# “The influence of lecturer text-based immediacy on student engagement experiences and learning outcomes in Distance Education in Saudi Arabia”

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Submitted in fulfilment of the requirements for the degree of
Doctor of Philosophy

College of Education

Victoria University
Melbourne, Australia

April 2017

## DECLARATION

I, Abdullah Al Ghamdi, declare that the PhD thesis entitled, 'The influence of lecturer text-based immediacy on student engagement experiences and learning outcomes in Distance Education in Saudi Arabia' is no more than 100,000 words in length, including quotes and exclusive of tables, figures, appendices, bibliography, references, and footnotes. This thesis contains no material that has been submitted previously, in whole or in part, for the award of any other academic degree or diploma. Except where otherwise indicated, this thesis is my own work.

Abdullah M. Al Ghamdi

## ABSTRACT

Over recent decades, lecturer immediacy has been a widespread topic of inquiry and research. Investigations have specifically considered the influence of lecturer verbal and non-verbal immediacy behaviours in the classroom and their resultant impact on students' experiences and learning outcomes. Improvements in capacity and quality of information and communication technologies support the increase in educational transactions moving online and an increase in the number of distance education programs worldwide. Recurring concerns within the distance education community are the issues of physical and psychological isolation and the separation that students experience in contrast to the conventional classroom environment at universities. In this context, this research focused on lecturer verbal and non-verbal text-based immediacy behaviours in an online setting as a potential factor in reducing students' perceived sense of isolation (physical and psychological) and in supporting students' learning experiences. This study inquired into the impact of lecturer verbal and non-verbal text-based immediacy behaviours in distance education courses on the following four student engagement variables: (1) online class participation; (2) communication satisfaction; (3) affective learning; and (4) cognitive learning. The study was conducted at a University in Saudi Arabia and involved participants enrolled in distance education courses.

The research commenced with a pilot study to investigate the reliability of all measurements following translation from English to Arabic. The sample included 413 undergraduate students undertaking distance education courses. Participants completed six questionnaires hosted within a Survey Monkey platform that included the measures of lecturer verbal text-based immediacy behaviour (LVTIB) and lecturer non-verbal text-based immediacy behaviour (LNVTIB), and four measures assessing student online class participation (SOCP), student communication satisfaction (SCS), student affective

learning (SAL) and student cognitive learning (SCL) respectively. Results indicated strong internal consistency reliability of the measures (r = .83 to .95).

A mixed-method approach was conducted that comprised quantitative and qualitative methods that were undertaken in two phases. In the quantitative phase, 269 undergraduate female and male university students enrolled in distance education courses were sampled. The participants were disseminated into four groups: female control group, female treatment group, male control group, and male treatment group. A link to the measures was sent to the participants' emails requesting they submit their responses on-line in the first week as a pre-test and after a 16-week interval as post-test. The lecturers in the treatment groups adopted high levels of text-based verbal and non-verbal e-immediacy behaviours, whereas, the preferred delivery of lecturer text-based e-immediacy was maintained by lecturers in the control groups. A variety of inferential statistical analyses were performed to investigate the questionnaire response data.

In the qualitative phase, semi-structured interviews were conducted to further explore the themes considered within the questionnaire data. The sample included three female and three male participants from each of the treatment and control groups. The interviews were conducted over a period of 30-60 minutes. Interview questions considered the students' perspectives on lecturer effectiveness in verbal and non-verbal text-based e-immediacy, and their capacity to promote students' participation, engagement in supportive communication and facilitation of cognitive and affective learning outcomes. The interview data were analysed using the techniques of inter-categorical analysis and cross-category analysis of the identified themes.

In the first phase of quantitative data analysis, correlation results showed no significant relationships existed in female and male treatment and control groups scores at pre-test between LVTIB and LNVTIB practices and the four dependent variables.

However, at post-test all variables demonstrated moderate to high associations within the female and male treatment groups scores. No significant correlations existed for control groups at post-test. Results of independent sample T-test analyses undertaken separately for gender and group indicated that there were no significant differences between female treatment and control group scores and male treatment and control group scores at pre-test. However, there were significant differences between female and male group responses at pre-test for both control and treatment groups in all the variables, except SAL and SCL. Due to the gender differences at pre-test ANCOVA analysis was conducted to examine post-test differences for the LVTIB, LNVTIB, SCS, and SOCP variables scores. Results indicated that there were significant differences between treatment and control group scores for LVTIB, LNVTIB, SCS and SOCP. Finally, repeated measure ANOVA analyses were undertaken for SAL and SCL. The results showed that there were significant differences in female treatment and control group responses between pre- and post-test scores. Similarly, results indicated that male treatment and control group scores were significantly different between pre- and post-test. No significant differences were found for the control groups.

Thematic analysis of interview responses from treatment groups revealed that the lecturer text-based 'verbal' and 'non-verbal' immediacy behaviours positively influenced students' online participation, and increased their satisfaction with lecturer communication, affective and cognitive learning. However, the female and male control group responses indicated that the absence of lecturer e-immediacy behaviours correlated with students' perceptions of feeling a physical and psychological distance. This experience was reported to have reduced their engagement, satisfaction with lecturer communication, and learning outcomes.

The main conclusion proposed as an outcome of the quantitative and qualitative analysis of implementing improved lecturer text-based immediacy practices (verbal and non-verbal) was that it positively influenced lecturer communication with students. Enhancing the relationship between lecturer and students can promote a social presence aspect within distance learning courses. Overall, the text-based immediacy behaviours promoted in the current research facilitated a dual influence: (a) an ontological impact, whereby it stimulated the lecturer's social presence which supported students' learning and reduced the sense of isolation and separation, and (b) an epistemological change, whereby students were more confident in communicating and actively participating in their inquiry towards knowledge construction. Finally, the findings are discussed and implications are proposed for academics and administrators applicable to universities in Saudi Arabia. Recommendations outline that strategies to develop general instructional immediacy and e-immediacy practices by academics in distance education courses may serve to improve the quality of online teaching and lecturer interpersonal on-line teaching behaviours. It is also envisaged that the application of this type of recommendation could compensate for a lack of face-to-face communication, particularly with Saudi female students.

# ACKNOWLEDGEMENTS

All praise and thanks is due to Allah, the Lord of the Universe, for his blessing, guidance, and help, and for providing me with the strength, ability, and patience to complete this study. I would like to thank the Ministry of Education for providing the generous scholarship which made this doctoral program possible. Also I would like to thank the Dean of Postgraduate studies in King Abdulaziz University for allowing me to conduct this research. Words cannot describe my thanks and appreciation for the assistance of my principal supervisor, Associate Professor Anthony Watt. He provided his valuable expertise and guidance, and always challenged me to do my best. His help and support cannot be measured. His kindness and help were clear in all our meetings throughout this process. Also, I would like to express my thanks for my co-supervisor, Dr Ahmad Samarji, who provided me with valuable suggestions and time. I thank them for being patient, cooperative, and supportive. Great appreciation goes to the students who volunteered to participate in this study for their effort and time in engaging in the project.

Gratitude and appreciation is also necessary for the great Dr Marg Malloch, Director of Research Training at Victoria University. I have never forgotten her support and cooperation during my thesis program.

A special note of appreciation is extended to my wife, Dr Norah, who has been an endless source of love, encouragement, unceasing support and thoughtfulness. Thanks for all your sacrifices. I can never repay you for all you have endured the past years. You provided me great and wonderful recommendations and suggestions since I started my study life, particularly starting my PhD thesis.

A warm thanks to my lovely children Rama and Khalid who supported me through their play when I was studying by asking me to stop my work so we could all go outside, and have some fun and when they hugged me every night and morning.

Grateful thanks to my wonderful Mum and Dad who have been the most important source of support through many years in school and through many achievements. I share this joyful accomplishment with them and will always be grateful to them. Finally, I would like to thank all of my friends in Australia and Saudi Arabia for their prayers, encouragement, and friendship. I thank them and appreciate them very much.

## PUBLICATIONS AND PRESENTATIONS ARISING FROM THIS THESIS

Al Ghamdi, A. (2017). Influence of lecturer immediacy on students' learning outcomes: Evidence from a distance education program at a university in Saudi Arabia. Paper presented at *International Journal of Information and Education Technology,* 7, 17.

Al Ghamdi, A., Samarji, A., & Watt, A. (2016). Essential considerations in distance education in KSA: Teacher immediacy in a virtual teaching and learning environment. Paper presented at *International Journal of Information and Education Technology, 6*(1), 17.

# TABLE OF CONTENTS

## LIST OF ACRONYMS

| | |
|---|---|
| TI | Teacher Immediacy |
| TDT | Transactional Distance Theory |
| SPT | Social Presence Theory |
| SIP | Social Information Processing |
| VIBLQ | Verbal Immediacy Behaviour Lecturer Questionnaire |
| NVIBLQ | Non-verbal Immediacy Behaviour Lecturer Questionnaire |
| OCPQ | Online Classroom Participation Questionnaire |
| SCSQ | Student Communication Satisfaction Questionnaire |
| ALQ | Affective Leaning Questionnaire |
| CLQ | Cognitive Learning Questionnaire |
| VTIBL | Verbal Text-based Immediacy Behaviours Lecturer |
| NVTIBL | Non-Verbal Text-based Immediacy Behaviours Lecturer |
| OCPS | Online Class Participation Scale |
| SCSS | Student Communication Satisfaction Scale |
| ALS | Affective Learning Scale |
| CLS | Cognitive Learning Scale |
| VISIE | Verbal Immediacy through Students' Interaction and Engagement |
| NIDC | Non-verbal Immediacy of Distance Communication |
| INLVNVI | Interactive Net Literacy of Verbal and Non-verbal Immediacy |

# LIST OF TABLES

## LIST OF FIGURES

# CHAPTER 1: INTRODUCTION

## Statement of the Problem

There is a large body of research around teachers and their pedagogical practices. What a teacher says and does in the classroom contributes to a student's perception of both the teacher and the unit of study (Andersen, 1979). Particular classroom behaviours, as perceived by students, have been shown to contribute to students' perceptions of motivation and learning (Allen, Witt, & Wheeless, 2006; Chesebro & McCroskey, 2001; Christophel, 1990; Christophel & Gorham, 1995; Comadena, Hunt, & Simonds, 2007). These behaviours, termed 'immediacy' by Mehrabian, are aimed at reducing the social and psychological distance between people, and are demonstrated at both the verbal and non-verbal levels of behaviour (Andersen, 1979; Mehrabian, 1967, 1971). Most of the research on teacher immediacy and its effects on student outcomes has focused on the traditional classroom, in which students typically engage in face-to-face communication with instructors (Allen, Witt, & Wheeless, 2006; Chesebro & McCroskey, 2001; Christophel, 1990; Christophel & Gorham, 1995; Comadena, Hunt, & Simonds, 2007). With the advent of electronically-delivered courses, the classroom took on a new dynamic, which presents a new dimension to immediacy.

