</td>
</tr>
<tr>
<td>Role Playing</td>
<td>(n=9)</td>
</tr>
<tr>
<td>Puzzle</td>
<td>(n=8)</td>
</tr>
<tr>
<td>Crime and Investigation</td>
<td>(n=5)</td>
</tr>
<tr>
<td>Cultural</td>
<td>(n=4)</td>
</tr>
<tr>
<td>Other</td>
<td>(n=1)</td>
</tr>
</tbody>
</table>
It should be noted that the students were able to indicate as many options as they wished so that a full view of the potential of each of genres could be considered.

Having understood learners’ acceptance of DGBLL and the type of games they prefer, the following section of the questionnaire focused on and explored the learners’ views on using technology and games in the classroom. The results of this investigation gave the researcher a wide appreciation of the pros and cons and the external and internal obstacles associated with using DGBLL as well as a clearer understanding of the need to develop a better learning environment. In addition, it was also intended to give the Saudi students in general a good understanding of digital learning. This will be further explored in Chapter 6.

5.9 Pros and Cons of DGBLL in Saudi Arabia

Following the process of the previous questions in the questionnaire, questions 14 to 25 were designed using a simple 4-point Likert scale, deleting 'neutral', which is the typical 5th central point on the Likert scale. Learners were asked in question 14 whether using digital devices in the classroom makes the lesson more interesting (see Appendices 10A and 10B). 17 of the participants strongly agreed and 3 agreed that using digital devices makes the classroom environment more interesting, while only one student disagreed. In other words, all but one student enjoyed using digital devices in the classroom. Due to students enjoying such classes, it is possible that they may become more engaged in the classroom, which is, of course, the aim of every teacher.

Question 15 in the questionnaire focused on time. The learners were asked to respond to the following statement: “There is not enough time to use digital technologies such as, computers, smartphones and tablets in the classroom”. The number of participants who strongly agreed is 2, while 9 agreed and 10 did not agree with the statement. Based on these answers almost half of the students disagreed with the statement.

In question 16, learners were asked to respond to the following statement: “Using digital technologies such as, computers, smartphones and tablets is not an effective tool for learning English”. The number of participants who strongly agreed was 2 as
well as 3 who agreed. 3 of the students did not agree and 13 did not strongly agree with the statement. Thus, the majority of the participants see digital technology as very useful and effective. Having acknowledged Saudi learners’ positive reactions to digital technology as a means for language learning, question 17 focused on whether the Saudi learners preferred learning through teachers only. They were asked to respond to the following statement: “I prefer learning from the teacher directly rather than combining digital technologies and the teacher”. (see Appendices 10A and 10B). The number of participants who strongly agreed was 4, 3 agreed, 8 did not agree and 6 did not strongly agree with the statement. In other words, the majority, that is 66.7%, (n=14), prefer combining teachers with the digital tools they are using. After learning what digital technology means to Saudi learners, it is important to find out whether learners view digital games as good tools for language learning.

Since this study aims to ascertain whether DGBLL is an appropriate alternative for Saudi learners, question 18 focused on this issue. The Saudi learners were asked to respond to the following statement: “Using digital games is an effective English learning tool”. The number of participants who strongly agreed was 13, 7 agreed and only 1 did not agree with the statement. These results show that the majority of the participants, that is 95.2% (n=20), believe that digital gaming is the right tool for language learning. More evidence of such claims is revealed after analysing the group interview, and this issue is discussed in more detail in Chapter 6.

In regards to whether the use of digital games had improved their English learning, again the majority 95.2% (n=20) did believe that digital games had had such an effect on their own abilities. This further underlines the value of the DGBLL approach for vocabulary acquisition.

The last section of the questionnaire was focused on evaluating culture and digital games as a learning tool in the Saudi EFL classroom. The voice recorded group interview also focussed at length on these issues and is analysed in the following Chapter.

When asked about the cultural appropriateness of digital games in the EFL classroom there was a general agreement that any materials used in the classroom needed to
conform to the cultural ideas of propriety. This is because the group considered their culture, and maintaining a healthy respect for it, to be highly important in the classroom, and therefore also in any digital materials utilised. Specifically, 42.9% (n=9) strongly agreed and 42.9% (n=9) agreed, showing that the vast majority considered that digital games needed to fit their culture.

At the same time, 90.5% (n=19) felt that they had learned some new English vocabulary as a result of using the digital games (see Appendices 10A and 10B) and only 9.5% (n=2) considered that they had not. These outcomes were further supported by the fact that more than 90% (n=19) indicated that they would continue to utilise digital games as a learning tool, underlining the value they believed had been delivered during the course. This finding is an incredibly promising one in terms of better understanding the potential for DGBLL in a Saudi environment, and as such the issue is discussed in more detail in Chapter 6.

Question 24 was designed to assess from the Saudi learners’ responses if they were prepared to use digital devices, able to accept changes and confident enough to use such digital devices. These are all concerns that teachers have when integrating digital technology into their lesson plans. The Saudi students were asked to respond to the statement “I use digital technologies such as, computers, smartphones and tablets for most of my English subject”. The response to these statements was 52.4% (n=11) strongly agreed, 42.9% (n=9) agreed while only 4.8% (n=1) strongly disagreed with it. Hence, the majority do in fact use digital devices as a tool to help them improve their ability in second language proficiency.

As Prensky (2003) notes, motivated learners are more likely to engage, self-direct and focus on learning. In the context of using digital games therefore the levels of motivation would indicate whether the learners are engaging with the materials and games in the curriculum that was prepared by the researcher (see Chapter 4 for more details). Figure 5.10 below highlights where there was a general agreement that incorporating games into the classroom with digital devices increased their own student motivation.
At the same time, it was also necessary to evaluate how the learners’ needs were met by DGBLL in terms of times of usage. It was already highlighted that the students were regular game players outside of the classroom, but it was not clear whether there was a specific time when they preferred to undertake this activity. As Figure 5.11 below indicates, the majority of the students play games in their spare time.

The results also show that the physical space they play in is not a factor when it comes to playing digital games since they play between lectures, when they are waiting somewhere and 71.4% (n=15) said that they played games before they go to sleep. Thus, digital game playing is not confined to a particular time or place.
In order to strengthen and further validate these findings the group were also asked a number of open-ended questions. This also served to gain a richer and more in-depth view of the overall process and new teaching approaches. This allowed the students to provide context and depth to the empirical data gathered by the other questions on the questionnaire.

### 5.10 Experimental Group Responses to Open-Ended Questions

Questions 27, 28 and 29 were open-ended. The students were asked to write freely and truthfully with no restrictions to a specific type of writing. They were free to write in their first language, Arabic, as this would facilitate more comprehensive answers to the questions. It was important to use open-ended questions for this research in order to explore and verify students’ reactions to DGBLL as well as to gather their views and personal opinions regarding this method. The participants always said ‘we’ and ‘they’ rather than ‘I’ which aligns with the collective nature of Saudi culture indicated by the country’s Hofstede (2016) scores.

For this research and in order to gain a deeper understanding, each response from the participants to each question was translated into academic English and the original Arabic questions were kept in the appendix (see Appendices 10A and 10B). It is important to note that each question was analysed separately, putting each into perspective. Some of participants’ responses addressed all the themes, while others did not. There were also a few responses that were not directly related to the main themes of this research, but these are addressed for the sake of further research.

### 5.10.1 Issues and Attitudes

Students were asked in question 27: ‘What do you think are the potential problems when using digital games as an English educational tool in Saudi Arabia?’ Each and every student’s translated response to this question can be seen in Table 5.16 below.
## Table 5.16 - Issues and Attitudes

<table>
<thead>
<tr>
<th>Student</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>There are no issues. They just do not want us to improve. They just want us to keep on using books and they do not want to spend their money on their people.</td>
</tr>
<tr>
<td>2</td>
<td>At the moment there are no issues. Actually, students play for learning and for personal pleasure. On the contrary, this will make students more motivated to learn.</td>
</tr>
<tr>
<td>3</td>
<td>There are no issues except if there are inappropriate photos, images or pictures.</td>
</tr>
<tr>
<td>4</td>
<td>Some students are not committed to the game and instead use chatting apps. As a result, they are not focused in class on the subject matter.</td>
</tr>
<tr>
<td>5</td>
<td>One of the issues is that some people still have not yet advanced and improved when it comes to using digital devices. Also, some still do not have suitable or proper devices. The University should support and help developers in making specific games with the help of professors.</td>
</tr>
<tr>
<td>6</td>
<td>DID NOT ANSWER</td>
</tr>
<tr>
<td>7</td>
<td>There are no issues.</td>
</tr>
<tr>
<td>8</td>
<td>There needs to be a sufficient way to supervise children. The reason for that is some games violate and are against our religion as they contain music. As a result, our children will believe that listening to music is completely normal.</td>
</tr>
<tr>
<td>9</td>
<td>I do believe there are no issues. Under one condition, it needs to be part of the educational system.</td>
</tr>
<tr>
<td>10</td>
<td>There are no issues.</td>
</tr>
<tr>
<td>11</td>
<td>There are no issues.</td>
</tr>
<tr>
<td>12</td>
<td>There are inappropriate images and pictures which do not fit our community or society.</td>
</tr>
<tr>
<td>13</td>
<td>Cultural differences, beliefs and faiths between game developing countries and Saudi Arabia.</td>
</tr>
<tr>
<td>14</td>
<td>The only issue that I see is with music.</td>
</tr>
<tr>
<td>15</td>
<td>In general, some of them do not fit our culture because they have naked females and music.</td>
</tr>
<tr>
<td>16</td>
<td>There are no issues whatsoever.</td>
</tr>
<tr>
<td>17</td>
<td>The device might breakdown, which leads to loss or damaged data.</td>
</tr>
<tr>
<td>18</td>
<td>1- Do not accept this new method 2- They will not use digital devices as an alternative to books 3- There is no one who will provide the required device for the students.</td>
</tr>
<tr>
<td>19</td>
<td>Students do not accept this method. They are used to books.</td>
</tr>
</tbody>
</table>
| 20      | It is a massive change and is for the best to use digital gaming method for learning in Saudi Arabia. Of course, everything has its pros and cons, but here the pros overlap the cons. I see the only negativity is students’
financial issues and nothing else.

| 21 | The problem will be with the presented materials. If it was better chosen so that it would not be religiously and culturally inappropriate. Thus, a committee is a necessity in order to choose what is appropriate |

Since this study’s main concern is the students’ cultural attitudes and reactions to DGBLL, each main theme needs to be addressed separately to make the results clearer for the discussion in Chapter 6. The first question focuses on Saudi Arabia and potential issues that may arise in terms of implementing DGBLL in the classroom.

There were 6 out of 20 of the participants who believed that there were no issues regarding implementing digital games in Saudi Arabia. This shows that just over 25% of the participants completely accept the idea of using digital games and that in their view there are no cultural, religious or personal issues that could disrupt or interfere with educational efforts toward implementing digital games.

After focusing on students who do not have any issues, it is important to turn to students who have no issues providing certain adjustments are made or conditions met. Only 2 participants suggested such conditions. As seen in Table 5.16 above, student 3 and student 9 suggested certain conditions to resolve the issues. After presenting the comments from these 2 learners, the following 12 participants raised a number of issues they thought might impede the implementation of digital games as a language learning tool in Saudi Arabia.

It is clear from reading the students’ responses that most of their concerns are related to culture or religion. As mentioned in Chapter 2, Saudi Arabia is a Muslim nation. Thus, it is no surprise that the issues that they described are related to their religion, culture and the Saudi identity. The concerns repeated the most were related to music and inappropriate images (see Table 5.16). As these were considered the most pressing concerns by the students involved in the study it is important to reflect upon such concerns. This significant finding is one of the most engaging of the results to be borne of the research and as such it is thoroughly discussed in Chapter 6. Other issues that were also mentioned that need to be addressed are: not having proper or suitable devices, financial issues and distraction.
As mentioned in Table 5.16, student 4 believes that using mobile devices as a medium for learning could distract learners because they might use their mobile devices to do different tasks, like chatting, rather than focusing on playing the presented game for learning purposes. The basis for the students' concern is the potential for distraction that comes along with the use of mobile devices in the classroom.

Another issue that was also mentioned by 2 participants, student 5 and student 18, is the necessity for the students to have proper and suitable devices. After presenting all the issues that arose from the responses to question 27, it is important and significant to this study to see if learners accept DGBLL.

The following section discusses whether learners are motivated to use both digital games as learning materials and mobile devices as the medium for the delivery of said material. Motivation for the teaching method is important to examine because it has been demonstrated that learners’ motivation to use DGBLL will directly impact upon their acceptance of it (Gardener, 2001).

5.10.2 Motivation
This section is important to this research since one of the key issues related to acceptance and use of DGBLL is motivation. It is vital to identify what triggers these Saudi students to engage in learning, and what it is that keeps them motivated both during their lectures as well as outside of the classroom proper. Before presenting the responses to question 28, it is important to specify the key factors that are the focus of this section. These factors are:

1. Acceptance.
2. Learners’ engagement with digital games.
3. Simplicity.

These three factors could be the most important of all, and the results of the analysis should verify whether Saudi society is ready for DGBLL. In question 28, the experimental group were asked to “Write the reasons if you support or do not support the use of digital games as an educational tool” (see Appendices 10A and 10B). The translated responses to this question in Table 5.17 below need to be addressed
separately and this is done so in the next Chapter. First though, whether learners accept or do not accept DGBLL as well as if they support or do not support this method of teaching and learning needs to be established since this is the key to understanding more about Saudi culture. The aim of question 28 was to measure how receptive the students were to DGBLL and whether they felt motivated to continue SLVA through the medium. In addition, their reactions to DGBLL will help to form an understanding of how, or even if, it is possible to make DGBLL a suitable tool for this society.

Table 5.17 - Motivation to Use Digital Devices in Class

<table>
<thead>
<tr>
<th>Student</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Using digital devices motivates learners to play during lectures and after as well.</td>
</tr>
<tr>
<td>2</td>
<td>I support it because students enjoy such methods.</td>
</tr>
<tr>
<td>3</td>
<td>1- It shows that our education has improved and evolved. 2- It is better and an easier alternative to using books. 3- The lectures are more motivating and exciting.</td>
</tr>
<tr>
<td>4</td>
<td>(DID NOT ANSWER)</td>
</tr>
<tr>
<td>5</td>
<td>I support using games because this teaching method is fun, interesting and more useful to the students than traditional teaching.</td>
</tr>
<tr>
<td>6</td>
<td>We should use the PlayStation to raise motivation levels.</td>
</tr>
<tr>
<td>7</td>
<td>I completely support digital gaming, and it should be part of our educational system.</td>
</tr>
<tr>
<td>8</td>
<td>I support it because it gives us pleasure and excitement in the classroom. It is also easy to use when studying and revising. Also, the information gained is permanent.</td>
</tr>
<tr>
<td>9</td>
<td>I completely support the usage of digital games for various reasons. For example, boredom, which is the usual result of traditional teaching methods, is reduced. So, using the digital games method will help learners to reach their goals without feeling stressed or bored.</td>
</tr>
<tr>
<td>10</td>
<td>I support it because I gained more vocabulary words.</td>
</tr>
<tr>
<td>11</td>
<td>I support the usage of digital games.</td>
</tr>
<tr>
<td>12</td>
<td>I support the usage of digital games in the educational system because they are simple to use and fun.</td>
</tr>
<tr>
<td>13</td>
<td>I support it because it is fun, enjoyable, motivating and not boring.</td>
</tr>
<tr>
<td>14</td>
<td>1. The lecture is enjoyable 2. Learning English is much easier.</td>
</tr>
<tr>
<td>15</td>
<td>I support it because the class is enjoyable and time passes with better results.</td>
</tr>
<tr>
<td>16</td>
<td>I completely support the usage of digital devices in our teaching after experiencing it with Dr. Abdulaziz Alsayegh.</td>
</tr>
<tr>
<td>17</td>
<td>I strongly support the usage of games</td>
</tr>
</tbody>
</table>
because I learn while having fun.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>There are things that make me a supporter and there are others that do not. I have previously mentioned what makes this acceptable and what does not. This method is new to the students and was not expected. As a result, it was difficult at first. So, it would be much better if it was implemented on learners before they entered the University.</td>
</tr>
<tr>
<td>19</td>
<td>I completely support it because the information gained is easy to memorise. Also, the vocabulary items are perfectly chosen, informative and fun, and you do not get bored from playing them.</td>
</tr>
<tr>
<td>20</td>
<td>It is an easy and a modern method of teaching.</td>
</tr>
<tr>
<td>21</td>
<td>I completely support it because it helps to memorise the given information.</td>
</tr>
</tbody>
</table>

From these responses it can be seen that in general the students saw DGBLL as fun, enjoyable and interesting and thus indicates that there was a degree of engagement and motivation from the materials. This was further evidenced by the indications that the students felt that they had increased their vocabulary, and that they retained the new words better after using the games for learning than when they were simply memorising new lists.

### 5.10.3 Cultural and Social Impacts

To understand the role that cultural, social and religious beliefs had on the acceptance of DGBLL the participants were asked to discuss the effects of local culture on digital games as an educational tool. There were 2 respondents who chose not to answer this question. Of the remainder there was a general view that the process was positive and that there were no unresolvable issues associated with implementing it as a teaching tool in Saudi Arabia. There were some indications of religious and social factors such as the type of music played in games, although this was considered a “manageable” (see Table 5.18 below, student 11) rather than being a serious problem.

From a social perspective, and the Saudi identity, the participants recognised that some teachers and others, who disagree on the value and virtue of DGBLL, view its potential as a teaching approach as a waste of time as games are designed for children. However, there were also indications that this was likely to change in future and that therefore the approach should and could be widely adopted to improve learning practices and outcomes in the country (see both Tables 5.17 and 5.18).
Having addressed the social, cultural and religious issues when implementing DGBLL into the classroom, we now present the responses of the learners’ who have accepted DGBLL and do not see any issues with using it.