Teaching and learning transactions in distance education are characterised by separation of time and place, where the learners may experience psychological disconnectedness and isolation (Moore, 1993; Rao & Krishnan, 2015). This sense of physical and psychological separation has been a concern for both students and lecturers in a distance education environment, contributing to increased student dropout rates from distance education courses and also affecting students' communication and interaction (Berge, 2013; Farwell, 2011; Kerka, 1996; Rovai, 2002). The perceived

feeling of distance has been described by Moore (1993) in his theory of transactional distance, which focused on teacher-learner communication. Moore proposed that the feeling of distance for learners is related to the 'Social Presence' concept, whereby their engagement participation is improved by lecturer verbal and non-verbal immediacy practices. Lecturer immediacy behaviours – both verbal and non-verbal – can increase social interaction between students and lecturers within computer-mediated communication in an online classroom (Kehrwald, 2008; Richardson & Swan, 2003).

Lecturer immediacy practices are likely to transfer the feeling of face-to-face communication (Tu, 2002), which is considered an effective element of interaction and communication in a virtual classroom. One possible effect of the 'immediacy behaviours' element on students' feelings of the social presence of lecturer is to increase their communication interactions (Zhan & Mei, 2013). Thus, lecturer verbal and non-verbal immediacy can impact students' perceptions of social presence, which in turn can affect experiences and learning outcomes in the virtual classroom (Picciano, 2002; Richardson & Swan, 2003). Gunawardena and Zittle's (1997) research findings highlighted that students' perceptions of the social presence concept involving teacher immediacy accounted for 60% of their course satisfaction. The treatment study of Witt and Wheeless (2001) revealed a high possibility of a teacher conveying verbal and non-verbal immediacy within electronic communication tools (e.g., videoconferencing, textual communication) in virtual classrooms, which can promote student communication. Previous studies have shown the importance of lecturer immediacy and its impacts on communication elements to reduce a feeling of remoteness between students and lecturers (Andersen, 1978; Asiri, 2013; LeFebvre & Allen, 2014; Mehrabian, 1968), particularly in distance education courses (Baker, 2010b; Brooks & Young, 2015; Farwell, 2011).

The pedagogical use of electronic tools within communication approaches (i.e., asynchronous and synchronous) could reduce the likelihood of remote students feeling a sense of isolation and separation from the lecturer and their peers, a problem that is not experienced in face-to-face classrooms. Lecturer immediacy (both verbal and non-verbal) as a pedagogical approach can ease the sense of separation and isolation and promote a sense of closeness. This is likely to have positive impacts on students' learning outcomes and experiences, particularly with female students who face cultural restrictions in terms of communication in Saudi Arabia. In a digital literacy age, where more education transactions are moving online and into cyber settings, enhancing students' experiences in distance education is an essential and timely inquiry. Students' learning outcomes and experiences are challenged by the physical and psychological separation experienced in distance education.

## The Purpose of the Study

This research aimed to investigate the impacts of lecturer verbal and non-verbal text-based immediacy on students' experiences and learning outcomes at King Abdulaziz University in Jeddah city, Saudi Arabia. This study examined the relationship between lecturer immediacy and students' participation, communication satisfaction and their affective and cognitive learning outcomes in virtual classrooms. It was envisaged that there could be differences between those who received the normal practices of lecturer immediacy (in control groups) and those who received treatment practices of lecturer immediacy (in experimental groups). It was proposed that these differences could play an important role in students' participation, communication satisfaction and their learning outcomes in virtual classrooms.

Findings from this study will help support the pedagogical approaches employed in online settings, playing a positive role in changing the perceptions of psychological and physical detachment by students enrolled in distance education courses. If the reconsidered approach of lecturer verbal and non-verbal text-based immediacy practices adopted within this study, and promoted within the treatment groups, subsequently contributed to significant development in students' experiences and learning outcomes. These findings could be used to develop lecturer immediacy behaviours in other institutions, increase lecturers' social presence, and support recommendations and teaching strategies in distance education environments.

## Significance of the Study and Contribution to Knowledge

A number of studies on lecturer verbal and non-verbal immediacy behaviours have been conducted in diverse countries and cultures; however, this study was the first conducted in the Saudi Arabian cultural context. In comparing the effects of lecturer immediacy behaviours drawn from studies in the United States, Australia, China, Brazil, Finland and France (McCroskey, Richmond, Sallinen, Fayer, & Barraclough, 1995; Roach, Cornett-Devito, & Devito, 2005; Santilli & Miller, 2011; Zhang, Oetzel, Gao, Wilcox, & Takai, 2007), it was determined that few of these studies focused clearly on the textual immediacy behaviours of lecturers (Arbaugh, 2001; Farwell, 2011; Gunawardena & Zittle, 1997; Kehrwald, 2008; Reio Jr & Crim, 2013). Additionally, none of these studies' investigations focused on lecturer text-based communication in terms of verbal and non-verbal immediacy within online communication approaches in distance education courses at Saudi universities. Therefore, this study has a role to play in the development of lecturer immediacy practices in the Saudi Arabian context.

The results of this study may contribute to various areas focussing on the development of lecturer immediacy behaviours in distance education environments. Firstly, the study could support existing literature on the lecturer-student relationship within a theoretical framework of lecturer immediacy based on text-based communication content and supported by three theories (Transactional Distance, Social Presence, and Social Information Processing). This framework was applied in this study within a quasi-experimental design, which involved six dependent variables – two representing lecturer communication behaviours (verbal and non-verbal) and four related to student factors (participation, satisfaction with communication, affective and cognitive learning). This framework has not been used in previous experimental studies of lecturer immediacy behaviours in online learning, particularly not in Saudi Arabia, or Gulf or Arabic countries. The meta-analysis of Witt and Wheeless (2004) found that there were small quasi-experimental studies that focused on teacher immediacy behaviours with student communication and learning outcomes. However, in a distance education environment, few researchers have conducted experimental studies on teacher immediacy behaviours using electronic communication tools (e.g., videoconferencing, audio or photos), which is a different model of variables than that used in this current study model (Bodie, 2009; Broota, 1989; Farwell, 2011; Limperos, Buckner, Kaufmann, & Frisby, 2015; Witt & Wheeless, 2001).

Secondly, the findings of this study will likely contribute to an understanding of communication and interaction elements of students and lecturers in the online learning field by linking transactional distance theory with lecturer immediacy to reduce the sense of psychological and physical distance between lecturers and students in Saudi online learning environments (Baker, 2004; Moore, 1993; Witt & Wheeless, 2004). This

should have positive effects on students' engagement, participation and communication satisfaction and their learning outcomes.

Thirdly, the mixed methodology design of this research was novel in investigating the impact of lecturer verbal and non-verbal text-based immediacy on four variables of online students – participation, communication satisfaction, affective and cognitive learning. This was the first study that examined these variables within two experimental groups and two control groups, including gender as a variable. The methodology of this study has the capability to bring an extended understanding of immediacy behaviours through the comparison of students' perceptions from two groups, the examination of the effects of lecturer text-based immediacy on students' engagement participation, and the evaluation of student satisfaction with their lecturer's communication and their own learning outcomes. The key goal of this study was to consider students' communication satisfaction and class participation as dependent variables. This study contributes to the understanding and conceptualisation of effective teaching and learning in distance education by generating additional knowledge of the role of text-based immediacy practices in relation to student participation, communication satisfaction, affective learning and cognitive learning. The study also incorporated the development of a model, which can inform other studies focusing on this subject, particularly in Saudi distance education environments.

The fourth significant contribution of this research was the implementation of lecturer immediacy practices, demonstrated via textual communication for verbal and non-verbal behaviours in online classrooms. This study was again the first to apply this approach of lecturer communication in Saudi Arabia distance education courses, particularly relating to communication approaches (i.e., synchronous and asynchronous) based on purely textual communication. This may encourage policy makers to develop

distance learning quality indicators (teaching and communication styles) with assistance from other experts in e-learning and distance learning centres in Saudi Arabia. This study was the first to be conducted on lecturer immediacy practices in a virtual classroom environment in an Arabic language setting, with the aim of promoting social presence and increasing interaction and communication with students in distance education environments in Arabic speaking counties in particular.

The results of this study could also assist in formulating recommendations and strategies to develop new teaching and content delivery approaches within the Saudi online learning environment. Thus, this study presents unique suggestions, recommendations and strategies on lecturer immediacy behaviours in distance education courses.

## Thesis Structure

This thesis is organised in nine chapters. Chapter One has introduced the focus of the study, problem statement and research purpose, and outlined the contribution to knowledge. Chapter Two will define the locus of the study: the Saudi Arabian context, including eminent Saudi education features, cultural elements and gender factors, plus a detailed description of distance education in Saudi Arabia, particularly at King Abdulaziz University, where the research was conducted. Chapter Three will incorporate two literature reviews – terms, definitions and informing theories; then e-learning history and typology, the distance education environment and communication and behaviour elements related to distance education systems. Finally, the chapter will review lecturer immediacy behaviours in relation to students' participation, satisfaction with communication, and affective and cognitive learning in both general and online contexts, and conclude by outlining the conceptual theoretical framework of this study.

Chapter Four will outline the pilot study, including methodology, participant sample, instruments, procedures, data analysis and results. Chapter Five is the methodology chapter, including the main research questions and the mixed-method approach of research design.

Chapters Six and Seven discuss the quantitative and qualitative phases, respectively. Chapter Six presents the quantitative study phase, including description of variables, sampling, measures, data collection procedures, data analysis and discussion. Relationships and significant impacts on students' perceptions of lecturer text-based immediacy behaviours of verbal and non-verbal behaviours with their online participation, satisfaction with communication, affective and cognitive learning are identified and analysed. Chapter Seven then presents the qualitative data: samples, measures, interview procedures, data collection, data coding, synthesis of a categorical and a discussion at the cross-categorical level, followed by a summary.

Chapter Eight provides a conceptual discourse between the quantitative and qualitative data and the literature, to generate deeper understandings in relation to lecturer text-based verbal and non-verbal immediacy behaviours and the potential impact of such behaviours on students' online participation, satisfaction with communication, and affective and cognitive learning in a distance education environment. Chapter Nine concludes the research journey: the research findings are summarised, practical recommendations embedded, research limitations outlined, and prompts for further research discussed.

## Summary

Realising and understanding the variations of an individual's perceptions of lecturer immediacy is based on the processing of the lecturer text-based immediacy concept. Students' perceptions of their participation and communication satisfaction may be influenced negatively if the practices of the lecturer in terms of verbal and non-verbal text-based immediacy have not been applied in an effective manner in their virtual classroom. Lecturer text-based immediacy practices are important elements of teaching strategies in any learning environment. The absence of face-to-face interaction and communication is a popular issue world-wide and within Saudi universities, the impacts of which could probably be reduced by implementation of lecturer text-based immediacy practices for verbal and non-verbal communication in virtual classrooms.

The next chapter presents a definition of terms used in this study, e-learning history and typology, the distance education environment and communication and behaviour elements related to distance education systems. Also, the theories related to the content of distance education and the concept of lecturer immediacy, are discussed, with more clarification of lecturer text-based immediacy verbal and non-verbal practices, particularly its relation to students' online class participation, communication satisfaction, and affective and cognitive learning outcomes.

# CHAPTER 2: CULTURAL BACKGROUND

This chapter provides an overview of the study context, namely: Saudi Arabia, in terms of geography, demographics, policy making, higher education, socio-economic characteristics, and cultural and religious influences. After this general profile, the chapter explores the distance education system in Saudi Arabia and its development over time. The chapter also describes the system of distance education implemented at King Abdulaziz University.

For the past few decades, the Saudi Arabian government has focused on diversifying and modernising the education system in an effort to provide skills and employment opportunities for its citizens. With this development, there have been many changes and reforms in the educational system. One of the most recent reforms is in the field of Information and Communication Technology (ICT) and distance learning. ICT is a diverse set of tools to communicate and manage information. It supports teaching and learning in a digital educational environment in the form of e-learning, which involves delivery of undergraduate and postgraduate education through many of the cognitive media sources, such as videoconferencing, photos and electronic documents, via the Internet. ICT is critical to facilitating distance education, wherein students and lecturers are physically separated and education has to be delivered through several forms of media as well as the internet.

## Saudi Arabia

### Geography

Saudi Arabia, located in the southwest corner of Asia, occupies 80% of the Arabian Peninsula and is the largest country in the Middle East. With Riyadh City as its capital city, the kingdom is divided into thirteen regions and cities, including Makkah, Medina,

Riyadh, Eastern and Northern regions, and the cities of Asir, Al-Baha, Hail, Al-Jourf, Jizan, Narjan, Tabuk, and Al-Qassim, and Jeddah (Saudi Network, n.d.). Saudi Arabia is a member of the Gulf Cooperation Council (GCC) together with neighbouring countries Kuwait, Qatar, Arab Emirates, and Oman.

Saudi Arabia has an arid desert climate characterised by high temperatures during the daytime and low temperatures at night, with high humidity in the coastal cities in the summer season. Conversely, the winter season brings slightly cooler climates. There are significant distances between Saudi Arabian cities, which can cause issues in an individual's education due to a lack of nearby institutions such as colleges and universities. In addition, there are vast spaces inside larger cities such as Riyadh and Jeddah, which can cause difficulties for students travelling to university, especially female students.

**Demographics**

Population distribution across the country varies. Jeddah is the largest city, consisting of a population of over 10 million. Saudi Arabia comprises Saudis, expatriates, and general labourers (Central Department of Statistics and Information, 2010a). According to the Population and Housing census, Saudi Arabia has a total population of 32.1 million with women constituting 73% of the total population. Furthermore, 29% of the total population are under 15 years of age, comprising 7.7 million male and female children (Saudi Arabia Population, 2016). In Saudi society, men and women are separated in workplaces, public transport, schools, colleges and universities. Thus, these cultural and religious restrictions create additional challenges for women, limiting their skills and jobs and learning, especially in terms of communication with men.

**Government Structure**

Founded in 1932 by Abdulaziz Al Saud, the Kingdom of Saudi Arabia is a monarchy with a constitution based on the Qur'an and Shari'ah law. Oil revenue contributes 80% of government revenue and supplies 28% of the Organization of Petroleum Exporting Countries (OPEC) oil production. Oil from the Eastern provinces has served as Saudi Arabia's primary source of rapid economic growth over the last few decades. But this growth trajectory has not been without disruptions, as Saudi Arabia has occasionally suffered from setbacks in the global economy. In the 1970s and 1980s, Saudi Arabia's economic growth was disrupted by global oil price shocks. Although oil remains the primary source of economic growth, the government has since invested in various fields – including the higher education sector – in order to support economic diversification and sustainable growth in the kingdom (Ramady, 2010).

**Culture**

Saudi Arabia is considered the birthplace of Islam and holds a special place in the Muslim world, as it contains the two holy cities of Makkah and Medina (Alebaikan, 2010; Al-Saggaf, 2004; Oyaid, 2009). The country regards Islam as a comprehensive system with prescribed norms and practices for all spheres of life, including, personal, social, and business affairs (Al-Munajjed, 1997). Given this, all major aspects of society, including culture, tradition, gender roles, and societal norms, are shaped and defined by Islam (Alhazmi, 2010; Al-Munajjed, 1997).

Saudi Arabia follows conservative Islamic societal norms and traditions in relation to gender segregation. Gender roles and segregation rules are rigid and encompass every aspect of every citizen's life including education, business, public transport, and social interactions. Women are expected to uphold these rules through practices such as wearing the hijab (face and body covering) and avoiding unnecessary social interaction

with unrelated men (Alhazmi, 2010; Al-Munajjed, 1997). Moreover, women in Saudi Arabia need to be accompanied or authorised by their male 'guardian' to work, study or travel due to cultural norms. A male 'guardian' can be one's husband or a blood-related male such as father, brother, uncle, or nephew. In recent years, female students at all stages of study were not permitted to do sport exercises in schools, universities or public places, but the Saudi government has facilitated and integrated sport lessons within specific gender restricted fitness centres. Policy makers are supporting education, work, and equal opportunities for Saudi women under the condition that such practices abide with adopted Islamic rules and cultural norms.

**Jeddah City**

Jeddah, one of the largest cities in Saudi Arabia, dates back to the era of Alexander the Great in 323-356 BC. With a population of approximately 3 million, it is a gateway for Hajj pilgrims during the Hajj season. It is the country's primary port, and is home to a major commercial centre where businesses, government headquarters, and offices are located. The socio-cultural ethos of the city supports a modern and metropolitan lifestyle. As the commercial centre of the country, trading is the primary enterprise, supporting the city with many shopping and entertainment complexes.

In summary, Saudi Arabia's geography, demographics, culture and government structure have unique characteristics. Saudi Arabia is a rapidly developing country in Asia, comprising mostly young people. The Kingdom has an opportunity to gain a competitive position in the global economy by providing employment for the young educated workforce.

**Education in Saudi Arabia**

General education in Saudi Arabia is free at all levels – primary, intermediate, secondary, and tertiary (Al-Hugail, 1998). Education is primarily managed by the

Ministry of Education. These ministries are responsible for the smooth implementation of education throughout the Kingdom. With 25% of Saudi Arabia's annual national budget allocated to these ministries, they manage all aspects of education, encompassing curricula, logistics, equipment and facilities, and educational resources (MHE, 2010). Established in 1954, the Ministry of Education manages 323 schools in the country. Over the last decade, the Ministry has implemented policy changes and reforms to integrate ICT and enhance students' knowledge and creative skills (Al-Sulaimani, 2010; Oyaid, 2009).

Although Saudi Arabia has witnessed significant reforms in education in recent years, this has not always been the case. Before unification in 1932, education in the country was fragmented with disconnected teaching systems. Prior to unification, only basic education was free, but literacy was valued and obtained primarily for reading the *Qur'an* and for engaging in trade and business (Faraj, 2005). Education was only accessible and delivered through mosques, which acted as repositories of knowledge and literature in addition to being places of worship. For tertiary and higher education, the primary universities were the College of Islamic Jurisprudence, established in Jeddah, and Riyadh University (now King Saud University). King Saud University is the oldest university in the country, established in 1957, whilst the College of Islamic Jurisprudence is the second oldest (Alebaikan, 2010). With greater reforms in education, more colleges and universities were established, offering diplomas and bachelor degrees (Asiri, 2013). Select students were also offered scholarships to study overseas.

The majority of Saudi universities universities are gender-specific, offering segregated classes for male and female students in undergraduate and post-graduate degrees at all levels. Among these universities are King Fahd University and Islamic University, which only admit male students, and Princess Norah Abdurrahman

University, which only admits female students. Gender segregation for these universities leads to a requirement for separate venues and compounds the issue of insufficient resources in the Saudi higher education sector (Albalawi, 2007). For the context of this research, gender segregation creates extra challenges to distance education, as gender segregation carries over to teaching and learning in virtual spaces and e-settings.