Based on their responses, it is apparent that the majority of the participants do not see any issues with implementing DGBLL in the classroom, and it is important to understand the reasons for their acceptance. As mentioned previously, most of the learners’ responses on this matter were direct. However, in some responses, the learners justified their response. For example, Student 1 thought that using DGBLL made learning much better. Another participant, Student 2 emphasised the importance of changing the learning and teaching from traditional, paper based materials, which he described as boring, to DGBLL because it “will promote learning and make it easier” (see Table 5.18 below). Student 17 mentioned that even though DGBLL is a new method it is “culturally accepted”. As discussed in Chapter 2 learners of this era have developed learning techniques that are unlike those of previous generations (Green & Bavelier, 2003).

<table>
<thead>
<tr>
<th>Student</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The learner gains and receives the required information much better and easier.</td>
</tr>
<tr>
<td>2</td>
<td>It definitely has a positive impact. At this moment in time everyone is using a digital device and it never leaves their hands. Because everyone owns a digital device at this present time, it is exciting to use these devices for learning. This will help to improve our learning as well as change our boring traditional learning routines. Also, these changes will promote learning and make it easier. This also will be seen as developing the educational system. Also, most of the developing countries are using these methods of learning.</td>
</tr>
<tr>
<td>3</td>
<td>Positive impacts.</td>
</tr>
<tr>
<td>4</td>
<td>Nothing.</td>
</tr>
<tr>
<td>5</td>
<td>Imitation.</td>
</tr>
<tr>
<td>6</td>
<td>(DID NOT ANSWER)</td>
</tr>
<tr>
<td>7</td>
<td>Nothing.</td>
</tr>
<tr>
<td>8</td>
<td>Nothing.</td>
</tr>
<tr>
<td>9</td>
<td>Our culture has become much better and acceptable after using advancements such as digital devices and smart phones.</td>
</tr>
</tbody>
</table>
There are no positive impacts because some people see it as a waste of time.

I see the issue is with music, but it is manageable.

Using digital devices is much more acceptable and also they are enjoyable and exciting.

I do not believe there are issues with games as long as they have nothing religiously forbidden.

I believe our culture will not accept it, but after some time they will.

There is definitely a positive impact.

There will not be a negative impact as long as the games are properly chosen.

Using games is a new method of learning and it is culturally acceptable.

Most of our community believes that games are made for children.

There are no cultural boundaries when it comes to using digital technologies.

I believe there will come a time with a generation of learners who are fluent in English.

(DID NOT ANSWER)

The open-ended questions have indicated that in general the participants had a positive view of the use of digital games in the classroom. It also shows that they believed that their usage contributed to an increase in their knowledge and ability with English. In addition, the games were considered fun, motivational and enjoyable. Even with some concerns about social and religious adherence overall the process was positively received and would be welcomed as an on-going teaching method by those involved in the research group.

The final parts of the presentation of results aim to review the voice recorded interview responses, where 21 participants of the experimental group came together to discuss the 12-week course and the content of the games used during this period.

### 5.11 Semi-Structured Voice Recorded Group Interview

As mentioned in Chapter 4, the 21 participants of the experimental group were asked the same questions as the open ended ones in the questionnaire. The voice recorded semi-structured group interview was conducted one week after they had completed the questionnaire. It is important to mention that the participants were not told in advance about the questions that they would be asked but were simply told that they were to be invited to an interview as a part of the research. Since the researcher understands the cultural tendencies of these learners, and that Saudis in general do not like ambiguity, they were told that they would be recorded throughout this interview,
that their attendance was optional and that they were free to withdraw from the interview at any time. They were also told that they would be anonymous during the recorded group interview, which would be in their first language, Arabic. The aim of this was to give them more confidence to express their thoughts and make it easier for them to respond to the questions while ensuring that if they became uncomfortable at any point they were welcome to leave. This was done to try and ensure the most earnest and honest responses from the interviewees.

The participants were asked to respond to three main questions, as follows:

1. Question 1: What do you think are the potential problems when using digital games as an English educational tool in Saudi Arabia?
2. Question 2: Give me the reasons if you agree or do not agree in using digital games as part of the educational system, and why?
3. Question 3: What are the possible effects of the local culture when using digital games as an educational tool in Saudi educational and learning centres?

As previously mentioned, the three main questions were similar to the open ended questions in the questionnaire (see Appendices 10A and 10B). The whole interview lasted for approximately fifteen minutes. Hence, there were approximately five minutes assigned for responding to each question. Each student was given free rein to respond and comment at any point during the interview process, respecting the cultural norms of Saudi Arabia. In other words, turn taking was frequent and normal. The full original transcribed recorded interview in Arabic can be seen in Appendix 11A, and the translated version can be seen in Appendix 11B.

The recorded group interview focused on two main elements. First, it was intended to be an expansion of the main questions from the questionnaire. Second, it provided this research with more data since Saudi learners could express themselves more freely and openly amongst their peers because Saudis are collectivist in nature and appear to be at their most relaxed in group conversational settings (see section 2.4).

5.11.1 Pros and Cons of DGBLL in Saudi Arabia

All three questions focused on the issues that the learners had encountered when using
DGBLL in Saudi Arabia. The majority, for the most part, gave positive feedback regarding DGBLL. However, some participants did mention issues, some of which were similar to the ones mentioned in their questionnaire responses, which were mainly social, cultural and religious issues. Other issues were related to the digital devices used. Table 5.19 summarises the pros and cons of using DGBLL in Saudi Arabia based on the learners’ responses to all of the three questions, as well as the pros and cons of using digital devices for learning. As was reported in Chapter 4, as a measure to ensure learners’ anonymity, each recorded response was numbered individually. The convention of using ‘StX’ (statement number in chronological order) was used to refer to the participants’ responses alone, e.g. St38 means the thirty-eighth statements recorded from respondents. In addition ‘Res’ was used to identify the researcher/interviewer’s interjection and prompts.

Table 5.19 - Pros and Cons of Using DGBLL

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fun, enjoyable and exciting.</td>
<td>Music</td>
</tr>
<tr>
<td>Learning is not confined to class time (e.g. during lecture times).</td>
<td>Female figures</td>
</tr>
<tr>
<td>Learning is not confined to a particular space (e.g. classroom or lab).</td>
<td>Social, religious and cultural issues. (e.g. any subject that is a threat to the Islamic religion is not accepted).</td>
</tr>
<tr>
<td>Learners learn at their own pace.</td>
<td>Isolation.</td>
</tr>
<tr>
<td>Time passes more quickly and faster.</td>
<td></td>
</tr>
<tr>
<td>Recalling the information is quicker.</td>
<td></td>
</tr>
<tr>
<td>The subject is more accepted.</td>
<td></td>
</tr>
<tr>
<td>Modern method of learning and teaching.</td>
<td></td>
</tr>
<tr>
<td>Boredom is reduced.</td>
<td></td>
</tr>
<tr>
<td>Motivating.</td>
<td></td>
</tr>
<tr>
<td>The feeling of equality.</td>
<td></td>
</tr>
</tbody>
</table>

**Mobile Devices**

<table>
<thead>
<tr>
<th>Mobile Devices</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multitask.</td>
<td>Expensive.</td>
</tr>
<tr>
<td>Convenient.</td>
<td>Loss of recorded results.</td>
</tr>
</tbody>
</table>
As discussed in Chapter 2, language and culture are difficult to separate. According to some of the learners’ responses, it seems they find it very hard to differentiate between them. During the interview some of the students did directly suggest that it is a good idea to learn about other cultures (see Tables 5.17 and 5.18). This shows that language and culture may work together and that learning another language may well eventually lead to learning about the culture associated with that language. This is discussed in more detail in Chapter 6. It should be noted that a number of the participants also proposed that outside forces could infiltrate the Saudi culture as a result of using DGBLL, which in themselves could affect Saudis negatively. This highlights the potentially contentious issue surrounding the use of DGBLL in Saudi Arabia, a problem that is discussed in deeper detail in the following Chapter.

5.12 DGBLL vs. Traditional Teaching

In the following Table 5.20 we compare DGBLL to traditional teaching through learners’ responses to the questionnaire (see Appendices 10A and 10B) as well as the three questions in the group interview mentioned in the previous section. This was necessary in order to ascertain which method learners prefer and which method they need. Table 5.20 was used in order to relate those reported and pertinent comments that compare DGBLL and traditional teaching as well as summarise the conclusions of the overall results of both methods. Setting out the responses like this makes it easier for the reader to make a comparison. The analysis of these results will occur in the next Chapter.

Table 5.20 - DGBLL and Traditional Teaching

<table>
<thead>
<tr>
<th>NO#</th>
<th>DGBLL</th>
<th>Traditional Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>New and modern method.</td>
<td>Well known method.</td>
</tr>
<tr>
<td>2</td>
<td>Learners are in control of the teaching/learning atmosphere.</td>
<td>Teachers are in control of the teaching/learning environment.</td>
</tr>
<tr>
<td>3</td>
<td>Learners are engaged in the subject and material. As a result they can recall what they learn quicker.</td>
<td>*NRF.</td>
</tr>
<tr>
<td>4</td>
<td>Fun, enjoyable and exciting.</td>
<td>Learners get bored.</td>
</tr>
<tr>
<td>5</td>
<td>Time passes quicker.</td>
<td>Time passes slower.</td>
</tr>
</tbody>
</table>
By comparing both methods, it is possible to report at this juncture that DGBLL has greater potential than traditional teaching. However, some issues need to be dealt with prior to using DGBLL as a method for teaching and learning.

5.13 Researcher’s Classroom Observations

During the course of the study, this researcher noted a number of salient observations of the participants’ reactions to the DGBLL method in the classroom. These observations will be discussed and analysed in depth in the next Chapter, and they are reported here in summary form. Pertinent observations related to the main research questions cover areas such as: culture, religion, localisation, Saudi identity, social and personal attitudes. In addition, other issues such as learner motivation and autonomous development, group work, attendance, adaptation and the learners’ sense of accomplishment are equally analysed. This researcher will also discuss the sense of change that was observed both during and at the end of the study, in the students and in the ecology of the research.

5.14 Summary

In this Chapter, there was an objective presentation of the gathered data that consisted of pre- and post-test scores for the control and experimental group, a questionnaire, and interview with the experimental group has highlighted a number of key points. The majority of the participants in the experimental group reportedly found the use of DGBLL motivating, enjoyable and fun. In addition, they felt that their proficiency and ability to retain vocabulary was improved after immersion in the video games. These perceptions were confirmed statistically by the increase seen in their post-test
scores. The control group also achieved a score increase, and it must be reported that their level was lower than that for the experimental group. Undoubtedly, there are a number of factors to consider in the final analysis in the next Chapter, from the test scores to the cultural and experiential impact and influence upon these Saudi test subjects. Having identified that the DGBLL process offers the potential to improve vocabulary, elevate motivation and encourage learning outside of the classroom, Chapter 6 will analyse these elements dealing with their limitations, from the local context to the wider academic context, covering possible implications as well as offering the overall findings and conclusions of the thesis.
Chapter 6 – Discussion

6.1 Introduction

The main purpose of this research study was to identify the cultural issues that affect Saudi learners when implementing the DGBLL teaching method in a safe teaching environment. In addition, and to reiterate the research questions as they were presented in Chapter 1, we asked:

1. What effect does the use of digital games as a teaching method have on students’ attitude to learning new vocabulary?
2. What role can video games take in improving the vocabulary acquisition of Saudi students?
3. What internal and external factors influence and limit the use of DGBLL in Saudi universities with particular focus on historical and cultural factors?
4. What effect does Saudi culture have on the use and implementation of DGBLL as a teaching device on vocabulary acquisition?
5. Are there recommendations that can be made to support implementation of DGBLL into Saudi universities?

These research questions were developed from a set of objectives (see section 1.7) that this researcher wished to pursue and were identified as the following:

1. To identify if digital games can be used as a tool to increase Saudi students' SLVA and to identify if there is a detrimental effect or beneficial effect on the learner’s performance and attitudes.

2. To gain more insight into the challenges associated with cultural issues that Saudi learners face as well as their attitude when implementing a possible DGBLL teaching method.

3. To investigate if Saudi learners can manage to overcome certain problematic issues, such as those associated with culture and if so, how this is achieved.
4. To establish and evaluate the effectiveness of delivery of a DGBLL teaching approach.

To identify these issues, a number of Saudi learners’ SLVA was tested after using the DGBLL teaching method, and their attitude towards this method unearthed several issues which affected them (see research objective 4). In order to gain an in depth understanding of these cultural issues, the researcher designed a full course plan (see Chapter 4) and reported the results of the research that involved implementing this plan (see Chapter 5). Based on the results of both the digital questionnaire and the semi-structured voice recorded group interview, it became apparent that the issues that affect Saudi learners when using DGBLL are typically of a religious, social and personal nature. Furthermore, it should be noted that most of the Saudi participants’ attitudes towards DGBLL were positive. This penultimate section of the research project starts by commenting on the findings and identifies a number of implications for the teaching and implementation of DGBLL in a male Saudi Third Level educational context.

6.2 Key Observations From Vocabulary Test Results

Several observations can be made from the analysis relating to the pre- and post-test scores for both the control and experimental groups which were presented in the previous Chapter. To make this research more compelling and to provide evidence of learners’ SLVA, it was necessary to compare both the control group and experimental group. The results of both groups’ vocabulary pre- and post-tests show which group scored most in terms of vocabulary acquisition. Comparing the average scores of the vocabulary pre- and post-tests revealed that both groups of participants progressed during the twelve-week vocabulary course. As previously mentioned in section 5.2.1, the average pre-test score for participants in the control group was 65% and the average post-test score was 74%. For the experimental group, the average pre-test score was 57% and the average post-test score was 68%. The results of both groups’ vocabulary tests allowed the researcher to make a comparison at this stage. The vocabulary post-test average showed that the participants in the experimental group increased their vocabulary score by 11% compared to a 9% increase for the control group. These positive results answer the first objective of this research, which is
whether or not DGBLL is capable of improving L2 learners’ vocabulary acquisition. The results show that there is no detrimental effect on the experimental group’s vocabulary acquisition. In fact, the acquisition has improved.

The results may also shed light on students’ acceptance of DGBLL and also their ability to adapt to such new teaching methods in a relatively short period of time, dispelling teachers’ fears that students will not be able to cope with such new methods due to time limitations (Ertmer, 1999). The fact that each group made some improvement in terms of vocabulary knowledge after their twelve-week vocabulary course signifies that both the traditional method and DGBLL worked well for both groups. As discussed in Chapters 3 and 4, despite having limited time and introducing new materials, digital games combined with M-learning did lead to positive outcomes for the experimental group. From our evidence, DGBLL may easily be used in a safe teaching environment (i.e. there were no cultural threats) and may be adapted by both teachers and learners alike within a Saudi context. Other researchers have echoed this finding concerning a safe virtual environment for learning (Hudson & Bruckman, 2002; Rankin, Gold and Gooch, 2006; see section 3.3). It is also important to note at this juncture that there are a number of limitations attached to this study, such as the group sizes and time restrictions, these identified issues will be fully addressed in Chapter 7.

Furthermore, the fact that the experimental group vocabulary knowledge actually improved due to using DGBLL means it does not restrict Saudi learners’ vocabulary acquisition. We can simply report here that there was no evidence from the post-test average scores of a detrimental effect on their lexical acquisition.

The indications from the results and also from this researcher’s own observations, show that the vast majority of the Saudi learners within the study are ‘tech comfy’. In other words, they are well adapted to using digital devices, and that they are also ‘tech savvy’, that is they are ready to incorporate modern tools and teaching methods into their learning regimes as long as they have the appropriate tools with the proper instructions (Dudeney, 2011; Hockly, 2013).
As regards the vocabulary testing mechanism that was used, the analysis of the vocabulary pre- and post-tests for both groups indicated that the students understood the questions and knew how to set about answering them on the test papers (see Chapter 4 and Appendices 8 and 9). Both groups were tested in a similar traditional manner, using pen and paper materials. This is here recognised as a possible limitation for testing the experimental group who perhaps should have been tested within the same ecology of the materials which they were using to acquire vocabulary. As a recommendation for the future design of a repeated research study, the experimental group should be tested using digital materials and/or indeed within a Digital Game-Based Language Testing (DGBLT) environment. This recommendation will be further expanded within Chapter 7.

The positive results of the experimental group go some way to indicate that the chosen materials were suitable for SLVA within a Saudi Third Level context. As previously mentioned in section 2.4.1 and in Chapter 4, when selecting and designing certain materials, such as digital games, it is important to understand the culture that they are to be used in in order to get the desired pedagogical results. In other words, M-learning and testing with the materials that the researcher selected and provided for the experimental group needed to work hand in hand to improve the experimental group’s SLVA within a limited time frame. In addition, a number of key issues that some researchers believe are obstacles when implementing technology into a safe teaching environment, i.e. time, lack of experience, anxiety, uncertainty and personal and cultural beliefs (see Ertmer, 1999, Al-Alwani, 2005, Albirini, 2006), have been proven in the main, not to be significant problems in our study for either the Action Researcher or the students (see Chapter 3). Since most of our learners were ‘tech comfy’, they were already prepared and well aware of how to use digital devices (Dudeney, 2011; Hockly, 2013), so there was no need for such concern. These cultural issues address research questions 3 and 4 and are further discussed later in this Chapter.

Having discussed some of the positive outcomes as well as several limitations, the following section focuses on the experimental group’s reflections on improving DGBLL in a society that is highly influenced by religious and cultural values (Elyas
& Picard, 2010; Ur Rahman & Alhaisoni, 2013) through the reported findings that have emerged from the digital questionnaire.

6.3 Experimental Group’s Reflections on DGBLL

Based on the data from the experimental group’s online questionnaire, we analyse in this section the most salient issues relevant to the main research questions. As previously mentioned in section 5.5.1, the participants were asked if they played physical or non-physical games with friends or peers, alone, or with people they do not know or not at all. Replying to question 4 in the questionnaire, all members of the experimental group indicated that they played games as a social pastime. The majority of the participants, that is 81% (n=17), responded that they enjoyed playing with their friends and peers. With supporting evidence from the classroom observations, the vast majority of the Saudis in our study prefer social gaming. This finding may support the claim that Saudi society is a collective one - see the discussion of Hofstede’s (2016), cultural scores in section 2.4 - and that the inherent collective nature of many games, in general, may be highly suitable for a collectivist Saudi culture. Such a finding, in part, addresses research question 4 and objective 2 and these will also be tackled later in this Chapter.