There is a substantial body of research concerned with higher education as a means to promote socio-economic reform (Albalawi, 2007; Alkhazim, 2003; Aseeri & Broad, 2009). Nolan (2011) stated that higher education has perhaps the most difficult setting in Saudi Arabia among all the Gulf Cooperation Council GCC countries due to a huge population, large geographic area and different cultures, which can affect universities' outcomes. Alshumaimri, Aldridge, and Audretsch (2010) find that the Kingdom's goal is to bypass the manufacturing stage of economic development for an innovation-based knowledge economy.

Apart from developing higher education, the present aim of the Ministry of Education is to enhance the quality and performance of universities and educational institutions. This is now implemented through a five-year development plan, with objectives in line with national plans. This plan aims to promote academic mobilisation by establishing universities and educational institutions that can provide quality education, thereby improving the public education system. These objectives are achieved by establishing sufficient resources and adopting instructional technologies, such as ICT in distance education learning, to develop the sector.

A primary issue in the higher education sector is the profile and capabilities of academic staff. Iqbal, Kokash, and Al-Oun (2011) found that inadequate management practices, inappropriate recruitment, and lack of performance criteria impact on faculty

intention to stay in these institutions. Thus, education institutions should receive more support to develop their faculties by providing funds, intensified training in administrative work and an appropriate academic environment, which can improved by current technologies.

The geographical nature of the country is the second issue. Saudi Arabia is a large country with few universities (Albalawi, 2007; Unnisa, 2014). Although new universities were established in regional areas in the last decade, they do not have the necessary resources and do not offer all the wide range of desired programs, so there is still a predilection among young people to move to larger cities, where the universities are better-resourced.

The third issue is with the faculty of distance education. In a digital and connected era, professional development – including training around ICT capabilities and e-learning facilities – for academics across the kingdom is a huge challenge for the Ministry, which needs to bring its 30,000 academic instructors to a standard of skills and knowledge that can produce competent graduates capable of surviving in a global world and rapidly changing industry (Onsman, 2010). In other words, the distance education institutions need to provide more training to their lecturers by using the modern technology and supporting them to employ this technology in their teaching. This leads to the development of education outcomes in various fields to overcome the issues faced by the lecturers, particularly in their experiences of communication in a distance education environment.

In summary, the government's economic priorities have changed over time, making education a key element for driving continued socio-economic reform. This is illustrated by the change in emphasis from the provision of educational services in the Ministry of Higher Education's seventh plan to the standard of the qualifications in the

eighth plan (Ramady, 2010). These policies are confirmed in the ninth plan, with an increase in the number of graduate programs offered as part of the government's tenth plan for the country's future (MHE, 2010b). Moreover, the Saudi Minister of Higher Education has supported and improved e-learning and distance education systems in several universities by developing the appropriate infrastructure (Unnisa, 2014).

**King Abdulaziz University**

This study was conducted in a distance education course at King Abdulaziz University (KAU). KAU was established in 1968, with 68 male students and 30 female students. A year after that, the university inaugurated its first college (College of Economics and Management), followed by the College of Arts and Human Sciences in the next year. After a resolution of the Council of Ministers was issued, the national university became a public university. It was also decided to merge the College of Sharia and the College of Higher Education (established in 1949 in Makka) with King Abdulaziz University.

The government's continuous support of King Abdulaziz University has transformed it into a major modern university, with a student body totalling 82,152 male and female students distributed over many faculties including Islamic studies, History, Sciences, Mathematics, Medical and Geographical Sciences, English language and Arabic language studies. Moreover, the students of this university have the chance to enrol in several distance education courses offered for English language, Arabic language, Islamic culture, and Business studies. King Abdulaziz University includes two separate campuses in line with Islamic regulations of gender segregation. These campuses have facilities for cultural, athletic, and recreational purposes. It also has a library equipped with the most up to date technology to serve students and teaching staff.

The university has witnessed much development in quality since being established, becoming one of the most distinguished universities in KSA. It is considered a pioneer in offering higher education in both traditional and distance education forms. The distance education faculties for both female and male students were inaugurated in the same year of 2004. The university also has many faculties spread across various suburbs in Jeddah.

**Culture Factors in Saudi Education**

Previous studies have confirmed that culture impacts students' learning styles (Davidson-Shivers, Muilenburg, & Tanner, 2001; Drew, 2008; Simonson & Schlosser, 2008). Cultural norms about social interaction and behaviour in everyday life are reflected in teaching and learning methods in the classroom (Joy & Kolb, 2009). Culture also affects an individual's cognitive process and interpretative skills, creating different meanings of communication and relationship in collaboration within groups. Culture can even determine the kinds of knowledge and subjects that are considered in the classroom as some topics may be considered a taboo in some cultural contexts (Drew, 2008).

Culture is also reflected in interpersonal behaviours exercised in the classroom, whether real or virtual (Bolls, Tan, & Austin, 1997; Meharbian, 1972). The display of acceptable behavioural prompts can make the receiver more comfortable whereas unfamiliar behavioural styles can jeopardise the conversation. Subsequently, when a sender shows acceptable or positive behaviours through interpersonal correspondence, the receiver will also be more engaged. Cultural differences between student and lecturer groups can also act as barriers in the e-learning format (Olesova, Yang, & Richardson, 2011) which may affect student experiences and academic success (Kelly, 2012). Cultural differences have a positive association with self-disclosure, which can

lead to reduced psychological distance and communicate a sense of perceived immediacy (Andersen, 1999; Mehrabian, 1967).

Tinley (2008) examined distance education courses in three Saudi universities and found that the culture factor was related to outcomes of the online learning environment. In the Saudi context, the most significant influence of culture is seen in the unequal relationship between student and lecturer, where the lecturer is in control and dictates the ideas to be received without contestation from the student (Richardson & Smith, 2007). Most studies have found that Middle Eastern classrooms are characterised with lecturer-centred delivery, rote learning and dictation (Falloon, 2011; Park, 2011). Moreover, "East Asia, Southern Europe, and Africa have supported the teacher-centered classroom, in which the single classroom teacher takes the initiative in imparting knowledge to students" (Slethaug, 2007, p. 79). In Saudi Universities, lecturers from different cultural backgrounds may have some difficulties in engaging with Saudi students due to communication gaps (Asiri, 2013).

**Gender Factors in Saudi Education**

A careful consideration of the gender variable is important for research, in order to ensure accuracy of data collection and generalisation of findings and results (Chrisler & McCreary, 2010). Social research focuses on comparative analysis based on gender, particularly in the level of participation, choices, performance, expectations, and contributions to the topic of research. Gender in education research continues to focus on comparative analysis of male and female participation, academic segregation, professional choices, classroom performance, expectations, and contributions (Ropers-Huilman, 2012). Gender differences are often framed in terms of cognitive abilities, emotion, creativity, sensitivity, and responsiveness to social cues, vulnerability to sadness and depression, and others (Fisher, 2011).

In the Saudi context, challenges facing Saudi female students are less academic and more cultural in nature. Gender segregation leads to restricted areas, limitations to travel and communication restrictions at university, as well as in choice of career (Al Ghamdi, Samarji, & Watt, 2014; Unnisa, 2014). The Saudi higher education system policy recognises women's right to obtain suitable education. While girls have equal access to educational opportunities at the school level, gender segregation is required in higher education. Higher education opportunities are therefore provided through female-only college and universities (Baker, 2011).

Further, gender segregation in higher educational institutions also means that female students can only learn from female lecturers and male students can only learn from male lecturers. It is also relatively common in Saudi Arabia to have a male faculty teaching female students over Closed Circuit TV and more recently through E-learning applications such as Blackboard Connect etc. While this is adopted as a norm in Saudi Arabia due to religious beliefs, some research supports that female and male students prefer lecturers of their own gender. In their survey, Menzel and Carrell (1999) found that the female students expressed greater desire to attend a course with a female lecturer and showed a higher degree of communication and interaction in a class with a female lecturer, in contrast to those with a male lecturer. Further, Violette (2002) also found that students were more likely to attend class when the lecturer was of their own gender.

## ICT in Distance Education in Saudi Arabia

### ICT and Distance Education

Distance education can increase the capacity of universities, offer more programs with improved curricula resources, and deliver courses to students regardless of their

location. Despite structural issues of management ability, faculty standards, and finances, the advent of distance education programs in Saudi universities is expected to alleviate some resource constraints (Alaugab, 2007; Albalawi, 2007; Alebaikan & Troudi, 2010).

The effect of gender norms is evident in the Saudi higher education system, in the form of segregation and educational opportunities. However, opportunities are being further opened for women by distance education through online learning. Many studies have found that female students are more flexible and willing to enrol in a distance education course (Menzel & Carrell, 1999; Olesova et al., 2011; Sullivan, 2001; Tinley, 2008). Alebaikan and Troudi (2010) assert that Saudi women's acceptance of distance education is significantly higher due to the fact that women are able to overcome restrictions on their movement and receive an education from the security of their home. Saudi women are strong supporters of online learning, as it gives them easier access to higher education (Alkhalaf, Nguyen, & Drew, 2010). The online distance education environment, with its instantaneous delivery of learning materials, removes the problem of commuting and interacting with strangers (Tinley, 2008). However, gender can still impact distance learning – for example, in Saudi universities female lecturers cannot display their faces via digital photos or through videoconferencing.

The Ministry of Education has shown interest in ICT, as evidenced by its investment in this sector and the establishment of the National Centre for E-Learning and Distance Learning. This educational reform led to the development of distance e-learning. The centre helps institutions to increase their service capacity through e-learning and distance learning programs to make higher education more accessible to a greater number of citizens (Unnisa, 2014). The primary goal of the centre is to support research and develop quality standards for e-learning and distance learning programs (Unnisa,

2014). In addition, the National E-learning and Distance Learning Plan was launched to map the transformation of universities from traditional classroom environments to e-learning or virtual classrooms in the next 15 years.

The aim of this project is to guide educational institutions in a) transforming their school library from traditional print books to electronic books to boost student access and engagement; b) the achievement of a complete framework, incorporating instructional objectives of pedagogy with data sources and instruments; and c) helping students with independent learning. Even traditional classrooms will benefit from the availability of online material, including video lectures from eminent scholars, extensive communication and discussion threads.

E-learning projects, or Learning Resources Centres, have been launched at all levels of primary, secondary and high school. As of now, nine universities have already been incorporated within this plan and offer this type of electronic learning environment in their universities (Alebaikan & Troudi, 2010; Unnisa, 2014). King Saud University, King Fahd University, Islamic University, and King Abdulaziz University, King Khalid university, Dammam university, Jazan university have established deanships of e-learning, and are considered national leaders in the field. As an entirely online curriculum was deemed to be not acceptable, online learning is used to supplement traditional instruction.

Previous research in the Saudi context shows that instructors are willing to incorporate ICT functions in their curricula, but both faculty and students refer to time constraints in an already full schedule (Alshankity & Alshawi, 2008; Oyaid, 2009). For instance, the lecturer may have a work overload due to the number of lectures and students, combined with other tasks as requested from the faculty. Lecturers have the additional challenge of selecting an optimal course design for a distance education

approach and some of them face difficulties in improving their teaching skills by the use of ICT in their course, such as contacting students by emails, creating PowerPoint slides and dealing with the functions of Learning Management Systems (LMS). For students' issues, there are many of them who have jobs or tasks besides their study or, as female students, have household tasks which challenge their educational in a distance learning environment. A high level of discipline and responsiveness is necessary for students entering these distance education courses. Whilst these matters create some barriers, further advances in ICT capability may serve to reduce these negative impacts.

**The Distance Education System in King Abdulaziz University**

In regard to the challenges facing the lecturers and students in the e-learning faculty in King Abdulaziz University, the subject of research in this study, the faculty has developed its own ICT infrastructure for general institutional use, and invested in ICT development for its distance education system. Thus, the distance education deanship was established in 2004 in order to help develop the distance education and learning environments of universities in Saudi Arabia, and particularly at King Abdul Al Aziz University, by employing modern technologies and LMS. Currently, more than 6000 Saudi students are enrolled in distance education courses. The policy of this distance education deanship is that a male lecturer instructs male students while a female lecturer instructs female students. At King Abdulaziz University, the distance education courses are mainly available in foundation subjects (Arabic language, English language, communication skills, etc.) and across several faculties (English, Islamic, Engineering and Mathematics).

Recently, King Abdulaziz University has adopted two new smart learning management systems (LMS) for distance education: Centra and Emes. These systems act as interaction and communication portals between teachers and students. Centra is

focused on providing synchronous virtual classrooms for lectures, delivering course content via a diverse range of computer applications, including: videoconferencing and chat. The system uses this multimedia technology to facilitate direct face to face interaction, providing the basic elements of interaction between teachers and students. It has web pages that feature interactive multi-form conservations, in addition to Webcam streaming between students and teachers at the same time, instant polls, and a cue to raise your hand to answer. The synchronous environment enables real-time interactions, where lecturers deliver instructional material and students can ask or answer questions at the same time.

Emes concentrates on providing an asynchronous environment for supplying teaching materials. It can provide digital content through media such as e-mail, discussion boards, social media, wikis, and blogs. The Emes system facilitates the process of interaction and communication between the student and teacher in distance education by providing course material via the internet.

# CHAPTER 3: LITERATURE REVIEW

## Introduction

Distance education, similar to face-to-face conventional classroom education, demands efficient and engaging pedagogical approaches and features, one of which is immediacy. Richmond and McCroskey (1992) stated that "immediacy creates a more engaging atmosphere for the teacher-student relationship" (p. 102). Teacher immediacy uses verbal and non-verbal behaviour to provide an engaging learning environment for students, which can potentially reduce any negative feelings that may result from the perceived psychological distance between the students and their teachers (Andersen, 1979). Studies focusing on the domain of teacher immediacy behaviours have asserted that the construct has demonstrated positive correlations with students learning outcomes, providing a richer learning environment and supporting effective teaching (Moore, Masterson, Christophel, & Shea, 1996).

The current research examines one of the major concerns associated with distance education, that is, the issue of physical separation. Physical separation may seriously influence effective communication between lecturers and students in distance learning environments. While past innovations have most directly affected the distribution of course materials (for example, learning management systems), technologies – such as Computer Mediated Communication (CMC) – are dramatically altering relationships between teachers, students, and educational institutions. This chapter will explore the literature around lecturer immediacy behaviours within distance education as a pedagogical strategy to promote effective online teaching and learning within text-based immediacy behaviours. In addition, studies examining the relationship between lecturer immediacy behaviours and students' experiences in distance education environments

are reviewed. This review will frame the potential role of lecturer immediacy practices in supporting student experiences to promote participation through communication satisfaction, engagement and interaction and improve students' learning outcomes, defined in terms of affective and cognitive learning.

When facilitating distance education, communication practices are important for both lecturers and students, as they are separated by place and also time (different time zones) in some instances. The concept of teacher immediacy, demonstrated through both verbal and non-verbal practices, has high potential to offer an alternative for face-to-face interaction and communication based on text-based behaviours in distance education courses. With the increasing demand for online courses and the increasing numbers of students enrolled in such courses (Allen & Seaman, 2011; Picciano, 2015), immediacy behaviours in online settings have become an important area of professional development and research.

As this study is focused on distance education, the literature review will explore various perspectives on distance education and its online delivery. This chapter is organised in seven sections. The first section will present the definition of terms in general and the working definition of a number of terms that are explicit to this study. The second section will review theories of relevance to lecturer immediacy behaviours, incorporating psychological and physical issues in distance education environments to inform the theoretical framework for this research. The third section will examine ontological and epistemological perspectives of distance education and will set a working definition in this research for the use of 'ontology' and 'epistemology' in this context and how ontological and epistemological notions intersect with the sense of lecturer presence within immediacy behaviours in distance education settings. The fourth section will highlight opportunities, challenges and concerns relating to distance

education. The fifth section will offer a review of previous studies that investigated teacher immediacy behaviours in online education settings in order to identify the significance of this research. Finally, the sixth section will synthesise the main concepts of lecturer immediacy to create a conceptual framework, which will later inform data analysis and interpretation. The chapter will conclude with a summary and the aims and purpose of the study.

## Definition of Terms

### Distance Education Environment

In essence, distance education is a type of education that can be acquired without face-to-face interaction between the student and teacher and can be delivered from a distance in various forms through technologies that enable communication (Lopes, O'Donoghue, & O'Neill, 2011; Moore, 2011). The main concept of distance education is that "some form of instruction occurs between two parties, it is held at different times and/or places, and uses varying forms of instructional materials" (Moore, Dickson, & Galyen, 2011, p. 130). Distance education can refer to any educational arrangement that uses technology as a medium for instruction delivery instead of face-to-face classroom instruction (Monolescu, Schifter, & Greenwood, 2004).

### Online Learning Classroom

The online learning classroom is a more recent format of distance education, "which improves access to educational opportunities for learners described as both non-traditional and disenfranchised. Other authors discuss not only the accessibility of online learning but also its connectivity, flexibility and ability to promote varied interactions" (Moore et al., 2011).

**E-learning**

E-learning involves applying technology-based solutions for student-centred learning to meet the needs of learners, be they individual or grouped (Buzzetto-More, 2007; Lytras et al., 2010; Moore et al., 2011). It has involved all forms of e-Learning, whether they be as applications, programs, objects, websites, etc., can eventually provide a learning opportunity for individuals (Moore et al., 2011).

**Computer-Mediated Communication**

Computer-mediated communication is defined as an approach of delivering human interaction within electronic communication tools (e.g., email, chat rooms, instant messaging or social network services). According to Nnochirionye (2005) "new technologies such as Computer Mediated Communication (CMC) are dramatically altering the relationships between teachers, students, and educational institutions" (p. 72). Computer-mediated communication – which may be synchronous or asynchronous – is capable of delivering effective teaching and learning within text-, video- or audio-based media (Ross, 2013). The effectiveness of CMC is that social content can be improved by conveying verbal and non-verbal behaviours and communication to promote the interpersonal relationship between lecturers and students (Shahid, Krahmer, & Swerts, 2012).

**The Synchronous Approach**

The synchronous approach serves as the first format of communication in distance education settings. This approach to communication is used to convey an electronic human interaction such as immediacy behaviours within CMC content by using textual content in 'chat' rooms during real-time conversation, video or audio conferencing, or instant messaging. Furthermore, synchronous approaches between learner and lecturer can be in different places but should be at the same time of communication, which

enables them to exchange their participation and experiences in a virtual classroom without limitations in communication (Oztok, Zingaro, Brett, & Hewitt, 2013).

**The Asynchronous Approach**

An asynchronous approach allows students and lecturers to communicate with each other via a discussion board, web log ("blog"), message or email. It is flexible in relation to the time of communication, which has advantages for students to engage in tasks anywhere and at any time (Oztok et al., 2013).

**Text-based Communication in CMC**

Text-based communication is defined as any human interaction that occurs within CMC formats (e.g., email, instant messaging, chat board or a social media). Text-based communication can present human interpersonal behaviours and communication in computer-mediated communication content. For instance, emoticons such as ☺ and ☹, or text-conversation to express body language can reduce the sense of distance and hence promote a relationship between people in an online environment (Skovholt, Grønning, & Kankaanranta, 2014). The text-based communication can be synchronous or asynchronous with similar immediacy behaviours to face-to-face communication in classroom.