Another key finding that emerged from the responses to question 5 and to several of the open ended questions (and also from the classroom observations and group interview), was that learners actually teach one another through collaboration. As a result, learners are taking some control of their teaching and learning regimes instead of being passive learners; similar findings were also reported by Chowdhary (2009), see section 3.3. The results also show that 76.2% (n=16) also enjoy playing individually, indicating that they can learn individually or with others. On the other hand, 23.8% (n=5) of the participants play with people they do not know. As a result, it is evident that Saudi students prefer to play either alone or with someone they know. In general, these results reveal that GBL is not restricted in terms of who it appeals to and that it can be used and enjoyed by most types of learners with various learning strategies and styles (see sections 2.2.4 and 2.2.5). This further reinforces the potential value of collaborative play and thus learning within the EFL classroom that can be provided by using video games for improving vocabulary acquisition.
It may be noteworthy to state that when they were asked in question 7 how long they had been using digital devices (PCs, tablets and mobile Smartphones), many of the participants, that is 38.1% (n=8), responded that they had only relatively recently been introduced to such technology, specifically in the past 2 to 4 years. Other participants reported using digital devices for between 5 and 7 years (33.3%, n=7), while 19% (n=4) had been using them for between 8 and 10 years and 14.3% (n=3) for over 10 years. These results show that all the learners had some experience of using digital devices. The results also reveal that even learners with the least amount of digital experience (2-4 years) are still ‘tech comfy’ and may produce favourable language results through proper and effective instruction (Dudeney, 2011; Hockly, 2013).

A further observation is that the students have a relatively high level of both technology acceptance and experience in using digital devices (see Chapter 5). With a majority, 52.4% (n=11), using their devices for more than 4 hours a day (as reported in their responses to question 8) this suggests that there would be positive responses to their introduction into the classroom environment, further underlining the value of implementing technology into the Saudi EFL classroom. Such results reveal that digital devices could be an appropriate tool for language teachers to use for L2 learning in Saudi Arabia because Saudis already spend a great deal of time using them. The results also reveal that Saudi learners are well adapted to using digital devices for their learning and that teachers need only provide them with the required materials and appropriate instruction (see Chapter 4). This leads to the inevitable conclusion that teachers also need to be up-to-date with both learners’ needs and appropriate technologies for possible integration into their own pedagogies. This has always been the case in CALL research and practitioners have long argued in favour of necessary Continuing Professional Development (CPD) in technology use and critical engagement therein (Healey, 2016, see also Chapter 3).

As mentioned in section 5.6, the results show that 57.1% (n=12) use digital devices for reading and writing as well as for accessing electronic and digital dictionaries, 95.2% (n=20) use digital devices for web browsing and also for communication, while 81% (n=17) use digital devices for playing and 33.3% (n=7) use them for studying. These results further indicate that Saudi learners are well aware of how to use digital
devices as well as digital games and are well adapted to using them. It is reasonable to ask how these learners achieved good vocabulary results and improved their SLVA since the majority, according to their answers, do not use digital games for studying. It is of course possible that the experimental group could have gained some of their vocabulary knowledge incidentally and from various other sources (Ellis, 1994, see also Chapter 3). As was described in methodology Chapter 4 and from the evidence gleaned from the responses to question 9, the students were encountering and acquiring vocabulary items in an informal learning environment whilst playing the digital games. It may be stated that the students were ‘studying’ and learning without being aware of this possible incidental learning, putting all cultural and educational boundaries aside. The participants were enjoying the games they were playing, and as a result, they were learning new words, presumably subconsciously. This could mean that digital games may improve and promote Saudi learners’ L2 acquisition without affecting their Saudi identity (this goes some way to answering our research question 2 and objective 1). In other words, choosing the right and appropriate material (see Chapter 2 and also Fareh, 2010) for the targeted learners might improve their language learning with, hopefully, minimum negative effects. In our study, these effects are presented in Chapter 5 and are analysed later in this Chapter.

As was revealed by the responses to question 13, there was a clear preference for adventure and sport games which suggests these would be a viable genre to include in any classroom intervention using digital devices. Knowing Saudi learners’ preferences for such games will allow future teachers, lecturers, researchers, material developers and educational game developers to focus on these games in order to develop, produce and implement better digital games as materials for teaching and learning in Saudi Arabia, thus leading to better learning outcomes. It is important that learners are engaged in the classroom (see Chapter 3 and also Yazzie-Mintz, 2007), and understanding what games Saudi male learners prefer may maximise their engagement, eventually producing better learning outcomes.

With evidence from question 14, there was strong agreement that using digital devices made the lesson more interesting and more enjoyable which suggest there is a potential that incorporating these into the classroom sessions may actually be a better alternative to traditional teaching (see research question 1). One of the reasons why
the experimental group’s vocabulary acquisition improved could therefore be that they were more interested in using digital devices and so engaged more with the material provided. In a similar vein, there was a more positive than negative view of how effective digital technologies could be in terms of improving classroom and learning outcomes. Such results are very encouraging to this research since using digital technology as a means for L2 learning is the basis of this research. Similar findings have been presented by numerous researchers (see Chapter 3). In addition, with such results, it is apparent that the new generation of Saudi learners are coping easily with new methods of teaching and learning, which is a good sign for teachers. It means that teachers with relevant and up-to-date CPD need to spend less time helping learners adapt to the usage of digital devices and can instead focus on improving their L2 proficiency through using those digital devices to their maximum advantage.

As highlighted in Chapter 3, Gee (2003, 2004 and 2007a) has examined and counter-argued many of the negative concerns regarding students using games for learning. Echoing Persson (2011), Sundqvist (2013) and in support of Gee’s proposals in favour of using games in learning, we can state that – from the answers to question 16 – a significant majority, 76.1% (n=16), indicated that they believed the use of digital devices for in-class gaming is an effective language learning tool. This represents one of the central questions of the research and thus several questions in the questionnaire were devoted to this theme. From the answers to questions 18 and 19, the same percentages of more than 95.2% (n=20), indicated that they found DGBLL to be an effective tool and again that they believed the experience to have improved their English vocabulary acquisition (see section 5.7). This is further supported by the evidence from question 22 where 90.5% (n=19) believed that they had learned new English vocabulary words.

In further underlining the value of the DGBLL approach, the responses to questions 20 and 23 recorded that 90.5% (n=19) would continue to utilise digital games for English language learning and this adds strength again to the argument that any prospective resistance from teachers or educational authorities could be tackled because the students clearly enjoy this approach to learning and can see the positive potential of DGBLL. These help to provide more conclusive answers to our research questions 1 and 2. The effect on the students’ attitudes to learning new vocabulary
items is a positive one, through enjoyable incidental and engaged learning experiences (see Rankin et al, 2006 for similar results).

The responses to question 17 show that the majority of the group (66.7%, n=14) felt that digital technologies were a support, rather than a direct replacement for teachers in the classroom. This result also indicates that digital technology should not take the place of teachers since learners only see ICT as a tool for learning (see Chapter 3). The obvious request here is for a blended approach. The teacher’s role remains highly significant to their success and learners still see teachers as their mentors. In other words, digital technology is seen as another learning tool rather than a replacement for teachers. This means that teachers should continue to contribute and be influential in the classroom, which aligns with the cultural and religious focus of Saudi schools and the status and deference given to teachers in the country (see Chapter 2 and Elyas, 2008; Elyas and Picard, 2010). This also underlines the importance of ensuring that those teachers who are encouraged to implement the use of digital technologies (see Chapter 3 and Selim, 2007) for vocabulary acquisition view the process as a positive one and do not feel professionally threatened by a blending learning approach, which may include DGBLL where appropriate.

In attempting to begin to achieve objectives 3 and 4, respondents were asked in question 21 about their needs for localised games that were suitable to their culture. The vast majority (85.8%, n=18) agreed with the statement that digital games must fit their local culture. This will be further elaborated upon in the discussion of the open ended questions, the researcher’s observations and semi-structured interview.

Learners also appeared to see the positive impact of DGBLL and the potential it offers for balancing cultural norms and the need for cultural adaptability when learning a target language. In addition, the results also reveal that learners are accepting of and well prepared for new and radical changes. Thus, teachers are now able to use new methods and materials for language learning with no hesitation, and encourage improved outcomes for vocabulary acquisition, student motivation and ultimately communicative competence.
Third and most importantly, the results from question 24 indicate that using digital devices exposes the learners to the target language, English. As mentioned previously in Chapter 3 researchers have suggested that learners are more exposed to the target language due to using mobile devices (Norbrook and Scott, 2003; Thornton and Hauser, 2004, 2005). In addition, it was further identified from responses to question 25 that over 95% (n=20) of the students felt that the inclusion of digital games in the classroom increased their motivation. Given the importance of motivation in achieving proficiency in a target language (see Chapter 3, and also Guilloteaux and Dornyei, 2008; Ebner and Holzinger, 2007), this overwhelmingly positive response suggests that there is a high potential for the inclusion of games within the Saudi EFL classroom as a tool to increase motivation, and ultimately English proficiency.

The fact that the students were motivated and welcomed the approaches suggest that the focus during the 12 week course was effectively aimed at meeting the needs of the students. This was felt to be an important facet of the work, given the strong cultural and religious focus of the education system in Saudi Arabia. The fact that they were motivated appears to indicate that the games chosen for the study were not culturally threatening or inappropriate for the students, which suggests in turn that they were able to localise the chosen materials to fit their cultural needs and personal preferences. This does however underline the importance of selecting appropriate materials when implementing DGBLL in the classroom, which this researcher successfully achieved (see Chapter 4).

One of the most unexpected findings from answers to question 26, was that 71% (n=14) of the experimental group’s last activity before they go to bed is playing digital games. This significant finding can be seen as evidence of how convenient digital games can be for learning. It also suggests that the medium could be a positive revision tool for learners since playing games is the last thing they do prior to sleeping, encouraging learning at any time. The findings therefore indicate that digital games are an enjoyable learning tool that could be used as an alternative to traditional teaching and learning both in and out of the classroom environment. In particular, since learning and teaching are not subject to place nor time restrictions when using DGBLL, learners can be active continually throughout the day with no restrictions and needing no-one to guide them through. So, digital games may indeed represent a
self-learning tool that could be much more effective than vocabulary textbooks (see Meddings and Thornbury, 2001 for their discussion on alternatives to vocabulary textbook use).

In summary, the responses to the direct questions on the questionnaire identified a number of factors that are relevant to the use of DGBLL in the EFL classroom. They revealed the importance and integrated use of digital devices for Saudi learners and their social use and academic use for language acquisition: they understood the positive potential of this technology to help them improve. The teacher’s role within this process of blended learning may be only to direct these learners and guide them along the self-learning path with minimal intervention. This also shows that these participants are somewhat in control of their learning. Chowdhary (2009) has made similar findings (see Chapter 3) about students gaining more control of their own learning. This is a positive sign for teachers and learners alike that language learning can work hand in hand with digital devices. One of the main advantages for the DGBLL learners in the experimental group was that they had the chance to explore the chosen materials, to be more in control of their learning process and to see their progression through their game scores. This triggered a sense of personal accomplishment, as researchers had previously predicted (Ebner & Holzinger, 2007). In addition, they had no issues learning what was required, with minimum effort from the teacher/researcher since his main role consisted of observing their progression. The main findings are that they students were motivated and engaged with the materials, whilst at the same time being consciously aware of the potential impact of such materials on their cultural and Saudi identity.

The following section presents an analysis of the main themes gleaned from two other data sources.

6.4 Comments and Analysis Arising from the Open-Ended Questions and the Group Interview.

Although there were many positive responses to the open ended questions in the questionnaire to the use of video games for learning, they were not without some important issues (see Table 5.16). It was noted that a number of students indicated
concerns about the possible content of the games used and that any materials would need to be sanctioned before introduction. This underlines the strong role that cultural and religious values have in the education system in the country and the importance of ensuring that the materials used are appropriate (see research objective 2 and research question 3 and also Chapter 2).

Furthermore, the fact that the group felt the appropriately designed and repurposed materials used in the classroom not only made learning exciting and interesting, but they also helped to cement a deeper level of knowledge. The students felt that the words learnt through the games were retained better and with a greater understanding of how to use them in the right context compared to the traditional method of learning vocabulary lists (Chapter 5).

There was clearly also a high level of motivation (Chapter 5), not only because the games were easier to use than books, but because the overall process appeared, to the experimental group, to be simpler and more enjoyable than traditional teaching and encouraged them to play the games outside of the classroom, effectively extending the learning period. In addition, the group also felt that the lessons passed quickly which suggests they were deeply immersed and engaged in the digital game, which is one of the signs of ‘flow’ (Csikszentmihalyi, 1990; Csikszentmihalyi, 1997; Nakamura & Csikszentmihalyi, 2002) (see Chapter 3). Some participants also mentioned that due to time passing quickly, lessons are not boring any more, compared with traditional teaching. This coupled with the indications that the group felt they were achieving a more concrete learning of new words and how to use them, further underlines the value of the approach for increasing the vocabulary of students in Saudi Arabia. In summary, these important factors which were frequently mentioned by the students in the open-ended questions and group interview, are:

1. Acceptance on social, cultural and religious levels.
2. Learners’ engagement with digital games both in the classroom and outside of it.
3. Simplicity in the integration of the games.

From a social and religious perspective and recognising the important roles that religion and social values have on educational approaches in Saudi Arabia (see Chapter 2), it is unsurprising that a few participants did identify that there could be
obstacles. These included a perception that gaming was for children and that their usage in classrooms was a waste of time and that they could contain religiously offensive and threatening images i.e. semi-naked female figures. However, it was also identified that this attitude did change over time and during the engagement process and that for the majority the use of DGBLL was both desirable and effective (see research question 4).

From student comments made in the group interview (and from observations carried out during the teaching process), it would appear that learners were willing to change and accept new teaching approaches. As previously discussed in this Chapter, the learners were able to localise the games to suit their personal interests, giving them an opportunity to be in control of their learning as well as the materials used. It seems that localisation is a personal window for learners and a key that can be used to overcome cultural obstacles (for a description of these cultural obstacles, see Chapter 3 and Al-Alwani, 2005 and Albirini, 2006), eventually making them comfortable when using digital games for learning.

Since these learners are in the digital era, it is likely that they may overcome socio-cultural boundaries. An investigation of such boundaries and how learners surpass them is discussed later in this section. Despite the fact that there is a dearth of COTS games on the market that may suit the Saudi culture, the participants in this study still managed to achieve good vocabulary results. As mentioned in Chapter 5 the learners’ responses to questions 21, 22 and 23 in the questionnaire indirectly revealed the importance of localisation. In other words, the participants managed to localise the games and the materials without affecting the original purpose and design. The students effectively and successfully repurposed the games to suit their own needs. As a consequence, they were more motivated, they were in control of the learning environment and their engagement with and experience of SLA improved. This type of situation may well contribute to improving the actual learning process in Saudi Arabia.

As previously mentioned, localising the game materials gave learners the opportunity to be in control. So, with the options provided by these materials, Saudi learners have the chance, choice and opportunity to a certain degree to adjust them as they see fit.
However, compared with books, teacher and learner options to modify the chosen English materials are very limited. As mentioned previously in Chapter 2, modifying a book may be as simple as skipping a Chapter of the chosen book that does not comply with Saudi culture, Saudi identity or the Islamic religion, which could eventually affect the overall outcome of the students’ L2 learning. Thus, Saudi teachers at this stage make such choices for the learners, denying these learners the chance to make them themselves. As a result and based on this researcher’s personal experiences, Saudi teachers tend to localise the course book that they are teaching to fit their own personal interests while disregarding, to some extent, the learners’ needs, thus enforcing their interests on their learners. Saudi learners at this stage are playing a passive role.

Using digital games as learning materials and mobile devices as the medium, gives each Saudi learner the option to adapt the materials to suit his or her own personal, religious and cultural preferences without diminishing the main benefits of these chosen materials, as seen in the experimental group vocabulary post-test results mentioned earlier in Chapter 5. Therefore, the researcher, through observation and gathered evidence, believes that his purposely designed DGBLL teaching method gave the Saudi learners a sense of ownership and being in control, which kept them interested and motivated during his course. As a result, the participants played a continuous active role in the whole process, primarily because they have invested their time and efforts in accepting the challenges of the games (see Chapter 3).

Bearing in mind how important culture is due to its influence on Saudi students and the Saudi community as a whole (Prokop, 2003; Ur Rahman & Alhaisoni, 2013), and in our case as evidenced by over 86% (n= 18) of the participants believing that culture plays a decisive role in their learning regime (see Chapter 5), it would be reasonable to expect that culture could also affect the choice of teaching materials (Fareh, 2010). Our results also show that understanding a culture is critical when choosing materials. Thus, the positive SLVA results of the experimental group, as mentioned previously, reveal the effectiveness of the materials used for this teaching method and how the researcher considered many important aspects of Saudi culture when choosing such materials and teaching methods. In other words, learning, understanding and considering what the taboos are within a certain culture in order to choose suitable
materials will obviously have a positive impact on learners’ acquisition outcomes as well as their openness to change in terms of learning and teaching methods.

Whilst giving Saudi learners a chance to have a high level of control, my DGBLL teaching method also gave them a sense of personal responsibility for their actions within the game itself. Therefore, teachers’ interference with students’ learning is minimal, and they are the main focus instead of the teachers. In other words, using this DGBLL teaching method in the classroom made it student-centred. Since digital games give direct and immediate feedback to the players, DGBL learner actions in the game impact upon their overall results. Also, learners can easily see their progress and development without needing to wait for the teachers’ personal opinion or their mid-term or final exam results. This would be beneficial for some teachers in a number of ways. It could reduce teachers’ stress since they do not need to localise the materials used. It would also help teachers with learners who do not interact in class and are usually silent and, therefore, hard to observe and evaluate during class time. My DGBLL teaching method with the appropriate material might help with this issue since both teacher and learner can visually see their progress through the game’s results.