**Lecturer Immediacy Concept**

Immediacy is the "measure of psychological distance that a communicator put between himself or herself and the object of his or her communication" (Gunawardena, 1997, p. 9). The practices of immediacy typically include verbal and non-verbal behaviours facilitating warmth, involvement and physical and psychological closeness. Lecturer immediacy refers to the use of such behaviours by a lecturer to create a sense of familiarity and intimacy with the student to create mutual trust, a favourable impression of teacher competence, and increased compliance with teacher's instructions (Wiener &

Mehrabian, 1968, as cited in Zapf, 2008). Previous studies have described lecturer immediacy in terms of verbal and non-verbal communication behaviours between a lecturer and students in traditional face-to-face classrooms (Sanders & Wiseman, 1990; Witt & Wheeless, 2001). However, the current study examines verbal and non-verbal, text-based immediacy lecturer practices within CMC and distance education systems. Text-based communication in this context includes both synchronous and asynchronous communication between students and lecturers, labelled as 'e-immediacy' in this study, which comes from electronic communication practices such as chat rooms or emails. In this study, text-based communication involves two types of e-immediacy behaviours: verbal and non-verbal (e.g., call students by first name, provide personal stories, post emoticons).

***Verbal Text-Based Immediacy Behaviours***

The verbal immediacy behaviours practices considered within this study include any form of spoken interaction within text-based communication by the teacher to impart a sense of immediacy within text-based communication. For example, when lecturers share their experiences, encourage students or address them by their first names (Gorham, 1988; Mehrabian, 1967; Witt, 2001) (see Table 2).

***Non-Verbal Text-Based Immediacy Behaviours***

Non-verbal immediacy behaviours considered within the broader immediacy domain include forms of physical orientation – 'body language' in the popular vernacular – which approximate the sense of physical interaction that occurs in face-to-face conversations. These include gestures, facial expressions, body movement, gaze, etc. (Knapp & Miller, 1994). In the study's context (distance education), non-verbal forms of behavioural practices considered are restricted to text-based behaviours that can replicate such facial expressions, body language or gestures, for example, the use of

emoticons ☺ (Shachaf, 2008; Walther, 2008) – and syntax such as upper case letters for exclamations ("WoW", "!"), marks ("?"), and colloquial expressions ("LOL" for 'laugh out loud').

Previous studies showed that the use of verbal and non-verbal immediacy behaviours supported students' experiences – participation and communication satisfaction – and learning outcomes – affective and cognitive learning (Asiri, 2013; Bailie, 2012; Baker, 2010; Farwell, 2011; Gillies, 2008; Spector, 2012; Walther, 2006). After defining the key terms used in this thesis, the next section reviews the relevant theories.

## Informing Theory for This Study: Teacher Immediacy

The lecturer immediacy concept based on communication messages is represented within the categorisations of explicit and implicit. Explicit messages tend to "carry the content" while an implicit message "conveys emotions and feelings" (Velez, 2008, p. 76). Thus, the explicit message is essentially verbal communication behaviour whereas non-verbal communication behaviour is represented via implicit messages. Immediacy practices have been linked with both verbal and non-verbal behaviours (Witt, 2004). Mehrabian (1976) originally defined immediacy as the "relationship between the speaker and the objects he or she communicates about" (p. 3). It was further defined by McCroskey and Richmond (1992) as "immediacy creates a more engaging atmosphere for the teacher-student relationship" (p. 102). Mehrabian (1971) indicated that "in terms of the immediacy that they can afford, media can be ordered from the most immediate to the least: face-to-face, picture phone, telephone . . ." and "below this, synchronous and asynchronous computerized conferencing and letters or telegrams" (p. 11).

There is a common consensus that teacher immediacy (TI) behaviours can reduce psychological distance in online classroom, which positively affects students' learning perception, and facilitates development of self-direction and student appreciation of distance education courses (Miller, Katt, Brown, & Sivo, 2014). In this respect, Bailie (2011) argues that the teacher must create proactive and personalised communication with students, encouraging them to participate in discussions, share their own experiences and views, and facilitate affective and cognitive development. Such personable behaviour in communication improves student learning, achievement of course objectives and engagement with others (Baker, 2010b; Woods & Baker, 2004). Ondrejka (2013) asserted that students' self-esteem inside the classroom is closely related to empowerment provided by the lecturer's communication style. This increases the sociality of interactions between students and lecturers (Woods & Baker, 2004), which could again positively affect the interpersonal distance of the virtual human to promote social presence in virtual classrooms.

All of these behaviours profoundly affect the teacher-student relationship (Hattie & Anderman, 2013; Knapp & Hall, 2009; Powell & Powell, 2010). This study has adopted text-based behaviour as the main content of lecturer immediacy as shown in Table 1. Many studies have demonstrated that teacher immediacy verbal and non-verbal behaviours have a strong positive correlation with student satisfaction and cognitive learning in the distance education environment (Arbaugh, 2001; Baker, 2010; Farwell, 2011; Ledgerwood, 2008).

This research investigates the concept of immediacy behaviour practices within the context of transactional distance theory, as it is relevant to the issue of the physical separation between the lecturer and learner in online distance education classrooms. The discussion of Transactional Distance Theory follows.

**Transactional Distance Theory**

Transactional distance theory (TDT) was defined by Moore (1993) as "a psychological and communications space to be crossed, a space of potential misunderstanding between the inputs of instructor and those of the learner" (p. 22). The essential notion of this theory is that there are numerous types of interaction between the learner and the content, amongst learners, and between the learner and the instructor/lecturer. Additionally, this theory purports that since distance education involves interactions between teachers and learners who are physically separated, misunderstandings and communication gaps can arise (Kasworm, Rose, & Ross-Gordon, 2010; Keegan, 1993; Wankel & Blessinger, 2013). Transactional distance theory is concerned with physical and geographical separation, and the proper use of behavioural techniques that can decrease psychological distance and facilitate interaction (Cheney & Sanders, 2011; Szücs, Tait, Vidal, & Bernath, 2013). Moore's theory has links with the psychological aspects of the sociality of a learning environment and is concerned with reducing the sense of distance by promoting dialogue in the online learning environment. Transactional distance theory supports the use of communication technologies to increase discussion and interaction and to reduce feelings of separation between students and teachers associated with distance education (Chen & Knudson, 2011; Cheney & Sanders, 2011; Greener, 2009; Lemak, Shin, Reed, & Montgomery, 2005). Through discussion above, psychological distance is seen as more important than physical distance (Moore, 2013; Zapf, 2008). This relates to social psychology closeness between people (Frey, Gouran, & Poole, 1999; Surin~ach & Moreno, 2007). Hence, more evidence arises to support the importance of visibility, and availability of verbal and non-verbal cues discernible in online learning environments where there is no face-to-face communication.

TDT is closely related to the concept of teacher immediacy behaviours because it explores the level of dialogue between teacher and learners, and immediacy is concerned with social presence (Dron, 2007; Haythornthwaite, 2011; Haythornthwaite & Andrews, 2011; Keegan, 2013). Currently, many researchers utilise TDT as an underpinning framework to investigate distance education (Aluko, Hendrikz, & Fraser, 2011; Goel, Zhang, & Templeton, 2012; Shaw & Chen, 2012) and many others have adopted the theory in their research when focusing on the concept of immediacy behaviours in the online classroom (Baker, 2010b; Farwell, 2011; Korres, Karalis, Leftheriotou, & Barriocanal, 2009; Ni & Aust, 2008). McInerney and Van Etten (2001) found that verbal and non-verbal immediacy behaviour can bring students and their teacher closer together, increase participation, encourage openness, and enhance student affective, behavioural, and cognitive learning. Thus, in this study, TDT theory is linked with other theories such as social presence theory and social information processing theory, which could be effectively integrated to reduce the sense of distance and separation (both physical and psychological) between students and teacher.

**Social Presence Theory**

The Social Presence (SP) theory is the second behavioural theory that can support this study in investigating and understanding virtual interactions and social interpersonal communications in an online learning environment. It is defined as feeling the presence of the person with whom one is interacting (Kuyath, 2008). Biocca (1999) asserts: "The minimum level of social presence occurs when users feel that a form, behaviour, or sensory experience indicates the presence of another intelligence" (p. 19). Similarly, Short, Williams, and Christie (1976) describe social presence as "the degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships" (as cited in Cheung, Chiu, & Lee, 2011, p. 65). The theory is concerned

with analysing whether or not a sense of interpersonal relationship is created in a particular interaction (Rice, 1993; Walther, 1992). Furthermore, SP theory considers that the degree of a perception of closeness by the person with whom one is communicating is more important than the actual degree of physical closeness. Social presence is involved in CMC as the "degree to which a person is perceived as a 'real person'" (Gunawardena, 1995). The fact that a lecturer is ready and able to communicate increases social presence for the student and reduces the potential sense of social isolation that can occur in online learning or distance education environments (Kuyath, 2008; Moller, Robison, & Huett, 2012; Veletsianos, 2010). Social presence is commonly considered important for effective face-to-face learning (Joyce, 2009). According to Cobb (2011), social presence has a positive influence on students' satisfaction with communication when they feel comfortable to interact and engage with peers or lecturers in an online learning environment.

According to Baker (2010b), students perceive a sense of isolation in distance education courses because of the absence of real verbal and non-verbal behaviours and interactions with their lecturer, where the social presence of the lecturer may hardly be perceived by students in an online environment. Frisby (2014) examined three levels of social presence of personal behaviour communication in the online learning environment: low, moderate and high, showing that the content was better delivered and understood in online learning courses when the student reported higher social presence due to a sense of lecturer presence. Borup, West, and Graham (2012) found that text-based communication can convey social presence content within instant messaging (IM) or chat rooms to a receiver, promoting interpersonal behaviours in virtual classrooms.

Next, the theory of Social Information Processing is discussed to further support the concepts representative of immediacy behaviour in online classrooms.

**Social Information Processing Theory**

Social Information Processing (SIP) theory is the third closely related theory to the computer-mediated communication concept aligned with the theory of Social Presence (DeAndrea & Walther, 2011). The theory was developed by Walther (1992) to explain how people get to know each other online, in the absence of non-verbal cues, and how they develop and manage relationships in a computer-mediated environment (Farwell, 2011; Goel et al., 2012). The SIP theory is concerned with message-based communication, such as IM, chat rooms or email content (Baker, 2010b; Wilken, 2010).

From the perspective of communication psychology, the concepts of both chronemics (interpersonal management of time) and proxemics (interpersonal management of space) can also generate meaningful non-verbal cues within SIP theoretical framework (Farwell, 2011; Wilken, 2010). The concept of chronemics explores the time taken by teachers to clarify course goals and procedures, and to respond to students. Time taken to clarify course content and to answer student questions, emails and comments in an online environment can increase or decrease the sense of immediacy of teacher behaviours (Farwell, 2011; Shachaf, 2008; Wagner, 1997). Chronemics also refers to the pacing and timing of speech and the length of silence before responding in conversation (Walther, 2006). Together with the social presence, the timing of a response in consideration of silence in messaging can generate a sense of verbal and non-verbal cues for the receiver. Chatting in real time is associated with pacing and conversational turn taking (messages that sometimes overlap). However, although a faster response quickly builds an impression of a relationship, a slower response triggers more powerful reflection on the deeper meaning of an inquiry (Salmons, 2009). In other words, if a lecturer takes a long time to respond, a feeling of distance from the lecturer is created; if a lecturer responds immediately, students feel

closer to that lecturer (Farwell, 2011). Moreover, CMC can foster the formation of positive social interpersonal impressions by timely responses, which are likely able to build a useful feeling of closeness rather than distance because the sending and receiving of messages is immediate (Amichai-Hamburger, 2013).

### Theory Contextualisation with the e-Immediacy Concept in Distance Education

This review has shown how these theories are relevant to distance education settings to promote lecturer electronic immediacy behaviour. Figure 2 (see p. 108) shows how TI maps to TDT, SP and SIP theories, supporting a potential positive influence on receivers' (students') perceptions of distance/ isolation when teaching and learning in a virtual setting is coupled with lecturer immediacy behaviours. The next section reviews distance education history, and associated issues and opportunities.

## Nature of Distance Education

### Ontological and Epistemological Considerations: Working Definitions

The terms 'ontological' and 'epistemological' are integral when explaining the human interaction factor within CMC content in online learning. In simple terms, ontology is the philosophical inquiry into 'reality, nature of existence', or 'being' (Mills, Durepos, & Wiebe, 2009). As an internal lens, ontology is how "we see and experience the world" (Allison & Pomeroy, 2000, p. 13). Human perception is a reflection of an "ontological level of reality, which manifests its categorical novelty in the emergence of meaning" (Albertazzi, 2010, p. 199). Ontology deals with existence and being, and with "what can be rationally understood, even partially, in relation to such existence and being" (Poli, 2010, p. 1). This research will adopt a working definition of ontology to refer to the ontological challenges in terms of the sense and perception of physical and psychological isolation that participants may experience in a distance education

environment. This is in relation to students' attitudes towards distance education and their online experiences before and after experiencing lecturer e-immediacy behaviours. In this respect, elements of interpersonal behaviours could promote human interaction presence by e-immediacy behaviours of the lecturer in an attempt to increase students' experiences and learning achievements in online learning settings.

Epistemology is the philosophical questioning of knowledge, the assumptions upon which it is based, and questioning what we "do know" and "can know" (Allison, 2000, p. 13). Epistemology has moved beyond the "static environment" of "individual knowledge and its acquisition" to inquire into "information change, its flow among groups and its place within interaction" (Girard, Roy, & Marion, 2011, p. 1). This research will employ the term epistemology in relation to lecturer behaviours including e-immediacy practices and its potential impact on the interpersonal relationship and experiences of students in their online inquiry towards building their understanding and constructing their knowledge.

Although it is problematic in many instances to isolate ontology from epistemology and not see them both as a continuum (Samarji, Hooley, & Gidron, 2015), this research will refer to: (a) ontology when stressing distance education in its isolated and separated features and the respective perceived isolation of students enrolled in distance education courses; and (b) epistemology when highlighting online delivery of content to students associated with transactions, and verbal and non-verbal e-immediacy behaviours of a lecturer in a distance education environment.

**Concept of Distance Education: Ontological Perspectives**

Distance education was first defined by Michael Graham Moore during the 1972 World Conference of the International Council for Correspondence Education as an instructional method where teaching is facilitated through communication by print,

electronic, mechanical and other devices (Moore, 2013). Following the presentation of an initial description others have approached distance education as a formal educational setting wherein educators and students are separated by time and space (Abels, 2005; Aggarwal, 2007; Muirhead, 1999). Teaching and learning activities are not confined to classrooms and can include e-learning, blended learning, and flexi-learning, all of which are forms of distance education (Caulfield, 2011; Halverson, 2009; Moore, 2007).

Distance education originated with the intention of providing flexible access to education for those bound by time or disabilities, or as a means for employed people to upgrade their skills through independent learning without having to leave their jobs (Garrison, 2011). According to Drew (2008), most students enrolling in distance education courses are mainly attracted to its flexibility in instructional delivery. The ontological term is used to describe the being of human presence in a distance education environment. Ontologically, students in distance education experience separation in time and space (Joo, Andrés, & Shearer 2014).

Distance education is flexible learning, where students have the freedom to choose a convenient place and time to learn (Akhter, 2015). As illustrated by Hussain Shah & Ahmad, (2014), flexible learning enables the students to make decisions regarding learning what they want to learn, in terms of the frequency and duration, as well as time. In addition, they can determine how they want to learn, in terms of their modes of learning (Bernard, Borokhovski, & Tamim, 2014).

As distance education is ontologically characterised by separation in time and place (Joo, Andrés, & Shearer 2014), it would not be surprising that students enrolled in distance education courses may perceive a sense of isolation and separation when compared to students enrolled in conventional face-to-face courses. This type of ontological restraint posed an epistemological need for more effective communication

avenues and opportunities within text-based e-immediacy behaviours of lecturers (Courtney & Wilhoite-Mathews, 2015). Thus, the invention of new ICT tools (e.g., video conferencing, podcasts, social media, email and discussion boards) opened new avenues of communication between the learner and lecturer (Naidu, 2014). The gender of the lecturer herself/himself is of great importance in the Saudi context and is now discussed in relation to the lecturer immediacy concept.

**Gender and Lecturer Immediacy**

Several studies have found that gender is an important factor to consider when examining perceptions of students and their communication behaviours in online classrooms (Rovai, 2005; Sullivan, 2001; Yukselturk, 2009). There can be gender differences in the awareness of use of technology, information and electronic communication (Mahmood, 2012). According to Burgoon (1995, as cited in Guerrero, 2013), several studies on gender roles in immediacy behaviour found that there were differences in perceptions of lecturer immediacy between female and male students. Females preferred submissive visual cues of immediacy behaviour, such as head tilt, silence, smiling face, kind words or less talk. In contrast, males tended to display these immediacy behaviours less than females, and instead showed more aggressive behaviours, implying dominance. Culturally, females in the Saudi society experience boundaries to the extent that they can communicate with males. At schools and universities, males and females learn at separate premises, whereby communication online is no exception.

When examining lecturer gender and immediacy practices, female lecturers tend to provide more feedback, answer questions and receive feedback from students around their impression of homework or class assignments (Christensen, 1995). Other studies found that female lecturers employ more body language cues to encourage participation,

such as smiling and moving up and down the classroom (Gorham, 1988, as cited in Kim, Kwon, & Cho, 2011). Brophy (1985) found that the teacher immediacy behaviours of females and males teachers were similar at the elementary school level, and female teachers displayed equal levels of teacher immediacy practices with both male and female students (Bellamy, 1994, as cited in del Castillo Andrés, Granados, Ramírez, & Mesa, 2012).

Generally speaking, gender and lecturers' interpersonal behaviour can affect student learning outcomes (Acker & David, 1994; Lai & Gwung, 2013; Violette, 2002). Female students are more accepting of learning and communicating with female lecturers more than with male lecturers, and vice versa for male students (Menzel & Carrell, 1999). Furthermore, female students learn better when a female lecturer engages in high immediacy in communication, but the opposite is true for male students when a male lecturer shows low or moderate levels of immediacy behaviour (Hsu, 2010; Santilli, 2010). These findings reinforce that gender plays a role in students' perceptions of their lecturer's immediacy practices in relation to their learning.

**Transactions within distance education: Epistemological perspectives**

Distance education existed long before the emergence of computers, e-learning innovations, and ICT. The origins of distance education can be traced as far back as 1728 when the Boston Gazette advertised a shorthand course by mail. A more comprehensive distance education initiative emerged in 1873 with a correspondence course created by Anna Ticknor in Boston. In 1892, Pennsylvania State University developed a 'rural free delivery' program, another correspondence course in higher education intended for rural families (Willis, 1994). In the early 1900s, lantern slides, railroads, and postal service made distance education possible for non-traditional learners and those whose geographic location prevented them from continuing their

education (Bidgoli, 2004; Jiang, 2008). During the 1920s, delivery of instruction in distance education entered into the electronic and technological period with emergence of radio technology. The first credit courses in the University of Iowa were offered through radio, subsequently followed by over 176 stations offering distance education in the United States. However, radio delivery for distance education did not last long as television took the place of radio by the 1930s and US universities began offering teaching programs and college credits through television (Casey & Upton, 2008). At this time, distance-learning instructions were delivered through one-way broadcasting by video and television with no direct interaction between learners and instructors.

In the 21st century, distance education developed further and achieved greater prominence with the widespread availability of technological innovations such as videoconferencing, software and websites of virtual learning environments, computers, and the internet. Consequently, the method of delivery used in distance education expanded along with diversity of learners enrolled in distance education (Bidgoli, 2004; Harry, John, & Keegan, 2013; Jiang, 2008). In the history of distance education, postal correspondence courses can generally be considered as the first generation of distance education, open universities (Evans, Haughey, & Murphy, 2008). Despite limitations in delivery methods, distance education in universities can often have a larger volume of student enrolments compared to their traditional courses (Moore & Kearsley, 2011b; Shih & Hung, 2007).