The Saudi learners also mentioned in the interview that they enjoyed this DGBLL teaching method and remained motivated throughout (see Chapter 5). During this research study, the researcher observed that some of his participants had finished the suggested game materials earlier than was anticipated. These participants told the teacher/researcher that they liked the suggested games so much that they kept on playing them until they had reached the end of the game. Some also mentioned that they liked this teaching method and the game materials so much that they played the games more than once. A number of students reported that they had fully completed the obligatory games ahead of time and planning. At this stage, these students suggested a list of games that interested them which the researcher first evaluated and then made them available to all participants in the group (see Chapter 4).

These three scenarios could signal that some participants are more motivated and more engaged than others in the group. Therefore, the researcher submits that this DGBLL teaching method enables learners to learn continuously, not just inside the
classroom but also outside and during their free time. This could be achieved by giving them a larger number of suitable (both pedagogically and culturally) digital games to play after classes or by repeating the same game or even playing games that are always updated through extra Downloadable Content (DLC). DLCs are a very common characteristic of many digital games today, whereby extra levels of play can be downloaded from the game producer and developer for free or at an extra cost.

In the recorded group interview, one particular response to question 1 (“what do you think are the potential problems when using digital games as an English educational tool in Saudi Arabia?”) that was never mentioned previously was about female game characters not being suitably attired and so possibly provoking sexual desires.

“Some educational games contain and have naked female pictures and figures. This could have a negative impact on an individual because instead of learning it provokes sexual needs.” (St2)

We are interpreting this from the original Arabic to mean that certain characters within the chosen and repurposed COTS games were not wearing enough clothing to cover sufficient quantities of their anatomy, according to this respondent. It should be remembered that this represents one single response which may be perceived as coming from a very strict and conservative individual who remains in a minority of one, in our group. Whilst at the same time, one cannot completely ignore this point of view, it does serve to remind us of the existence of certain highly conservative elements in Saudi society. Relating to cultural and religious issues, some participants also believe that DGBLL success is based upon religious and cultural grounds and that in order to be successful, the games need to conform to Saudi culture. Others, however, completely reject this approach (see again research question 4 and objective 2).

“If it does not carry any threat to our culture or religion.” (St34)

“Some games show and contain churches and crosses. This would be hard to use in teaching, especially for kids.” (St35)

“I am against what you said. I believe it is good to learn about other cultures.” (St36)
This opposing of views is quite indicative of the frank exchanges that occurred during the interview, conducted in a relaxed and comfortable atmosphere.

As mentioned in Chapter 2, language and culture are hard to separate (Brown, 2007). A number of participants anticipated that external forces could overlap the Saudi culture as a result of using DGBLL, and this might affect Saudis negatively (see research question 3). Such concerns find their echoes in other research work, see for example Azuri (2006) and also Elyas & Picard (2010). In traditional learning environments, some teachers would skip some subjects and Chapters that did not reflect Saudi culture (see Chapter 2).

“It is the fear of other cultures overlapping ours.” (St39)

“That is why we have Chapters in our books that we do not take.” (St40)

As a result, some participants suggested that games should be carefully chosen, considering all aspects of cultural needs. In other words, the learners want games that are localised. This suggestion could indirectly mean that they understand the positive potential of DGBLL as well as how to gain the most out of digital learning.

“The Ministry of Education should adapt and make games that are applicable to the Saudi culture since they already spend millions on books every year.” (St38)

“There will not be any issues when used properly. Choosing the right game that will not offend our culture is important.” (St44)

As part of this discussion and by way of analysis, we would like to propose an extension to the used DGBLL method in that a student-teacher centred approach could be adapted in the future. This would involve a collaboration between the students and teacher in assessing and repurposing possible COTS for English language acquisition. The teacher must remain as the ultimate “Gatekeeper” but a joint close-working exercise where the students are first taught how to evaluate the potential of digital games for SLA and are allowed to suggest games for both inside and outside of the classroom, as an authentic part of their curriculum. The approach would seek to
exploit the known motivation amongst most students for the DGBLL method and seek to engage students further, prolonging their educational experience.

In question 2 the participants were asked if they agreed or did not agree with using digital games as part of the educational system. All the participants agreed. One particular response was very pertinent and crucial for this study. One Saudi participant responded:

“Playing games in the classroom made everyone equal no matter how smart they are. As a result, the classroom became more competitive.” (St53)

“Do you mean it gives a better learning atmosphere?” (Res)

“Yes. And it fits every level.” (St54)

This response indicates that what learners want in the classroom as well as from the course they are taking is to be equal to their peers and challenged. This may also be another sign that Saudi society is collectivist (see Chapter 2). In other words, he did not feel that one student was better than the other. This could also be an indication that digital games give these Saudi participants a sense of self-satisfaction since they play them with no restrictions and remain completely in control. Another important thing that this response shows is that the Saudi learners enjoy what they are playing despite any cultural boundaries that they have to negotiate. This could also be an indirect indication that they are motivated to continue what they have started, i.e. the game, to achieve the result they are looking for, the goal, which eventually gives them this sense of equality.

Another response that was also important to this research shows that Saudi learners want to improve their method of learning. The following participant identified the necessity to change the learning atmosphere by comparing DGBLL to traditional teaching methods.

“Most of us do not attend courses [skip classes] that use books while the courses that use digital devices, most do attend” (St59)
This response proves that DGBLL has answered one of the Saudi learners’ needs (see research objective 4). It also shows that learners are enjoying the language course and the learning atmosphere and are motivated to continue attending. One participant even responded by suggesting that DGBLL is a complete success.

“And this [referring directly to the course] is evidence of its success.”

(St60)

The final question in the group interview focused on one of the most important issues that this research is based on, and that is culture. By responding to question 3 (see Appendices 11A and 11B), learners identified the social and cultural issues that they saw as relevant when adapting digital games as a learning tool. It is important to note that all of the participants raised some form of social, cultural or religious issue (see table 5.19). According to the learners’ responses, the main issue is religion.

“Some games speak about religion.” (St62)

“So, you will not accept it if it speaks about other religions?” (Res)

“Yes, I will not accept it.” (St63)

Since Saudi Arabia is based on the Islamic religion, it has a direct impact on the Saudi culture and identity of Saudis (Prokop, 2003; Ur Rahman & Alhaisoni, 2013, see section 2.3), it is understandable that the learners are protective of it and wary of anything that might be a threat to it, such as digital games as learning tools. One participant mentioned that digital games had previously been ridiculed for religious reasons.

“Conservative and extremely religious scholars will not accept and would ridicule such games. For example, Temple Run was criticized because you play inside a temple.” (St65)

In order to identify learners’ perception of culture, the researcher/interviewer asked the Saudi participants if religion and culture are connected to one another (see Appendices 11A and 11B). The majority of the participants responded that there was definitely a connection. Hence, their responses are a direct indication of how massive...
a role religion plays in forming Saudi culture and identity (see research question 3). Following on from these responses, the researcher/interviewer proceeded to ask an additional question in order to verify whether religion was the main issue when adapting digital games for learning and teaching:

“Does our religion affect digital game usage?” (Res)

“It definitely does. Because I will not accept anything if it is not part of or against my religion.” (St72)

To overcome such religious and cultural issues, one participant suggested that games should be localised and another participant suggested that religious boundaries should be understood before using and adapting digital games as learning tools.

“There will not be any negative reactions if it is Saudi constructed.” (St73)

“It will not affect if there are boundaries” (St74)

After verifying the learners’ reactions to DGBLL through their responses to the questions in the group interview, it is clear that Saudi culture plays a massive role when adapting a new method of learning and materials.

To conclude this section, it is no surprise how effective digital games are if used properly since they allow learners to be in control, learn at their own pace, at a convenient time and in their chosen place, with no restrictions attached. Therefore, the researcher can only assume that his DGBLL teaching method does not interfere with the culture of the learner. Instead, the researcher believes that using digital games as materials actually gives Saudi learners an opportunity to break through the cultural barriers that may normally hold them back. Still, this assumption is based only on the researcher’s personal view, his observations and the evidence derived from the research conducted on his participants. More research would be helpful to confirm or refute this notion.

The comments previously presented are mainly based on the research findings (see Chapter 5 and Table 5.20); however, the following section is based solely on the
researcher’s own classroom observations during the DGBLL teaching course that he
designed (see Chapter 4). Since no other research, to the researcher’s knowledge when
conducting this study, has investigated the cultural issues that affect Saudi learners’
when using the DGBLL teaching method, the comments that follow are based on his
personal interpretation.

6.5 Comments Arising from Classroom Observations

As has been stated in the previous section, there is no comparable research in this
Saudi context. Therefore, these comments are based solely on the researcher’s
observations. The purpose of this section is to provide more information on Saudi
learners, Saudi culture and the proposed DGBLL teaching method. The researcher
could not officially document everything he witnessed during the research process
because some of what he observed was not part of his original research study and, as a
result, he was not prepared for it. However, it is worth mentioning what he observed
because it might help with future research. This is a common enough occurrence when
Action Research is employed as a methodology (McNiff, 2013).

As previously mentioned in Chapter 2, Saudi Arabia is a collectivist society (see
Hofstede’s 2016 scores). It seems to the researcher that the DGBLL teaching method
may foster and nurture in Saudi learners the collectivism that is an integral part of
their identity. Based on the researcher’s observations, there are a number of reasons
for making such a claim. During his teaching course, the researcher witnessed the
participants in the experimental group working together as a group even though each
student had his own device. When encountering any difficulty, such as finding the
meaning of a word, they relied on each other. On the other hand, the traditionally
taught control group typically worked individually and asked the teacher/researcher
for input. This may be attributable to their previous learning experiences. The new
DGBLL method broke with this tradition and allowed the students the opportunity to
redefine their own learning experiences. The students adapted quickly to this new
method and they reported that they enjoyed the experience and this was certainly
observed by this researcher.
The researcher witnessed another sign of collectivism during his class when one student’s phone battery died and he was devastated that he could not continue to play the suggested games. As a result, and in order for him not to be left out of the group, the other students asked him to join in and play their game with them without asking for the teacher’s permission. After that incident, the students started bringing their phone chargers to class. This incident not only shows how the DGBLL teaching method fosters collectivism but also how Saudi learners like working in groups. Their reaction could also mean they liked what they were doing and were motivated to continue, hence their invitation. They also liked being in control and not having to ask the teacher/researcher for permission, and most importantly they liked the results they got. This could mean that the DGBLL teaching method is a candidate for language learning and teaching in a collectivist society. After such observations, it is reasonable to ask if the DGBLL teaching method could also foster other cultural dimensions that may be worth exploring. This could be an issue for future researchers to explore.

As possible examples of autonomous development, the researcher also noticed that after week five, some of his participants actually began suggesting games that might support their L2 vocabulary learning. Some of these games were either similar in context and design to those the researcher had originally recommended to his learners as materials that could be used via mobile devices, while in order to play others the students needed particular devices, such as a Play Station or an Xbox. This could be a positive outcome of using this DGBLL teaching method. The learners felt they were in charge and wanted to contribute to their learning even more by suggesting more games to help them improve. This presents other researchers with an opportunity to explore whether learners’ L2 would improve should they be given a chance to actually choose their own materials. This could also be a suitable area for further research that may be of great benefit. Without any prompting on the part of the researcher, the learners created their own physical learning environment, they would arrive early to class in order to reorganise the outlay of the classroom, putting the chairs in a U-shaped design for easier collaboration between them. Student movement and interactions around the classroom were free and easy, with minimum interference from the researcher. Student attendance at the classes was high with very few absences observed.
At the very least, this new DGBLL method instigated a sense of change in the students in delivering the teaching. There was an observed sense of accomplishment in the students when they completed the games. Their exposure to and experience with the games opened up discussions on religion, culture, localisation and their own Saudi identity and their social and personal attitudes. Such an impact has not remained unnoticed at an Institutional level as the researcher has received an enquiry from an ICT Course Developer at Imam University where the original research project was conducted. The Developer is requesting valuable input from this researcher, based on his new teaching method to contribute to both new curriculum design and the production of a course textbook (see Appendix 12)

6.6 Summary

This Chapter has presented an examination of the main findings with a review of the vocabulary test results, the digital questionnaire, the semi-structured interview and the observations from the overall study. From the vocabulary test results, we may conclude that exposure to the DGBLL method did not cause a detrimental effect on the Experimental Group’s test scores. In fact, their scores improved. The questionnaire data revealed that students, in general, were positive in their attitudes towards DGBLL. They were ‘tech comfy’ when presented with the appropriate teaching materials. As a consequence, it was recommended that teachers also need to upskill themselves through CPD in order to remain ‘tech comfy’. It was argued from the data that DGBL teaching fostered collaboration (which is very important in a collectivist society). Evidence was also presented of the existence of incidental learning occurring, of learners gaining autonomy, of gaining a sense of control and equality. The learners themselves were certainly motivated as learners; they changed as learners. We have attempted throughout this Chapter to address each of the research questions and objectives and added several proposals of our own. In the following Chapter, these proposals will be detailed, along with the recommendations and final conclusions.
Chapter 7- Limitations, Recommendations and Final Conclusions

7.1 Introduction

This final Chapter explores the limitations of the study and indicates how these might be approached in future works. This then leads onto recommendations for further research that emerged as result of conducting the work. Finally, this Chapter concludes by summarising the findings.

7.2 Limitations of the Study

This research project, like any other, was subject to some limitations, which are presented below along with solutions proposed to overcome them. The number of games on the market that can be described as culturally acceptable for Saudis, based on Hofstede’s (1980, 2001) cultural dimensions, is limited. The researcher faced one of the biggest challenges when commencing this study in that it was necessary to find suitable games that would not affect the learners’ Saudi identity nor seem to threaten their culture since this would eventually affect both the learners’ language progress and the research study as a whole. This is especially the case when it comes to adapting these games for L2 use.

The most viable way of dealing with this limitation is for teachers and researchers in Saudi Arabia, or indeed any other conservative society, to find games that can easily be localised and repurposed to suit the host culture through understanding the identified and perceived cultural threats and sensitivities involved. This challenge can easily be tackled by teachers or researchers who are natives of a particular country and, therefore, familiar with its culture but can be relatively difficult for non-natives to overcome. Thus, it is recommended that non-native teachers or researchers make an attempt to thoroughly understand the local culture when adapting such games or new methods of teaching and learning in order not to threaten or harm the cultural identity of the students.

Since the researcher is male, he was only able to focus on a particular gender group, which was also male. As mentioned in Chapter 1, the Saudi Arabian educational system in general is not mixed. Males have their own schools and universities, as do
females. As a result, it is almost impossible for male teachers or researchers to gain access to female students in order to teach them in a face-to-face environment, except with one condition. Male teachers can only teach females via telecommunication whereby no females can be physically observed. This was not sufficient for the purposes of this research study and also not suitable for the DGBLL teaching environment. Hence, this research could only be conducted on male participants. Therefore, the researcher can only recommend that a female researcher interested in this field conducts another study on female participants within a similar research ecology.

Based on the researcher’s personal observation, the number of games he chose for this study was insufficient. A number of students unexpectedly finished the suggested games in less than seven weeks. As a result, some of the participants played other games that they already had on their mobile devices, while others played the same suggested games repeatedly. The most obvious solution to this problem would be to have more games as a backup, only to be used when learners have finished playing the required games. From a pedagogical point of view, it is important to note that the backup games should contain the same, or at least similar, content to the original games.

Further limitations include the facts that the group size was relatively small and also that the course lasted for 12 weeks in total. These conditions had to be accepted and were beyond the control of the researcher.

After describing the limitations of this study, the researcher will now propose some recommendations for further research that could be useful to other researchers interested in DGBLL and in introducing a possible DGBLL teaching and learning method in conservative societies.

7.3 Recommendations for Further Study

This section proposes some recommendations for tackling the limitations discussed above as well as proposals for future research studies. They are based on the researcher’s own personal views following observations carried out during the study and analysis of the results detailed in both Chapter 5 and Chapter 6. It is important to mention that at the time of conducting this study and writing this research paper the
researcher could not find any formal academic research papers or journals that dealt with the cultural implications of using DGBLL as a teaching and learning tool in L2 education in a Saudi setting or, indeed, any other. Thus, this study provides other researchers with an opportunity to investigate the impact of using DGBLL on L2 proficiency in conservative countries and welcomes any additional research into DGBLL use in a Saudi setting. Hopefully, the following recommendations will be beneficial to those conducting any further research in this area.

The fact that this study only focused on Saudi male students in their PYP provides other researchers with an opportunity to verify whether a similar DGBLL teaching method would have the same effect on Saudi female learners’ L2 proficiency in other Institutions. Future researchers would be able to examine female and male students from different levels and years of study and compare their attitudes to DGBLL as well as any other issues that may arise with those of the male learners in this study.

This research study also provides researchers with an additional advantage when exploring this DGBLL teaching method in universities with a student population largely derived from rural communities. Since the research was conducted in a city-based university, the question that presents itself is one of repeating the research project in a university mostly populated by students from rural communities. Any such research should provide deep insight into how such students adapt themselves to using new methods of learning as well as the challenges they face in doing so. A comparison could be done with other Saudi universities with students largely coming from urban areas.

This research has also provided insight into learners’ localisation of the games provided, as mentioned previously in Chapter 6. This research has concluded that learners do in fact localise the games to suit their liking by, for example, turning off the music or skipping dialogues that contain female figures whom they may find offensive in their dress. In other words, the learners’ are in control of the game materials. This finding gives researchers an opportunity to investigate whether denying learners such options has an effect on their learning and how they manage to deal with such a predicament. If the result of such an experiment is positive, it will,
hopefully, increase understanding of how learners in conservative societies localise games in a way that will not threaten their culture when they are not in control.

The games that were chosen for this research involved limited interaction with native speakers of the targeted language, English (see Chapter 4). In this study, learners only listened to and/or read the words and dialogues in the presented games. It is recommended that further studies have other options, such as those offered by MMORPGs. These types of games have certain features that other games do not, such as allowing multiple players to interact as well as compete with each other. Players of such games can also interact with native English speakers and with each other through voice chat or text messages. Since players play online with different genders as well as with players from different cultures, a number of questions can be posited due to using MMORPGs, and they are:

1. If MMORPGs are used as materials, do they have similar effects to the games used in this study?
2. Are MMORPGs suitable for the Saudi culture or would they offend the conservative player since players can interact with females?
3. Can MMORPGs be localised by learners?

As mentioned earlier, one of the limitations that the researcher faced and had to deal with was choosing a suitable number of games and the right type of game materials. One of the other issues that this researcher had to deal with was testing the experimental group using the traditional paper based method when it was more logical and fitted the research purposes better to test them using digital games, that is in the same way they were taught. As a consequence, this researcher recommends finding a possible specific DGBLT that uses a set of DLCs within the same game. This testing mechanism may be expanded to include testing other subjects beyond SLVA, which may be called Digital Game Based Testing (DGBT). As an extension to DGBT, this researcher would also like to propose having a universal DGBT that tests L2 proficiency. Since there are already a number of officially recognised tests, such as Test of English as a Foreign Language (TOEFL) and International English Language Testing System (IELTS), which test adults’ L2 proficiency, the DGBLT could be designed and used for all types of learners.
Since this research was conducted in a conservative Muslim society, Saudi Arabia, it would be proper to suggest that other researchers compare the impact of using similar DGBLL teaching methods in other conservative Muslim countries and find out whether the learners there face the same challenges as and react similarly to Saudi learners.

During the group interview and in the open ended questions in questionnaire (see Table 5.18, Appendices 11A and 11B), the Saudi learners stated that their parents view using digital games as a form of childish behaviour and that some games are viewed by religious scholars as religiously inappropriate. A number of research suggestions can be made based on what the students said. In order to verify the learners’ claims, the researcher recommends that after using a DGBLL teaching method, the learners’ parents are interviewed to find out how they perceive games as learning tools. This researcher also recommends interviewing religious scholars in order to find out the type of games they deem to be religiously appropriate for Muslims. This could help not only teachers trying to adapt a DGBLL teaching method but also material designers and game developers.

Another suggestion that can also be made based on the learners’ statements is to test this method on young learners to explore whether the same cultural, religious and social issues arise and to learn how they manage to deal with such issues.

Using Hofstede’s (1980, 2001) cultural dimensions (Chapter 2) to learn about the Saudi culture, this research has verified that the DGBLL teaching method gave Saudi learners a sense of equality and being in control and through the researcher’s observations (see Chapter 6) it was apparent that it fostered collectivism. Therefore, it would be justifiable to test what other possible successes and accomplishments a DGBLL teaching method can achieve related to the cultural dimensions that Hofstede (1980, 2001) covers.

In Chapter 6, this researcher proposed an extension of his DGBLL teaching and learning method in favour of a student-teacher centred approach to allow closer collaboration between the student and teacher when evaluating and employing game-related materials. Such an extension would offer the opportunity for learners to gain some autonomy and a sense of becoming ‘culturally critical’. The aim would be that they would become critical (in both a positive and negative way) of the culture of
digital games and aware of the potential of using such games as learning materials. In our study, certain students began to suggest additional games to the researcher. This unexpected but welcome development means that students should be taught how to assess games in a pedagogically sound and ‘culturally critical’ manner. Of course, it must be added that teachers too must upskill in order to remain as ‘tech comfy’ as their students through appropriate CPD, if they wish to integrate digital materials into their teaching.

To summarise what has been suggested above, the main recommendations are as follows:
1. To test DGBLL teaching method on Saudi female learners.
2. To test DGBLL teaching method on learners at universities where most of the student population comes from rural communities.
3. To remove certain options from the game materials in order to learn more about localisation in conservative societies.
4. To explore DGBLL teaching method using MMORPG as materials.
5. To conduct studies in other Muslim or conservative societies for comparison’s sake.
6. To interview parents and religious scholars.
7. To test Hofstede’s (1980, 2001) cultural dimensions to ascertain if the DGBLL method may foster more than a sense of collectivism amongst Saudi learners.
8. To develop DLCs related to the game materials used for learning as DGBLT and extending this to DGBT.
9. To extend the DGBLL method into a student-teacher centred approach in order for the student to become ‘culturally critical’.
10. Appropriate CPD for teachers involved in using digital materials.

7.4 Summary and Final Conclusions

Saudi Arabia is known for being a Muslim conservative country. This, inevitably, has an effect on Saudi learning and teaching. Saudi Arabia is known for its wealth, and a large proportion of that wealth is invested in education. The Ministry of Education in Saudi Arabia has deployed these funds to improve the educational system, offering teachers the opportunity to attend courses to improve their teaching patterns and
skills. They have also updated the classrooms in schools and universities, equipping them with new modern technology, such as overhead projectors, smart boards and computer labs. However, despite all of the investment in improving the educational system, Saudi teaching and learning methods have not changed. Claims have been made by some researchers that limited use of technology (Ertmer, 1999), cultural and personal beliefs and the fact that learners are not willing to accept changes (Al-Alwani, 2005; Ringstaff & Kelley, 2002) are the reasons more modern teaching methods are not being adopted (see Chapter 2). Thus, to learn about the Saudi culture and whether new teaching methods and tools can be employed in such a conservative society and what the implications of using such methods are, the researcher in this study has attempted to introduce a radical new teaching method, that is DGBLL, in such an environment. The overall results detailed in Chapter 5 revealed that this DGBLL teaching method improved Saudi learners’ L2 acquisition. The results also concluded that Saudi learners managed to surpass certain so-called cultural boundaries in order not to affect their Saudi identity due to being given the opportunity to be in control and, thus, able to localise the game materials to fit their own preferences and uses. The results, given their stated limitations, are encouraging in that they offer proof that extending and expanding this engaging method of learning and teaching can be highly beneficial to learners.

To the researcher’s knowledge, no official research has been done which discusses DGBL in conservative cultures such as the Saudi culture. Therefore, this research has only scratched the surface of the cultural issues associated with the use of the DGBL method in a conservative society and there is still a lot to be learned about this area in such environments. Indeed, the researcher has presented a number of recommendations for further research based on the research analysis and personal observations. Reiterating that Saudi Arabia has only recently embraced educational technology, it is clear that further cultural challenges will certainly emerge and will need to be addressed, especially in the area of DGBL.

The main findings are listed below:

- There is no detrimental effect to employing the DGBLL method
- Students are ‘tech comfy’ when using the appropriate digital tools
• DGBLL can be used by both students and teachers in a safe teaching environment when implementing culturally appropriate tools
• GBL as a whole process fostered collaborative interactions when faced with the same challenges within games
• Given the collaborative interactions, learners take some control of their learning method
• Incidental learning does occur
• Learners localise the materials as they see fit
• Students are motivated, challenged, engaged and immersed in the materials
• Students expressed a clear preference for two specific game genres: adventure and sport games
• Learners reported that they would like to continue to use digital games for language learning after the 12-week course
• Teachers should not feel threatened when using digital devices in their classes
• Learners accept the DGBLL method and start off feeling equal
• Learners build their own learning space and atmosphere when becoming autonomous learners.
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182


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Appendances

Appendix 1 - University of Limerick’s ethics committee form, information sheet and consent

FACULTY OF ARTS, HUMANITIES AND SOCIAL SCIENCES
RESEARCH ETHICS COMMITTEE
CHECKLIST

All applicants must fill in this checklist.

If you answer “No” to all the questions, please fill in SECTION ONE only.

If you answer “Yes” to any of these questions, you must fill SECTION TWO only.

All applications must be accompanied by an Information Sheet and Consent Form (Appendices A+B).

HUMAN PARTICIPANTS

Does the research proposal involve: Yes? No?

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<td>Any person under the age of 18?</td>
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<td>Adult patients?</td>
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<td>Adults with learning difficulties?</td>
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<td><strong>Adults under the protection/ control/influence of others (e.g. in care/prison)?</strong></td>
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<td><strong>Relatives of ill people (e.g. parents of sick children)</strong></td>
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<tr>
<td><strong>People who may only have a basic knowledge of English?</strong></td>
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<tr>
<td><strong>Hospital or GP patients recruited in medical facility?</strong></td>
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## SUBJECT MATTER

**Does the research proposal involve:**

| **Sensitive personal issues?**  | NO |
| **(e.g. suicide, bereavement, gender identity, sexuality, fertility, abortion, gambling)** | |
| **Illegal activities, illicit drug taking, substance abuse or the self-reporting of criminal behaviour?** | NO |
| **Any act that might diminish self-respect or cause shame, embarrassment or regret?** | NO |
| **Research into politically and/or racially/ethnically and/or commercially sensitive areas?** | NO |

## RESEARCH PROCEDURES

**Does the research proposal involve:**

<p>| <strong>Use of personal records without consent?</strong> | NO |
| <strong>Deception of participants?</strong> | NO |
| <strong>The offer of large inducements to participate?</strong> | NO |</p>
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<td>Invasive physical interventions or treatments?</td>
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**AREAS OTHER THAN HUMAN**

**Does the research proposal involve:**

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<td>Any field that may bring the University adverse attention?</td>
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SECTION ONE: only fill in this section if you answered NO to all of the questions on the

Applicant Details:

Name: Abdulaziz Abdullah Alsayegh
ID Number: 11170859
E-mail Address: abdulaziz.alsayegh@ul.ie
Department/Programme of Study: Applied Languages in LLCC
Type of Project: PhD.
Funding Body (if any): Saudi Arabian Cultural Bureau
Project Title: Teaching English Vocabulary via Digital Games in a Saudi Educational Environment: Issues and Attitudes
Supervisor/Other Investigators: Dr. Liam Murray

Signature of Applicant        Abdulaziz Alsayegh            Date 11/10/2013
Signature of Supervisor           Dr Liam Murray       Date 11/10/2013

Project Details:

1. Purpose of Research (100 words maximum)

To test 3rd level English Saudi students L2 vocabulary acquisition in Imam Mohamed Bin Saud University using digital game based language learning (DGBLL) method. And also test what issues they encountered and their attitudes towards this teaching method.

2. Research Methodology (100 words maximum) (This must detail how you will interact with your research subjects. Sample questions for interviews should be included. Include all questions for surveys. Please use a separate sheet for such information where necessary.)

The method for this research is focused on 2 groups. These groups are both L2 English learners. The researcher will interact with both groups by teaching them English vocabulary classes for a maximum
of 3 months. These groups consist of a controlled group and a test group. Both groups will have a pre-test and a post-test. The test group will have an additional survey questionnaire and a group interview and discussion. All the tests will be anonymous. The questions for the questionnaire and interviews will only deal with the students’ interactions and learning experiences when using the electronic games. For example: what aspects of XY game/s did you like/not like? What were the most effective learning aspects of XY game/s, in your opinion?

Learners have to attend these classes for the success of this research. They also have the right not to participate in this research if they wish to do so at any time.

3. Who will your informants be?

Third level Saudi Students of English at Imam Mohamed Bin Saud University, Saudi Arabia.

4. How do you plan to gain access to/contact/approach your potential informant(s)?

Formal approaches will be made to the Dean of English and Translation College at Imam Mohamed Bin Saud University and teaching colleagues at the same institution. Potential informants will be contacted by email and/or letter. The rights to anonymity and to withdraw from the research are guaranteed.

Please indicate that the Information Sheet included with this application covers:

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<td>Details of the research for participants</td>
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<td>Details of what participation will involve</td>
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<td>Rights to anonymity</td>
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<td>Rights to withdraw from the research</td>
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I have read the guidelines on data storage and have made arrangements to comply by them: Yes
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<td>Chair, FREC</td>
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Dear participant,

Thank you for agreeing to take part in this research project. It aims to assess the impact of Digital Game Based Language Learning (DGBLL) on your learning of English. During the course of this 12-week project, you will be asked to play and evaluate both inside and outside of classroom time a number of games that may enhance your vocabulary in English. We will have three one-hour classes together at your home University. The research project will start with a pre-vocabulary test. After the completion of the DGBLL course you will take another post-vocabulary test. Then a survey questionnaire will be handed out to you to evaluate this teaching method and the chosen games. Finally, you will be participating in a group interview. During this whole research project, any information that you submit will remain anonymous and at any point you may withdraw from this project.

The research investigator for this project is: Abdulaziz Abdullah Alsayegh, ID Number: 11170859, e-mail Address: abdulaziz.alsayegh@ul.ie and the research supervisor is Dr Liam Murray, email address: liam.murray@ul.ie 00353 61202742. Both work at the University of Limerick, Ireland.

This research study has received Ethics approval from the Arts, Humanities and Social Sciences Research Ethics committee. If you have any concerns about this study and wish to contact someone independent, you may contact:
FACULTY OF ARTS, HUMANITIES AND SOCIAL SCIENCES

RESEARCH ETHICS COMMITTEE

CONSENT FORM

Consent Section:

I, the undersigned, declare that I am willing to take part in research for the project entitled “Teaching English Vocabulary via Digital Games in a Saudi Educational Environment: Issues and Attitudes”.

- I declare that I have been fully briefed on the nature of this study and my role in it and have been given the opportunity to ask questions before agreeing to participate.
- The nature of my participation has been explained to me and I have full knowledge of how the information collected will be used.
- I am also aware that my participation in this study may be recorded (video/audio) and I agree to this. However, should I feel uncomfortable at any time I can request that the recording equipment be switched off. I am entitled to copies of all recordings made and am fully informed as to what will happen to these recordings once the study is completed.
- I fully understand that there is no obligation on me to participate in this study.
- I fully understand that I am free to withdraw my participation at any time without having to explain or give a reason.
- I am also entitled to full confidentiality in terms of my participation and personal details.

Signature of participant                                    Date
Appendix 2 – The Control Group Book

English Vocabulary in Use
Elementary

60 units of vocabulary reference and practice
Self-study and classroom use
with answers

Michael McCarthy
Felicity O'Dell

Cambridge
Appendix 3 – Lexical Items

The Vocabulary List for Both Groups

(Control / Experimental)

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Appendix 4 – Experimental Group Materials and Classroom Score Sheet

Game 1 (OBLIGATORY)

Hidden Objects by TOBI APPS

Game Features:

1) Up to 3 players can play individually.
2) 50 free trail levels.
3) Large number of vocabulary words.
4) Each level is scored and timed.

Classroom Score Sheet

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Game 2 (OBLIGATORY)

Dream Sleuth: Hidden Objects by Nevosoft Inc

Game Features:

1) A detective story with a great movie plot.
2) A great spoken and written dialog between different characters.
3) A large number of hidden objects.
4) A number of mini puzzle games.
5) A challenging and a free 3 chapters trial game.
6) Can be played individually or in groups.
7) Family and kid friendly.

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Game 3 (OBLIGATORY)

Hidden Objects Mystery Guardian by Big Bear Entertainment

Game Features:

1) 30 levels
2) Different modes (Word and Picture)
3) Large number of vocabulary words
4) Free and a challenging game.
5) 2 minute timed game.

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Game 4 (OBLIGATORY)

Mysteryville: Detective Story by NEVOSOFT INC.

Game Features:

1) Written dialogues.
2) Detective and a crime story.
3) 3 free trial chapters.
4) Simple English and family and kid friendly.
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Game 5 (Optional)

FIFA 14 by EA SPORTS

**Game Features:**

1) Can build your own team.
2) Can be played individually or online with multiple players.
3) Free game.
4) English commentaries.

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Game 6 (Optional) Students Choice

Name of the game .......................................................by.........................

Game Features:
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**Game 7 (Optional) Students Choice**

Name of the game ………………………………………………………by……………………

Game Features:

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Game 8 (Optional) Students Choice

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Game Features:

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Appendix 5– Experimental Group Full Dialogue of Obligatory Game Number 2

Game 2 (Dialogue)

Dream Sleuth: Hidden Objects by Nevosoft Inc

![Image of the game interface]

Hi! I'd like a cup of coffee, please.
I'm sorry, but we don't have any coffee left. We're all out.

Copied to clipboard

Then a cup of tea, please.
Coming right up...

You know, yesterday we had a party and the guests drank it all.

I've never heard of a cafe with no coffee before.
But you must have something else left.

Would you like some wine?

Okay, I'll have some wine.
I’ve got a bottle of excellent white wine, but I don’t remember where it is.

Copied to clipboard

Here you are. Excellent wine.

Thanks.
New to town, huh?

Yes, I just got here this morning. My name's Laura Winner.

I'm a journalist and I want to write an article about your town. I write the Countryside Life column.
Fat chance. Sorry to say it, but this is a god forsaken place.

Can't believe there's nothing interesting here at all.

Zip.
Really? What’s become of them?

No one knows. But it’s all pretty suspicious.

Sorry, I have to tidy this place up. The bar’s a mess.
If I help you, would you tell me more about the disappearing cats?

Sure!

Thank you for your help.
So, tell me about the disappearing cats.

There’s a witch that lives in our town. She works as a fortuneteller, but I know she’s really a witch.

I’m sure she’s somehow involved.
You think she steals the cats?

I don't know what she does, but she's definitely got something to do with it.

Well, thank you. That's interesting. I'll go and see her.
I know many things, dear, but this answer took no great skill. You called and made an appointment for 5 p.m.

Oh, sorry, how silly of me. My head is in a whirl. You see, my cat has disappeared. I need to know what happened.
I'll try to help you.

I've got my cards scattered all over. Help me to pick them up, and I'll tell you your fortune.

Okay, I'll give it a try.
Thank you, Laura. Now we’ll see your fortune.

I see that you don’t have a cat, Laura. Why are you lying to me?

Sorry, I’m a journalist. I came here to write an article about your town.
And I decided to investigate the case of the disappearing cats.

Do you have any idea why cats are disappearing?

I see that you're a good girl, Laura, despite being dishonest with me.
I sense we must learn a little more about your fortune.

I'll need my dice for that, though.

They're somewhere here in the room. Please help me find them.
Copied to clipboard

Okay...

The dice say a great challenge lies before you.

If you can cope with it, you'll become famous. And you'll find your true love.
Right here? In this town?

Perhaps. It'll happen soon. I can't tell you any more.

But what should I do?
Go to Dong Li's Chinese Emporium. He feeds all the stray cats in the neighborhood. He can help you with the investigation.

Thank you. I'll head there now!

Good luck, Laura! Come back if you learn anything.
Chapter 3
The Chinese Emporium

Good day! Are you Dong Li?

Yes, I am Dong Li and this is my humble store.
Jessica, the fortuneteller, told me that you feed stray cats.

Girl! You are very beautiful, but Dong Li has his own problem.

Instead of the beautiful Chinese lanterns I ordered, they sent me a crate of fruit. And now there's so much fruit all over my store!
What am I to do? I cannot eat so much!

What's your view on the disappearing cats?

Girl! When the store is a mess, Dong Li is not in a talkative mood.
Let me help you, Mr. Li.

I've no money to pay you, however. How would you help me exactly?

I can collect the fruit in three minutes, and then you can sell them. Let me try.
Young lady, if you want to help, all the better.
Appendix 6– Experimental Group Full Dialogue of Obligatory Game Number 4

Game 4 (OBLIGATORY)

Mysteryville: Detective Story
Hi, Catherine!

This early? You must still be jetlagged after your long flight from Europe.

Copied to clipboard
Yeah, I feel tired. And that evening news made it worse.

Yeah, tell me about it. I can’t believe how long it’s taking Bill to find out who kidnapped that girl.

Bill?
You know Grandma, I'm sure a great investigative reporter like you would solve this case in no time.

I'm too old for this now - about half a century too old. I'll be 75 next week. You must be tired. Now off to bed.

Good night, Grandma!
Is this a dream? Cool! I've never felt like this before. It feels so weird.


Who are you? What's going on here?
Where am I? It feels really weird to be in a dream. This must have something to do with that girl I just saw.

She didn’t say anything. She just stared at me. I’ve got to find something to help me understand who she is.

A piano! The girl must be a music lover. I think this strange-looking instrument might help me figure out who she is.
Lisa Fremont?! The girl who was kidnapped?! How is this even possible?

At least I know she's alive and well... just very scared. I've got to tell Grandma!

Grandma! Grandma!
Morning, Grandma! Listen to this: I saw Lisa Fremont in a dream last night!

Lisa Fremont? The poor girl who was kidnapped?

That’s right. They showed her picture on the news last night. I recognized her! She’s locked up in some dark room. And she’s scared. Grandma, we have to rescue her! We have to find her!
I'm afraid I don't know how to help her. I'm too old to launch a full-scale investigation. I wish I was your age.

But Grandma, you're an ace investigative reporter. You know lots of people! I'm sure we will find her if we work together!

Copied to clipboard

You could tell me what to do and I could carry on the investigation with your help.
Let me think about it.

Now where did I put my business card organizer?

I also need to find my photo archive before my birthday, so my friends and I can remember all the great times we've had together.
Grandma, let me help you find your business card organizer and photo archive! Where can they be?

They've got to be somewhere here in this room.

OK. When I find them, can we start our investigation?
Grandma, is this the business card organizer you were looking for?

Yes, in the meantime, I’ll think about where I would start if I was doing this investigation myself.

Copied to clipboard

That’s it. How did you find it so quickly? Well done, Catherine!
I'll keep looking for your photos and album.

It shouldn't take you very long. You're such a smart girl!
I found all the photos. Now I just have to find the album so I'll have a place to organize them.

You found all my photos and organized them! Good girl! You have no idea how long this would have taken me without you!

This will be the high point of my birthday party. We'll sit down after coffee and look at the photos, reminiscing about our youth.
Grandma, what about our investigation?

Investigation? Well, the first thing I would do would be to go to Lisa's school and talk to her teachers.

Perhaps they noticed something unusual before her disappearance. School's out in 10 minutes, so the noisy school kids won't get in your way.

Copied to clipboard
Thanks, Grandma! I'll head over there right now!

Yes, you must be tam thinking. We're trying to find a way to help you with your test assignment.

But your voice sounded different on the phone. And I think we agreed to meet tomorrow.
My name is Catherine and I’m not Tim Hoskin’s sister.

Nice to meet you, Catherine. You can call me John.

OK, John. I’m conducting an independent press investigation about Lisa Fremont, the girl who went missing, and -
Excuse me for interrupting, Catherine, but do you know what time it is?

Quarter past four.

Nothing. It's just that I have an important meeting at 5:30 and I can't be late. I have some reports that I need to grade before the meeting. And my clock needs to be fixed.
I'm just too busy to talk with you today. How about tomorrow?

No, wait I'm seeing Ms. Hoskin tomorrow. How about sometime later in the week?

Later in the week? Listen, John, what if I help you now and while I'm helping you, we'll talk?
Great idea! But first I need to find my glasses. The kids hid them around here somewhere.

Are these your glasses?

Yes! Thanks a lot!
So what do you want to know about Lisa?

Did you notice anything unusual the day she disappeared?

Unusual? Hmm. Let me think. What time is it?
I really appreciate your help! It was embarrassing asking everyone what time it was. Now I should have enough time to grade all the reports and we'll still have time to talk.
Except a few of the reports are missing. I must have misplaced them.

Great, that looks like all of them! Now I just need to grade them. By the way, these reports are about Aesop's Fables. Are you familiar with them?

Yes. Here's a quote: "No evil, whether it be small or large, ought to be tolerated."
That's right. You know, something strange happened in my class the other day.

One of my students, Tim Hoskin - the boy I mentioned earlier - he knows a lot about literature, but he likes to fool around.

This time he mixed up some lines from one of Aesop’s Fables in his paper to illustrate his idea of Aesop’s writing style.
Sounds interesting. May I take a look?

Go ahead. It would help me a lot if you could correct the sequence in his paper.
Appendix 7– Experimental Group Home Work Score Sheets

Vocabulary Class (2013 – 2014)
Score Sheet
(Experimental Group/ DGBLL)

Name:...........................................................................................................................................

Group NO#:....................................................................................................................................

Class NO#:.....................................................................................................................................

Details for score sheets:

1) Write your name, group number and your classroom number.
2) Homework Score Sheet:
   • The score sheet has been provided for you.
   • You have FOUR OBLIGATORY and FOUR OPTIONAL games.
   • The homework score sheet is for only the obligatory and optional games.
   • You need to fill in the boxes in your homework score sheet.
   • These boxes are for homework assignments only.
   • The homework sheet can only be filled with the details needed.
   • Only fill in the homework sheets after been asked by the teacher.
   • The homework sheet will be collected from you after each week or on later provided dates.
   • Marks will be lost for every late or no submission of the homework on the day of collection.

3) Personal Score Sheet:
   • This score sheet is for research purposes only and is NOT obligatory.
   • Fill in the boxes in the sheet provided for you.
   • The score sheet will be collected on a provided date.
   • There are no restrictions on the type of games you wish to play.
   • Personal opinions are welcomed in the personal sheet.
• Please fill in the boxes according to the games you’re currently playing. Not the games you have previously played.

Simple explanation of the words provided in the boxes:

- **Name of game**: the title of the game you are playing. For example, Call of Duty.
- **Day**: the day you played the game. For example, Monday.
- **Score**: the points you have received. For example, 3420 points.
- **Level / Chapter**: the highest position you have reached. For example, Level 3.
- **Misses**: a number of incorrect choices. For example, 13 misses.
- **Duration Played**: The time you have started playing till the time you have stopped. For example, 30 minutes or 00:30 / 1 hour or 1:00.
- **Grade**: The mark you have earned. For example, 1 out of 10 or 1 / 10.
- **Device Used**: the electronic machine you have used. For example, Iphone, X Box, PS4 or BlackBerry.
- **Personal Thoughts**: your own opinion. For example, I think this game is boring.
- **Time Played**: When did you play this game? For example, Morning, Afternoon, Midnight or 1:30 a.m., 5:50 p.m.

Note:
- Not all of the boxes can be filled. Because different games have different features.
- The teacher is the only person authorized to fill in the **GRADE** box.
- Try to fill in as much as you can in the **HOMEWORK** score sheet.

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Appendix 8 – Vocabulary Pre-Test for Both Experimental and Control Group

Vocabulary Test

➢ There are 30 questions in this test.
➢ Look at the WORD and the EXAMPLE of the word in use.
➢ Choose the meaning that most closely matches the CAPITALIZED word in the example sentence.
➢ All questions must be ANSWERED.
➢ You have ONLY have 60 minutes to answer all the questions.
➢ There is only 1 correct answer.

1) Write

Please WRITE it here.

☐ Make something better.
☐ Move to a new place.
☐ Make words on paper.
☐ Cut into pieces.

2) Strong

She is very STRONG.

☐ Is kind to other people.
☐ Is very happy.
☐ Eats too much food.
☐ Can carry heavy things.

3) Past

It happened in the PAST.

☐ Time of fighting.
☐ Time before now.
☐ Time of the year when it is hot.
☐ Time when it is dark.
4) Ask

Can I ASK you something?

☐ To guard against attacks.
☐ To be part of a family.
☐ Part of the body.
☐ To question.

5) Any

I can't find ANY.

☐ To cure.
☐ One or more.
☐ Falling down.
☐ A group of people.

6) Age

His AGE is 20 years.

☐ To work.
☐ How old a person is.
☐ To make less.
☐ A picture.

7) Away

He went AWAY.

☐ Not near.
☐ Not Extreme.
☐ A male with the same father.
☐ Lasting only a short time.

8) Always

She is ALWAYS around.

☐ To agree with.
☐ Amount.
☐ Every time.
☐ A family member.
9) All
I cannot eat it ALL.
☐ A prison.
☐ To cut.
☐ Something very big.
☐ Everything and everyone.

10) Airplane
I came to Riyadh by AIRPLANE.
☐ A vehicle that flies.
☐ Flying alone
☐ An army.
☐ Something that is very big.

11) Baby
She cries like a BABY.
☐ To move.
☐ The bottom part of the body.
☐ To agree.
☐ A very young child

12) University
I am a UNIVERSITY student.
☐ To bring from another country.
☐ Feeling fear.
☐ Responsibility.
☐ A place for education.
13) Gift
I have just received a GIFT from my friends.
☐ Something given for free.
☐ To make large.
☐ To come with something
☐ Limited time

14) Heart
I love you with all my HEART.
☐ Part of a human body.
☐ Higher than others.
☐ Words put on paper or any visible material.
☐ Part of a plant.

15) Box
Please leave it in the BOX.
☐ Dead body.
☐ Something to put things into.
☐ to require.
☐ a person travelling by plane.

16) Bread
I can't eat that BREAD.
☐ To show and express pain.
☐ To recognize someone.
☐ To happen from a cause.
☐ A food made from grain.

17) Ball
Pass the BALL.
☐ A part of human body.
☐ Express feelings.
☐ Something round.
☐ A tool to do something.
18) Book

I would love to buy this BOOK.

☐ Showing the direction of an action.
☐ To show the way.
☐ Time after how.
☐ A written work made for reading.

19) Camera

Take a photo of me with your new CAMERA.

☐ A device for taking pictures.
☐ Something very tall.
☐ To bring together a male and female.
☐ To take air into the body then letting it out again.

20) Clothes

You need to buy some new CLOTHES.

☐ A part of a human body.
☐ What people wear.
☐ From another place or nation.
☐ A machine that has four wheels.

21) School

I used to be in SCHOOL.

☐ A place to keep money.
☐ A Sea animal.
☐ A place for learning.
☐ A house.

22) Where

Where did he go?

☐ In what way.
☐ For what reason.
☐ At what time.
☐ To what place.
23) Many

I have MANY coins.
☐ Enough.
☐ A large number.
☐ Few.
☐ None.

24) Mug

This MUG needs a wash.
☐ A very old vehicle.
☐ A tall cup without a saucer.
☐ A piece of clothing worn next to the skin.
☐ A large gadget.

25) Fish

I do not like the taste of fried FISH.
☐ Type of food.
☐ A sea animal.
☐ Showing fear.
☐ Noisy.

26) Girl

That GIRL scares me.
☐ A female human being.
☐ Part of a human body.
☐ Expressing fear.
☐ Part of a family member.

27) Grandmother
My GRANDMOTHER is very old.

- New born child.
- The mother of one's father or mother.
- A female child of one's parents.
- A male child of one's parents.

28) Coffee

I love the smell of COFFEE in the morning.

- A product made of beans.
- A large cup.
- Part of a family.
- An animal that flies.

29) Email

I just received an EMAIL from my teacher.

- An electronic message.
- A paper message.
- An electronic device.
- Something made for reading.

30) Game

I love this GAME.

- An action.
- A type of playing that has certain rules.
- A type of measurement.
- A kind of celebration.
Appendix 9 – Vocabulary Post-Test for Both Experimental and Control Group

Vocabulary Tests 2

➢ There are 30 questions in this test.
➢ Look at the WORD and the EXAMPLE of the word in use.
➢ Choose the meaning that most closely matches the CAPITALIZED word in the example sentence.
➢ All questions must be ANSWERED.
➢ You have ONLY 60 minutes to answer all the questions.
➢ There is only 1 correct answer.

1) LOVE
   I LOVE you.
   □ A living animal.
   □ A part of a family.
   □ An expression of good feelings.
   □ An object to write on.

2) Letter
   I want to send her a love LETTER.
   □ Type of written communication.
   □ An electronic device.
   □ Type of food.
   □ Directions.

3) Bottle
   I can't open the BOTTLE for fresh air.
   □ Type of food.
   □ A container that holds liquids.
   □ To make less.
   □ Not near.

4) Word
   I can't spell this WORD correctly.
   □ A large number
   □ Combined letters used for communication.
   □ To recognize something.
   □ At or near the start.
5) Apple
An APPLE a day keeps the doctor away.

☐ A place.
☐ A sea animal.
☐ A type of food.
☐ An action.

6) Mobile
I cannot leave my home without my MOBILE.

☐ A kind of celebration.
☐ An electronic device.
☐ An action.
☐ A place.

7) Beans.
I hate the taste of BEANS.

☐ To show and express fear.
☐ Type of food.
☐ To recognize someone or something.
☐ An animal.

8) Scarf
I like to put my SCARF on my neck

☐ Express of feelings
☐ Type of food.
☐ Something people wear.
☐ On top of.

9) Car
My CAR is red.

☐ Under something.
☐ Express.
☐ A color.
☐ A machine with four wheels.

10) Chocolate
I always eat CHOCOLATE.

☐ A fruit.
☐ A Vegetable.
☐ Something usually sweet.
Something strong.

11) Eye
   I cannot see with my left EYE.

□ An animal.
□ Part of a plant.
□ Part of a human body.
□ Higher than others.

12) Gloves
   I only use my GLOVES in winter.

□ From another place.
□ A season.
□ Something people wear.
□ Part of the human body.

13) Knife.
   My sister cut her finger with a sharp KNIFE.

□ An object usually used in the kitchen.
□ Something very tall.
□ An object usually used in the car.
□ Something heavy.

14) When
   When did you go home?

□ In what way.
□ At what time.
□ For what reason.
□ To what place.

15) Pen
   Teachers usually use red PEN’s to check students’ papers.

□ Something used for reading.
16) Umbrella
I only take my UMBERELLA when it’s cloudy outside.

17) Strawberry
I like to dip my STRAWBERRY in chocolate.

18) Picture
I cannot stopp looking at my baby PICTURE.

19) Boy
My son is a big BOY now.
20) Alone
   I am ALONE at home.

   □ Only one.
   □ A group of people.
   □ A family member.
   □ From another place.

21) Angry
   I am very ANGRY at my teacher

   □ Expression of fear.
   □ Expression of hate.
   □ Expression of happiness.
   □ A place for education.

22) Again
   I lost my book. I have to buy it AGAIN.

   □ More than once.
   □ All the time.
   □ Not enough.
   □ Expensive

23) Glasses
   I use my GLASSES for reading.

   □ Something big.
   □ Something people wear.
   □ Something tall.
   □ Time after now.

24) Cup
   This CUP is broken.
Something very old.
A large gadget.
A piece of clothing.
Something usually used for drinking.

25) Mouse
I use cheese to catch the MOUSE.

Part of the body.
Something that fly.
An animal.
Enough.

26) Teacher
I like my English teacher.

Someone who teaches.
Something old.
Something big.
Few.

27) Why
Why are you still sleeping?

At what time.
For what reason.
In what way.
To what place.

28) Shoes
Put on your SHOES. There is broken glass everywhere.

Make something better.
Move to a new place.
Something people wear.
Part of the human body.

29) Cinema
I go to the CINEMA with my friends.

A place for education.
A place to cook.
In another place.
A place to watch movies.

30) Toys.
I used to break my TOYS when I was a kid.

Something used for writing.
Something used for reading.
Something used for playing.
Something used fixing.
Appendix 10A- Original Questionnaire in Arabic

لًلعب م ب وليسية الأذع الالكترونية

1- كيف هي اللغة تفضيلك لغة الإجابة؟
   a) اللغة العربية
   b) اللغة الإنجليزية
   c) الأخرى (يرجى التوضيح: 

2- كيف تم تعلم اللغة العربية؟
   a) اللغة العربية
   b) اللغة الإنجليزية
   c) الأخرى (يرجى التوضيح:

3- في طبيعة تعلم اللغة العربية، ما هو المكان والوقت الذي تفضل له هذه الاستمارة قليلًا؟

* Required

1) العمر *
   o 18-19
   o 20-21
   o 22-23
   o 24+

2) الجنس *
   o ذكر
   o أنثى

3) الدراسة الدراسية هذه *
   o سنوات 7-8
   o سنوات 9-10
   o سنوات 11-12
   o سنوات 13-14
   o سنوات 15及以上
   o أخرى:

4) هل تجعل ممرضة لغة الإنجليزية أو يفهم أي شخص؟
   o نعم
   o لا

5) هل تمارس لعبة الأذع والجواب لجودة بدني أو عقلي؟
   o نعم
   o لا

تم اختيار 11 من الخيارات من قبل
   o لوحدي
   o مع فريقك وعائلتك

304
هل تستخدم أي من هذه الأدوية لللقاح؟ (6)

- نعم
- لا

هيدروليست بمهمة لعلاج الأدوية لللقاح للعلاج من سبب الإسهال والاختناق، الأدوية لللقاح عند (7)

- 1 - 0
- 2 - 4
- 5 - 8
- 9 - 10

- لا

* خلال كيوبست بمهمة لعلاج الأدوية لللقاح، الأدوية لللقاح عند (8)

- لا

* خلال كيوبست بمهمة لعلاج الأدوية لللقاح، الأدوية لللقاح عند (9)

- نعم

* خلال كيوبست بمهمة لعلاج الأدوية لللقاح، الأدوية لللقاح عند (10)

- نعم
- لا

فاضل تستخدم الأدوية لللقاح عند (11)
لا يمكنني قراءة النص العربي الموجه إلى الأطباء. يرجى إعادة كتابة النص في لغة إنجليزية أو إスペانيولية للمساعدة.
الملف اللدني نبأ أيفون (اؾ) دوزووية نبأ اهبابد

أفسشبة
أوافق
لأوافق
لا أفسشبة

فاضل أن تقل اللى فنطط غي أن تق بربيتا ستخدم الأجذة للهكستن م وقوعها شتزي (17)

أفسشبة
أوافق
لأوافق
لا أفسشبة

ابستخدام الأعاب للهكستن م وقوعها تزقيق لغة الألبزي (18)

أفسشبة
أوافق
لأوافق
لا أفسشبة

ابستخدام الأعاب للهكستن م وقوعها تزقيق لغة الألبزي (19)

أفسشبة
أوافق
لأوافق
لا أفسشبة

لم كل لوديجز لا جهوت لاستخدام الأعاب للهكستن م وليغيكيكوس في تزبيقش ترركف للس (20)

أفسشبة
أوافق
لأوافق
لا أفسشبة

عجي بان تزديل غي لعابلزكيتس م وقوقو تكذبب لغة دزوزا لزهبية (21)

أفسشبة
أوافق
لأوافق
لا أفسشبة

تدعوت غيراتان غريزي جهوي بعليت ستخدمي الملاع للهكستن م وقوقو (22)

أفسشبة
أوافق
لأوافق
لا أفسشبة
SERVICING NEEDS OF THE DEPENDANT (23)

- أقسام الشردة
- أوقاف
- أفارقة
- لا أقسام الشردة

SERVICING THE LAZARUS DEPARTMENT TO DELIVER MATERIAL TO THE DEPARTMENT OF ALGERIANLangue (24) *

(MATERIAL: ELECTRICAL ENGINER: THE ELDERLY AND DEPENDENT PEOPLE AND THE HANDICAPPED)

- أقسام الشردة
- أوقاف
- أفارقة
- لا أقسام الشردة


- أقسام الشردة
- أوقاف
- أفارقة
- لا أقسام الشردة

CALL FOR THE DEPENDANT AND THE DEPENDENT PEOPLE AND THE HANDICAPPED TO DELIVER MATERIAL (26)

- للأجهزة، إلزابذا
- ضياء المخدر فقط
- طياء وتوظيف الرعاية المخدرات
- جميع الأدوية المخدرة
- جميع الأشجار وتصور انتظار شرير ما
- في دورات الدراسة
- جميع أشكال من النوم
- Other:

WHAT IS YOUR OFFICE OR DEPARTMENT ALLOWED TO USE THE DRUGS (27)  *

* The Arabic text is being translated to English. (1)

(Explanation of the Arabic text: The registration number: 308)
لاقترح في دليل الإجابة، إذا كان ذكر، أو تقديم بعض الأمثلة للإجابة على الأسئلة.

(الإجابة في الجواب)

28) لعاب، لأن ذلك بتحديد الأمثلة للإجابة على الأسئلة، أو لوصف النشاطات أو.draw.

29) لترك incidents، وللإجابة على الأسئلة، أو لوصف النشاطات أو.draw.

30) ما هي دليل المثل الشعري؟ (draw)
Appendix 10B - Translated Questioner Arabic to English

➢ You need to answer all the questions.
➢ Write freely and truthfully in Classical Arabic or in Slang.
➢ You will be completely anonymous throughout this whole survey.

1) Age

☐ 18 – 19
☐ 20 – 21
☐ 22 – 23
☐ 24 +

2) Gender

☐ Male
☐ Female

3) I have been studying English for

☐ 7 – 8 Years
☐ 9 – 10 Years
☐ 11 – 12 Years
☐ 13 – 14 Years
☐ More than 15 years
☐ Other ( )

4) Do you play games as a personal pastime? (Physical or non-physical games)

☐ Yes
☐ No

5) Do you play physical or non physical games (you can chooses more than 1 choice)

☐ Alone
☐ With friends or colleagues
☐ With people you do not know
☐ I never play at all
6) Do you use any of these digital devices (computers, smartphones or tablets)?
   □ Yes
   □ No

7) I started using digital technologies such as, computers, smartphones and tablets since:
   □ 0 – 1 year
   □ 2 – 4 years
   □ 5 – 7 years
   □ 8 – 10 Years
   □ More than 10 years

8) On an average day I use digital technologies such as, computers, smartphones and tablets for:
   □ Never
   □ Between 30 minutes and 1 hour
   □ 1 – 2 hours
   □ 2 – 3 hours
   □ 3 – 4 hours
   □ More than 4 hours

9) On an average day I use digital technologies such as, computers, smartphones and tablets for: (You can choose more than 1 choice)
   □ Reading and writing
   □ Web browsing
   □ Communication
   □ Studying
   □ Playing
   □ Electronic dictionary
   □ Other (---------------------------------------------------------------)

10) Do you use digital technologies such as, computers, smartphones and tablets for learning?
    □ Yes
    □ No
11) I prefer using these digital technologies as a learning tool: (You can choose more than 1 choice)
   □ Desktop
   □ Laptop
   □ Smartphones
   □ Tablets
   □ Other (………………………………………………………………………………)

12) Do you play digital games?
   □ Yes
   □ No

13) I prefer playing these digital games: (You can choose more than 1 choice)
   □ Adventure
   □ Crime and investigation
   □ Horror
   □ Role playing
   □ Sports
   □ Puzzle
   □ Cultural
   □ Other (………………………………………………………………………………)

14) Using digital technologies such as, computers, smartphones and tablets makes the classroom atmosphere more interesting.
   □ Strongly agree
   □ Agree
   □ Disagree
   □ Strongly disagree

15) There is not enough time to use digital technologies such as, computers, smartphones and tablets in the classroom.
   □ Strongly agree
   □ Agree
   □ Disagree
16) Using digital technologies such as, computers, smartphones and tablets is not an effective tool for learning English.
   □ Strongly agree
   □ Agree
   □ Disagree
   □ Strongly disagree

17) I prefer learning from the teacher directly rather than combining digital technologies and the teacher.
   □ Strongly agree
   □ Agree
   □ Disagree
   □ Strongly disagree

18) Using digital games is an effective English learning tool.
   □ Strongly agree
   □ Agree
   □ Disagree
   □ Strongly disagree

19) Using digital games improves my English learning.
   □ Strongly agree
   □ Agree
   □ Disagree
   □ Strongly disagree

20) I have all the resources needed to use digital games as an effective learning tool.
   □ Strongly agree
   □ Agree
   □ Disagree
   □ Strongly disagree

21) We need digital games that fit our local culture.
   □ Strongly agree
22) I have learned new English vocabulary words after using digital games.
   - Strongly agree
   - Agree
   - Disagree
   - Strongly disagree

23) I will keep using digital games as a learning tool.
   - Strongly agree
   - Agree
   - Disagree
   - Strongly disagree

24) I use digital technologies such as, computers, smartphones and tablets for most of my English subjects. (Reading, writing, listening, speaking, vocabulary)
   - Strongly agree
   - Agree
   - Disagree
   - Strongly disagree

25) Using digital games makes the classroom more motivational.
   - Strongly agree
   - Agree
   - Disagree
   - Strongly disagree

26) I play digital games: (you can choose more than 1 choice)
   - Never
   - In the classroom
   - Between classroom brakes
   - When I get ready to sleep
   - When I wait for someone or something
   - In the bathroom
   - When I first wake up from bed
27) What do you think are the potential problems when using digital games as an English educational tool in Saudi Arabia? (Write freely and truthfully in Classical Arabic or in Slang).

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‫)‪Appendix 11A – Transcribed Experimental Group Interview (Arabic‬‬
‫ﻱﻕﺓ ‪1 - 0‬‬
‫ﺍﻝﺩﻕ‬
‫ﻱﻝﺓﺕﻉﻝﻱﻡﻱﺓﻝﻝﻍﺓ‬
‫ﻝﺭﻕﻡﻱﺓ ﻙﻭﺱ‬
‫ﻙﺕﺭﻭﻥﻱﺓ ﻭ ﺍ‬
‫ﻑﻱ ﺇﺱﺕﺥﺩﺍﻡ األلﻉﺍﺏ اإلل‬
‫ﻱ ﺍﻝﻡﺵﺍﻙﻝﺍﻝﻡﺡﺕﻡﻝﺓ‬
‫ﺕﻕﺍﺩﻙ ﻡﺍ ﻩ‬
‫ﻝﺏﺍﺡﺙ‪:‬ﺍﻝﺱﺅﺍﻝ األﻭﻝ ﻩﻭﻱﺍﺵﺏﺍ ﺏﺏﺇﻉ‬
‫ﺍ‬
‫ﻝﺱﻉﻭﺩﻱﺓ؟‬
‫ﻝﻙﺓ ﺍﻝﻉﺭﺏﻱﺓ ﺍ‬
‫ﺍإلنجلﻱﺯﻱﺓﻑﻱﺍﻝ ﻡﻡ‬
‫ﻑﻱ ﻩ ﻡﺭﺵﺩﺏﺝﺍﻥﺏﻩ ﺍﺫﺍ ﻙﺍﻥﻑﻱ ﻡﺭﺡﻝﺓ‬
‫ﻱﻕﻯﺏﺱ ﺍﺫﺍ ﻡﺍ‬
‫ﻱﻕﻯ ﻡﻥﻥﺍﺡﻱﺓ ﺍﻝﻡﻭﺱ‬
‫ﺍﻝﻁﺍﻝﺏ‪ :‬ﻡﻡﻙﻥﺕﺃﺙﺭﺱﻝﺏﺍ ﺇﺫﺍ ﻙﺍﻥﺍﻝﻉﻡﺭﺹﻍﻱﺭﺍ ﺍﺫﺍﻑﻱ ﻩﺍ ﻡﻭﺱ‬
‫ﺕﻉﻭﺩ ﺍﻝﺵﺥﺹ ﻩﺫﺍﻉﻝﻯﺍﻝﻡﻭﺱﻱﻕﻯﺕﺹﻱﺭ ﺍﻝﻡﻭﺱﻱﻕﻯ ﻉﻥﺩﻩﺵﻱ ﻉﺍﺩﻱ ﻩﺫﺍ‬
‫االﺏﺕﺩﺍﺉﻱ ﺍﻭ ﺍﻝﻡﺕ ﻭﺱﻁ ﺍﺫﺍ ﻙﺍﻥ االﻝﻉﺍﺏ ﻩﺫﻱﻑﻱ ﻩﺍ ﻡﻭﺱﻱﻕﻯ ﺭﺍﺡﻱ‬
‫ﺏﻱ ‪.‬‬
‫ﺍﻝﻝﻱﺍﺵﻭﻑ ﺍﺫﺍﻑﻱﻩﺕﺍﺙﻱﺭﺱﻝ‬
‫‪2 -0,55‬‬
‫ﻝﺵﻱء ﻡﻡﻙﻥﻱﺍﺙﺭﺱﻝﺏﺍ ﻉﻝﻯ‬
‫ﺍﻝﻁﺍﻝﺏ ‪:‬ﻑﻱﻩﺏﻉﺽﺍﻝﺏﺭﺍﻡﺝﺍﻝﺕﻉﻝﻱﻡﻱﻩ ﻭ االﻝﻉﺍﺏﻑﻱ ﻩﺍ ﺹﻭﺭﻥﺱﺍﺉﻱﻩ ﻉﺍﺭﻱﻩ ﻭ ﺍﺡﻱﺍﻥﺍﻱﻙﻭﻥﻑﻱ ﻩﺍ ﻙﺫﺍﻑ ﻩﺫﺍ ﺍ‬
‫ﻱﻙﻭﻥﺕﻉﻝﻱﻡﻱﻱﻙﻭﻥ ﺍﺙﺍﺭﺓ ﺵﻩﻭﻩ ﺍﻭ ﻍﺭﻱﺯﻩ ‪.‬‬
‫ﻥﻑﺱﻩﻑﺏﺩﻝ ﻡﺍ‬
‫ﺍﻝﺵﺥﺹ‬
‫ﻱﻉ ﺍﻝﻡﺵﺍﺭﻙﻩﻱﺍﺵﺏﺍﺏ ‪.‬‬
‫ﻝﺏﺍﺡﺙ ‪ :‬ﻍﻱﺭﻩﺍﻝﺝﻡ‬
‫ﺍ‬
‫ﺍﻝﻁﺍﻝﺏ ‪ :‬ﺍﻥﺍ ﻡﺍﺍﺵﻭﻑﻑﻱﻩﺱﻝﺏﻱﺍﺕ ‪.‬‬
‫ﻱ ﺕﺍﺥﺫ ﺡﺭﻱﺕﻙﺕﺕﻉﻝﻡﺏﺱﺭﻉﻩ ‪.‬‬
‫ﺕﻕﻝﻱﺩﺓ‬
‫ﻥﻑﺱ ﺍﻝﻭﻕﺕ ﺍﻡﺕﺡﺱ ﺍﻥﻙﺝﺍﻝﺱﺕﺩﺭﺱ ﺩﺭﺍﺱﻩ‬
‫ﺍﻝﻁﺍﻝﺏ ‪:‬ﻑﻱ ﻩﺍﺍﻱﺝﺍﺏﻱﺍﺕ ﺍﻥ ﻩﺍ ﺩﺭﺍﺱﻩ ﻭﻝﻉﺏﺏ‬
‫ﻝﺏﺍﺡﺙ ‪:‬ﻱﻉﻥﻱﻉﻝﻯ ﺭﺍﺡﺕﻙﻱﻉﻥﻱﺕﺱﺕﻡﺕﻉ ‪.‬‬
‫ﺍ‬
‫ﺍﻝﻁﺍﻝﺏ ‪:‬ﺕﻍﻱﻱﺭ ﺭﻭﺕﻱﻥﺍﻝﺩﺭﺍﺱﻩ ﻭﺍﻥﺍﻝﻭﻕﺕﻱﻡﺭﺏﺱﺭﻉﻩ ‪.‬‬
‫‪3-2‬‬
‫ﺕﺫﻙﺭ ﻩﺍ ‪.‬‬
‫ﻱﺩﻱﻭﺏﺍﻝﺫﺍﺕﺍﻝﻝﻱﺕﺹﻱﺭ ﺩﺍﺥﻝﺍﻝﻝﻉﺏﻩ ﺍ‬
‫ﺍﻝﻑ‬
‫ﺕﺫﻙﺭﺍﻝﺹﻭﺭﻩ ﺍﻭﺍﻝﻡﻕﻁﻉ‬
‫ﺍﻝﻁﺍﻝﺏ ‪ :‬ﺍﻥﺍﻝﻡﻉﻝﻭﻡﻩﺕﻙﻭﻥ ﺱﻩﻝﻩﺍﺙﻥﺍءﺍﻝﻝﻉﺏﻩﺕ‬
‫ﺵﻑﻥﺍﻩﺍ ﻙﺹﻭﺭ ﻭﻙﻡﺹﻁﻝﺡﺍﺕ‬
‫ﺕﻕﺭﻱﺏﺍ ﺍﻙﺙﺭ ﺍﻝﻡﺹﻁﻝﺡﺍﺕﺍﻝﻝﻱﻑﻱ ﻩﺍﻝﻝﺡﻱﻥ ﺭﺍﺱﺥﻩﺏﻡﺥﻱ الﻥﻩ‬
‫ﺍﻝﻁﺍﻝﺏ ‪:‬ﺍﻝﻝﻱﻝﻉﺏﻥﺍ ﻩﺍﻑﻱ ﻩﺍ ﻡﺹﻁﻝﺡﺍﺕ‬
‫ﻭﻝﻝﺡﻱﻥﺭﺍﺱﺥﻩﺏﻡﺥ ﺍﻝﻭﺍﺡﺩ ‪.‬‬
‫ﺕﻕﺏبال مادةﺍﻝﺭﻱﺩﻥﺝ ﺍﻍﻝﺏ ﻩﻡ ﻍﻱﺍﺏ ﻭ ﺍالﻱﺱﺡﺏﻭﻥﻉﻝﻱ ﻩﺍ ﻡﺍﺕﻉﺝﺏ ﻩﻡ ﺍﻝﻡﺍﺩﻩﺏﺱﺡﻕﺕﻙ ﺍﻍﻝﺏ ﺍﻝﺡﺽﻭﺭﻱﻙﻭﻥ‬
‫ﺍﻝﻁﻝﺏ ‪:‬ﺕﺹﻱﺭﺍﻝﻡﺍﺩﻩ ﺍﻙﺙﺭ‬
‫ﻑﻱ ﻩﺍ ‪.‬‬
‫ﻝﺏﺍﺡﺙ ‪ :‬ﺍﻝﺡﺽﻭﺭ ﺍﻉﻝﻯ ﻡﻥ ﺍﻝﻡﻭﺍﺩﺍﻝﺙﺍﻥﻱﻩ ﻭﺍﻝﺱﺏﺏ ؟‬
‫ﺍ‬
‫‪4 - 2,50‬‬
‫ﻥﻑﺱ‬
‫ﻱﻕﺓ ﺝﺩﻱﺩﻩ ﻭﺏ‬
‫ﺕﻕﻭﻝ ﻁﺭ‬
‫ﻱﻕﺕﻙ ﻩﺫﻱ ﺯﻱ ﻡﺍ‬
‫ﻥﺱﺕﺥﺩﻡﻩﺏﺵﻙﻝﻱﻭﻡﻱﻑﻁﺭ‬
‫ﺍﻝﻁﺍﻝﺏ ‪:‬ﺵﺭﺡﻙ ﻭ ﻡﺍﺩﺕﻙﻙﻝ ﻩﺍﺵﻱﻱﺵﺩﻥﺍ ﺡﻥﺍ الﻥ ﺍﻝﺝﻭﺍﻝ‬
‫ﻑﺽﻝ ﻡﺡﺍﺽﺭﻩ ﺍﺡﺽﺭ ﻩﺍ ﻭﺍﺱﺕﻡﺕﻉﻑﻱ ﻩﺍ ‪.‬‬
‫ﻥﻑﺱﺍﻝﻭﻕﺕ ﺍ‬
‫ﺕﻉﻩ ﻭﺏ‬
‫ﺍﻝﻭﻕﺕ ﻡﻡ‬
‫‪4 - 3,7‬‬
‫ﻱﻕ ﻩﺍﻑﻉال ‪.‬‬
‫ﻥﻕﻝﻩ ﻥﻭﻉﻱﻩﻑﻱﺍﻝﺕﻉﻝﻱﻡﺍﻝﺱﻉﻭﺩﻱﻝﻭﺕﻡﺕﻁﺏ‬
‫ﻱﻕﺓﺍﻝﻝﻱﺍﺱﺕﺥﺩﻡﺕ ﻩﺍ ﻩﺍﻝﺕﺭﻡ ﻩﺫﺍﺕﻉﺕﺏﺭ‬
‫ﺍﻝﻁﺍﻝﺏ ‪ :‬ﺍﺵﻭﻑ ﺍﻥﻩﺍﻝﻁﺭ‬
‫ﻝﺏﺍﺡﺙ ‪:‬ﻥﻕﻝﻩ ﻥﻭﻉﻱﻩ ﻙﻱﻑ ؟‬
‫ﺍ‬
‫ﺏﺕﺡﺹﻝﻉﻝﻱﻩﺍ ﻡﻥ ﺥالﻝﺍﻝﺕﻉﻝﻱﻡ‬
‫ﻥﻑﺱ ﻩﺍﺍﻝﻝﻱ‬
‫ﻝﻑﺍﺉﺩﻩ‬
‫ﻥﻑﺱﺍﻝﻭﻕﺕ ﻡﺍ ﺭﺍﺡﺕﺡﺹﻝﻉﻝﻯ ﺍ‬
‫ﺍﻝﻁﺍﻝﺏ ‪ :‬الﻥﻙﻝﻥﺍ ﻡﻝﻱﻥﺍ ﻡﻥﺍﻝﺕﻉﻝﻱﻡ ﺍﻝﻥﻅﺭﻱ ﻡﻡﻝ ﻭﺏ‬
‫ﻙﺕﺭﻭﻥﻱ ‪.‬‬
‫االل‬
‫ﻝﻙﺕﺍﺏ ‪.‬‬
‫ﻝﺫﻙﻱﻩ ﺍﻙﺙﺭ ﻡﻥ ﺍ‬
‫ﺏﻝﻥﺍ ﻡﻥﺍﻝﺝﻭﺍالو ﺍالجهزه ﺍ‬
‫ﺕﻕ‬
‫ﺍﻝﻁﺍﻝﺏ ‪ :‬ﺍﻥﻩﻱﻙﻭﻥ‬

‫‪316‬‬


المître اسمه: زهير محمد عبد المقصود

للباحث: قم بالجواب على التساؤلات، وكتابة الإجابة بشكل واضح ودقيق.

الطالب: مفيد

5 - 4

 başvورات الدراسة.

الطالب: في أي وقت وأين قررت ذلك؟

الطالب: الاستخدام

الطالب: في أي وقت وأين قررت ذلك؟

الطالب: بطريقة الاستخدام.

الطالب: في أي وقت وأين قررت ذلك؟

الطالب: طريقة الاستخدام.

الطالب: في أي وقت وأين قررت ذلك؟

الطالب: طريقة الاستخدام.

الطالب: في أي وقت وأين قررت ذلك؟

الطالب: طريقة الاستخدام.

الطالب: في أي وقت وأين قررت ذلك؟

الطالب: طريقة الاستخدام.

الطالب: في أي وقت وأين قررت ذلك؟

الطالب: طريقة الاستخدام.

الطالب: في أي وقت وأين قررت ذلك؟

الطالب: طريقة الاستخدام.

الطالب: في أي وقت وأين قررت ذلك؟

الطالب: طريقة الاستخدام.

الطالب: في أي وقت وأين قررت ذلك؟

الطالب: طريقة الاستخدام.
الطالب: يسابق في النصر.
طالب: يلتقط في الفضاء، واجتماعه.
طالب: يمارس الرياضة.
طالب: يلعب على الطاولة.

لذا الشبل ببساطة صناع الألعاب في الطاولة لم يكن مطولًا في الطول. 6-8

الطالب: تشاييف.
طالب: مارى في الملعب.
طالب: يلعب على الرفق.

لذا مغالب عز الاعمال.
طالب: يلعب على الطاولة.
طالب: يتعرض لل∠ Teach؟ 7-8

الطالب: يمارس الألعاب البدنية ولا sharedPreferences مع الفرق في الدوريات.
طالب: يمارس الألعاب البدنية، والهرولة.
طالب: يمارس الألعاب البدنية.

لذا شكل من روتافياً للباطنة والهرولة.
طالب: يتعرض لل∠ Teach؟ 7-8
طالب: يمارس الألعاب البدنية التعاون مع المعلمين، والأطفال.
طالب: يمارس الألعاب البدنية، والهرولة.

الطالب: يمارس الألعاب البدنية
طالب: يمارس الألعاب البدنية، والهرولة
طالب: يمارس الألعاب البدنية، والهرولة

لذا شكل من روتافياً للباطنة والهرولة.
طالب: يمارس الألعاب البدنية
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طالب: يمارس الألعاب البدنية
طالب: يمارس الألعاب البدنية

لذا شكل من روتافياً للباطنة والهرولة.
طالب: يمارس الألعاب البدنية
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طالب: يمارس الألعاب البدنية
طالب: يمارس الألعاب البدنية
الطالب في متناول سوء الاستخدام تيلا لوا بة بة بة، بة بة بة تيلا تيلا تيلاو الاعتادات ذي ويجي داش حمى الفرق.

الاثر: هل ينصب على الملاحظات؟ هل تقدر في مركب.

الطالب: اجمي دافع ديرليبة ما.

9.55 - 11

الاثر: يعني مبيعك تهويو اذا الاذن لا تهوي خدام الاعاب الالكتروني في القيم وليوش؟

الطالب: اود.

الاثر: ليه؟

الطالب: لمعة الاستمتع جاغوراليوت.

الاثر: فصبع الفاحش، تيلا ليعادة، فصوري اليوت.

الطالب: فين تجهز رمح جماعي، رفعه تيلا تيلينوز، ينbia تيزي، ينbia ديروج، ينbia ديروج، ينbia ديروج

الاثر: فصبروت هويت؟

الطالب: تهوي و الاذا تهوي وليذا؟

الاثر: ارام: تهوي؟

الطالب: الاعاب الالكترونيه.

10.54 - 12

الاثر: محاول نترة جدا، ها، H
للباحث فيها احدها؟

الطالب: لم يلقي أي مراجعة لوضوع نفسه.

اللباحث: مجموعة الأسئلة بالفعل.

الطالب: إمس من_RCC؟

اللباحث: قصيدة سطى للحول على ليوم وليلًا.

الطالب: كيف سيكون راجب فاضل مايروي في نبأي، أي حاضرة لأجناة؟

اللباحث: على مدار دورة الفينتين، وأوقعه، فصول، فيبرانداً

الطالب: ما هو رفع الطبقات؟

اللباحث: بع مفتي في من وجد طلب؟

الطالب: في مجال من الأناشيد التمويه للجيش.

اللباحث: يمكنك إيصاله للقرآن الكريم.

الطالب: لما له؟

اللباحث: يعيش طويلاً.

الطالب: لا يوجد أي بوصلة على الجوانب الإضافية الأخرى.

اللباحث: 13,55

الطالب: الساعات؟

اللباحث: 15

الطالب: ما هو الموقع؟

اللباحث: ما هو الموقع؟

الطالب: إذا كانت تقع من بين الوزارات خاص.

اللباحث: في موضع مظلم...

الطالب: دفع إلى مفتي إذا أتى للبر، فما الذي يendir من دوام الأغاب.

اللباحث:كيف تحترم على مليشيات، وطالح وميتي؟ لندن واحتفل في رأس، ضمام للدشري.

اللباحث: قصرًا للبار مولع بشيوخون بالأتيئة ذي؟

320
الطابق: لا يُتهمون الذي يُشكل في التحسين النباتي والمثبطات إينشيرون.

لِبَاجِحِت: إذا لم تكن هذه الآفة، أي تحذر؟

15-16

الطالب: سبب إينشيرون، التغييرات في: 10% إلى 20%، أي تأثيلها.

لِبَاجِحِت: يُقدر هذا التغيير ببعض تدفقاته فيه.

الطابق: فيه.

لِبَاجِحِت: لا يوجد شكل من الهيكل، استخدم الألعاب الإلكترونية؟

الطابق فعلاً، لا يوجد شكل من الهيكل، ومع ذلك، لم يتم تعديله أو التغيير عليه، إنما إذا كان ذلك صحيحاً في ما راجح أن لا دخ.

الطالب: لا، راجح أنه المتكورة لالعاب المثيره، يمكن أن يكون تغيير 100%.

لِبَاجِحِت: لا يوجد سبب عن التغييرات الجاهزة والمثير للإثارة، أو لا يمكننا أي تغيير في الألعاب الإلكترونية؟

الطابق: لا، بإذن إذا تم، يمكن أن يكون جيد وضيق.

لِبَاجِحِت: أنت قلته مثفولي؟
Appendix 11B - Transcribed Experimental Group Interview (Translated to English)

Min 0 - 1
Res: okay guys. What do you think are the potential problems when using digital games as an English educational tool in Saudi Arabia?
St1: it could have a negative impact if it has music. Especially to youngsters without supervision. Because playing a lot of these games will make listening to music normal.

Min 0, 55 - 2
St2: some educational programs games contain and have naked female pictures and figures. This could have a negative impact on an individual because instead of learning it provokes sexual needs.
Res: any the other participants?
St3: I do not see any negative impacts.
St4: there are positives. You learn and have fun and at the same time you do not feel your learning in a traditional manner. You learn freely and in a fast pace.
Res: you mean at your own pace. You mean you enjoy and have fun.
St5: exchanges there learning group team in time passes faster.

Min 2 -3
St6: remembering and recalling the gained information is easy after and while the playing by remembering the images and videos within the game.
St7: There is clear evidence. Most of the vocabulary words in the games we played and saw them as images are well-established and rooted in my mind.

Min 2.33
St8: the subject course is more acceptable. Most of the students are absent and do not attend the reading lecture because they simply do not like. On the other hand, most of us attend your lectures.
Res: attendance are higher than other courses! Why?
St9: everything in this course keeps attracting us. The way you teach us is much better, very modern and fun because we use mobile phones daily.
St10: I do believe that your method of teaching is a big change and a massive leap in the Saudi educational system.
Res: Massive change! How?
St11: Because we got bored from traditional teaching. It is boring and we will not get as much benefit compared to digital learning.

Min 3.28 - 3.50
St 12: Our acceptance to acquire information when using mobile phones and digital devices is much higher than using books.

St13: This is not the age of books it is the age of technology.

Res: Do you mean using mobile phones, tablets, and Ipads are better?

Min 3.50 - 5

St14: You can use them at anytime.

St15: It is easy to use for learning. I just click on the program. On the other hand, if I want to learn using the book I have to go through page after page.

St16: it is easy to use. You also learn and revise at the same.

St17: what I mean by easy is that when playing a game and you find a difficult word you can use the same device to translate difficult word just by exiting the program.

St18: instead of learning using heavy books that could weigh up to 5kg to just bring a mobile phone or tablet which do not weigh even 1/4kg.

Res: you mean light?

St19: Yes, light.

Min 5 - 6

Res: We need to focus on the issues, if there are any, when using digital games.

St20: All the information will be lost when the mobile devices brake.

Res: You mean losing the recorded information is easy.

St21: We might lose to mobile device.

Res: I believe the same thing will happen when losing a book.

St22: You could by another book with all the original information still in it. But you could lose it with mobile devices.


St23: Expensive.

Res: Are mobile devices expensive?

St24: You could buy a book for 25 or 50 SAR.

St25: Everyone owns a mobile device.

Min 6 - 7

Res: I would like to know if there are issues when using digital games for learning.
St26: games that contain valance can affect youngsters.

Res: Do you mean it has a fast affect?

St27: My cousin had epilepsy after using the IPad for a long period of time.

St28: it contributes with lowering and weakening the eye sight.

St29: cultural and social issues.

St30: Mental illnesses.

St31: Isolation from the real world.

Res: let us focus on games. Are there any issues when applying them?

St32: I do not see any issues.

Min 7-8

St33: you mean the issues just came up after playing games? I will keep on using mobile phones for browsing amongst other things as well.

Res: You will always use it!

St34: If it does not carry any threat to our culture or religion.

Res: Threats? Can you give me some examples?

St35: Some games show and contain churches and crosses. This would be hard to use in teaching especially for kids.

St36: I am against what you said. I believe it is good to learn about other cultures.

Min 8 - 8.58

St37: It should be age restricted.

St38: The Ministry of Education should adapt and make games that are applicable to the Saudi culture since they already spend millions on books every year.

St39: It is the fear of other cultures overlapping ours.

St40: That is why we have chapters in our books that we do not take.

Min 8.58 - 9.55

St41: we should benefit from the experience of the UAE. They are using IPads in their teaching.

Res: Benefit from their experience? Let us focus on games.

St42: No issues.

Res: Are the benefits higher/overcomes than the negatives?

St43: I do believe there are no issues.
St44: There will not be any issues when used properly. Choosing the right game that will not offend our culture is important.

Res: You mean we could overcome them?

St45: the pros overcome the cons.

Min 9.55 - 10.54

Res: Give me a reason if you agree or do not agree in using digital games as part of our education and why?

St46: I agree

Res: Why?

St47: It is fun, enjoyable and time flies.

Res: Time flies!

St48: It is motivating, fun and time passes quickly. I have also mentioned previously that it is easy to use when revising the subject. We also can carry it anywhere.

Res: What was my question?

St49: If you agree or do not agree and why?

Res: agree to what?

St50: digital games.

Min 10.54 - 11.50

Res: we said it easy to use and revise, time passes quickly, exciting and motivating.

St51: easy to carry.

Res: I would like to focus on the games not the devices.

St52: They have the same subject and course but are much easier to acquire and accept.

St53: I agree. Playing games in the in the classroom made everyone equal no matter how smart they are. As a result the classroom became more competitive. but when using books, student who were below average fell bored.

Red: Do you mean it gives you a better learning atmosphere?

St54: Yes, and it fits every level.

St55: I agree. It is fun, easy and time passes quickly.

St56: I agree. I have gained and acquired more vocabulary words from the games.

Res: Do we have someone who does not agree?
St57: I agree. Because I understand the subject much easier.

Res: Understand the subject!

St58: It is easier than learning from the book.

Res: Do you mean it is easier to gain the information through games?

St59: I completely agree. Most of us do not attend courses [skip classes] that use books while the courses that use digital devices most do attend.

Res: what you are trying to say is that the attendance will be higher in courses that use games and enjoyable than other courses.

Min 12.57 - 13.55

St60: And this is evidence of its success.

Res: It could be.

Res: Ok everyone. This is the last question. Give me the reasons if you agree or do not agree in using digital games as part of our educational system and why?

St61: Do you mean cultural reactions?

Res: Yes. Our culture. Are there any?

St62: Some games speak about religion.

Res: So, you will not accept it if it speaks about other religions?

St63: Yes, I will not accept it.

Res: Will it affect our learning?

St64: My family will not accept it.

Res: So, families would not accept for their children to play games that speak about or contain other cultures?

Min 13.55 - 15

St65: Conservative and extreme religious people will not accept and would ridicule such games. For example, Temple Run was criticized because you play inside a temple. The same goes to music which I have mentioned previously.

St66: No one will say anything if it is regulated by the Ministry.

St67: Our culture will have a positive reaction to games if the games are well chosen.

Res: This means there are cultural reactions towards using games.

St68: It will not affect people who are above 20. They are more responsible.

Res: Do you mean older people get affected?
St69: No, they do not get affected. Youngsters do.

Res: What I mean is, does our culture and society have an effect?

St70: To some extent. For religious reasons they might affect.

Res: Do you mean our religion is directly connected to our culture?

St71: Definitely.

Res: Does our religion affect digital game usage?

St72: Definitely does. Because I will not accept anything if it is not part of or against my religion.

St73: There will not be any negative reactions if it is Saudi constructed.

Res: I am talking about our culture not constructing the game. Does our culture and Islamic religion affect our usage to digital games?

St 74: It will not affect if there are boundaries.

Res: Anything else?
Appendix 12 – Imam University Request

Dear Abdulaziz Alsayegh,

Hope this finds well. I am greatly interested in your research findings and your recent teaching method using digital games.

I would like to consult with you on further possible curriculum developments in the near future, with a view to incorporating some of these innovations into our teaching programs and also in the production of a new coursebook.

I look forward to hearing from you in due course.

Yours sincerely,

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