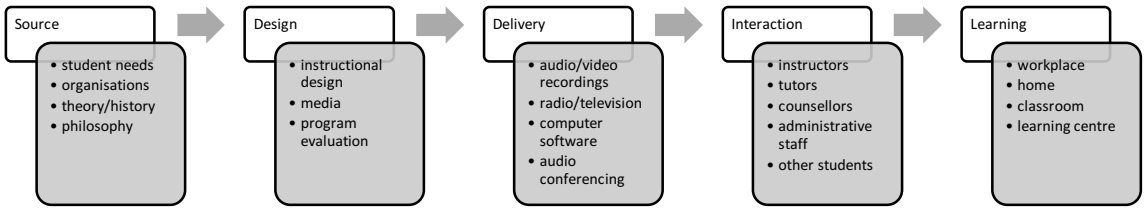
This was followed by a second generation, defined by the mass media of television, radio, and film production (Anderson, 2010). The third generation of distance education saw the emergence of the 'tele-learning generation' where interactivity was made possible through audio-conferencing and video-conferencing programs. This marked the first step away from total asynchronous models of distance education towards an

instructional model combining both asynchronous and synchronous communication (Perry, 2011). Computer software and the internet transformed distance education significantly as it supported educators to overcome the major difficulties experienced in previous delivery approaches. This led to the proliferation of distance education courses with renewed enthusiasm (Huffman, 2011; Norman, Vleuten, & Newble, 2002; Simonson & Schlosser, 2008).

Distance education is now conducted with the use of different forms of digital technology-mediated interaction and communicative tools (Moore, 2013; Watada, Xu, & Wu, 2013). As new computing-based technology has emerged, distance education has facilitated the communication between participants, particularly with the introduction of social networking and email (Bristol & Zerwekh, 2011; Ruhe & Zumbo, 2009). Distance educators now face challenges brought about by changing technology platforms and are being encouraged to create courses that include sophisticated interactivity, simulation of teacher behaviours, user-generated learning and increased capacity to approximate human interaction within CMC (Cleveland-Innes & Garrison, 2010).

When considered within actual implementation, a distance education strategy can vary depending on the type of delivery method employed. However, in terms of students' interaction and teacher activities, almost all strategies are the same. A generic model of the strategy employed in distance education is illustrated in Figure 1 (Moore & Kearsley, 2011, p. 34).

***Figure 1 – A systems model for distance education***




The following step-by-step strategy has been illustrated by Corry, 2012 for distance education courses using internet-based audio-visual technology.

a. *Planning for broadband network acquisition and installation*
b. *Designing video conferencing using voice, video and data*
c. *Acquiring hardware and networking equipment*
d. *Installing broadband antenna, software security, servers and multimedia conference managers, and quality of service control*
e. *Integrating new video conferencing equipment into the curriculum of participating schools*
f. *Aligning class schedules of schools to enable resource sharing*
g. *Teacher in-service training including integrating video conferencing technologies into the curriculum*
h. *Selecting courses for video conferencing and facilitating collaboration between schools*
i. *Implementing video conferencing*
j. *Assessing student achievement by gathering data*
k. *Enriching content areas by developing worldwide partners*
l. *Sharing instructional resources and expanding available courses by cooperating with other regional schools*

The strategy proposed by Corry (2012) reinforces that distance education is not simply about acquiring information, but is concerned with guiding the learner, discerning whether learning is actually occurring, and removing barriers that hamper learners' comprehension.

The other aspect of delivering distance education is the mode in which the course is taught through the adoption of specific pedagogical methods.

a. *Assignment: Students are asked to complete a task related to the lessons that have been taught in order to show their comprehension of the topic.*
b. *Discussion board: A lecturer posts a topic on the discussion board, and students participate in the discussion by posting their views, replicating discussions in face-to-face classes. This is a form of asynchronous communication, meaning that students who participate in the discussion do not have to all be present at the same time, and can access the discussion at different times.*
c. *Seminar: Teachers deliver a lecture in an online classroom in real time through audio, video and chat functions. There are many sites that provide online seminar facilities, including Blackboard, Adobe Connect, Blog and eCollege. These online learning sites allow students to see others in the virtual classroom, listen to their views, speak in groups or individually, and write messages.*
d. *Chat: Students exchange their experiences and ideas with peers and a lecturer with synchronous and asynchronous chats. The topics need not be predetermined and students can post comments or get feedback on any issue related to the course.*
e. *Office hours: Lecturers set specific hours on days when they can meet students face-to-face in their physical office or online through video or audio conferencing. This approach enables lecturers to communicate with students*

*and develop a level of familiarity with them that can reduce a possible sense of distance between students and lecturers in such courses.*

f. *Question and Answer: This type of session can be conducted either through asynchronous discussion boards/chats or synchronous audio or video conferencing. They are exclusively meant for students to clarify their doubts on a subject; students can ask questions and resolve problems through discussion with their teacher and peers.*

This historical discussion of the nature of distance education aimed to clarify the importance of lecturer e-immediacy behaviours in this type of learning environment. Reviewing distance education strategy explored ways to effectively apply lecturer e-immediacy practices. Lecturer text-based immediacy behaviours are likely to provide positive effects of transactional distance in distance education settings to promote students' perceptions of lecturer presence. For instance, both students and lecturers must ensure that their posts or replies are timely, ideally within 24 hours from the time that conversation is initiated. These considerations can secure the confidence of participants in these interactions, positively influencing perceptions of social presence, enabling positive learning outcomes and increasing lecturer e-immediacy behaviour effectiveness.

**Integrating E-Learning in Distance Education**

Communication between teachers and students in distance education occurs via a range of media including print, electronic and mechanical means (Bajt, 2009; Dillon, 1989; Haythornthwaite, 2011; L'Abate, 2011). The substantial development in information technology has made it an indispensable part of distance education, which is likely to improve the future of this electronic learning environment as these technologies deliver information and ease of communication between teachers and students. Since computers

and the internet have now become widely available, communication through this medium has also become a standard way of life. In fact, ICT-based education, generally referred to as e-learning, is in essence more advantageous to delivery methods of learning and communication (Drew, 2008; Hall, 2008; Visser & Visser, 2005). E-learning has brought about a significant shift in pedagogical assumptions and approaches, signalling a new era of distance education (Garrison, 2011).

While there are many definitions of e-learning, these mainly focus on the same set of features that emphasise the use of electronic technologies and the internet to deliver instruction and improve learning (Holmes & Gardner, 2006; Tai, 2007). E-learning has been defined as the use of ICT to facilitate learning (Horton, 2011; Sistelos, 2008), with instructions teaching delivered through computers and the internet containing information relevant to learning objectives (Clark & Mayer, 2011), and learning that takes place with the help of the internet or network-based technologies (Dron, 2007; Pierre, 2010). Synchronous and asynchronous learning events can be created, supported, and administered through internet technologies in the distance education environment through e-learning (Garrison, 2011; Iskander, 2007). E-learning programs typically require video and audio technology, multimedia workstations, web authoring tools, web servers, and an internet connection (Horton, 2011). This medium can incorporate a whole host of activities ranging from delivering instruction, supporting learning, and conducting assessment through digital technologies (Pachler & Daly, 2011; Sharma & Mishra, 2007). It can help students to develop a greater depth of understanding of their learning material through a range of interactive media. Currently, e-learning is used in several ways, be it learner-led, facilitated, instructor-led, embedded, telemetering or e-coaching.

Distance education is the generic term used to refer to education courses delivered through various media formats whereby teachers and learners cannot interact personally in a classroom setting, whereas e-learning refers to instructional programs conducted online with computer-based technologies in traditional classrooms or distance education settings (Alebaikan & Troudi, 2010; Monolescu et al., 2004; Ruhe & Zumbo, 2009). E-learning is about the use of computer-based platforms in any form of learning (Orellana, Hudgins, & Simonson, 2009; Wankel & Blessinger, 2013), and can be associated with all types of learning strategies, including distance education, traditional classroom learning, blended learning and others. According to Garrison (2011), blended learning is considered the most prevalent form of e-learning at different levels of study in universities; that includes face-to-face classrooms along with independent learning outside the classroom, conducted through online contact with teachers. Distance education has also emerged as a significant field for application of e-learning as these computer-based technologies can be used to link instructors, resources and learners separated by time and space (Moore, 2011).

While these two terms are distinct, scholars suggest that there is a historical link between distance education, flexible learning, and e-learning (Moore et al., 2011; Wilen-Daugenti, 2009). Generally, the origins of e-learning are marked by a clear link to approaches designed to facilitate learning at a distance (Bristol & Zerwekh, 2011; Gold, Thorpe, & Mumford, 2010; Wankel & Blessinger, 2013). Horton's (2001) history of e-learning outlined that across England this system is usually identified as the first attempt to use communication infrastructure to extend training beyond the sound of the human voice (Donnelly, Benson, & Kirk, 2012; Horton, 2001). Positing a different history, Holmes and Gardner (2006) argue that the origin of e-learning may be traced back to the 1920s, with the development of Sydney Pressey's testing machine, an

apparatus designed to provide programmed instructions, conduct tests and evaluate scores. In their summary of learning technologies, Conole and Oliver (2006) are of the opinion that the idea of learning with the use of computing technologies began in 1945 when a system with a hypertext-like capability or 'Memex' was described in the book *As We May Think* (Bush). Following these basic computing technologies, the 'Teaching Machine' was developed by Skinner in 1954, and Programmed Learning Theory was introduced by Pask in 1956 as the first commercial adaptive tutoring system based on cybernetic (cognitive) theory. In 1987, the Hypercard developed by Atkinson became widely used in schools, involving the use of a rich multimedia and hypertext environment following the Piagetian idea of learning environments. With the beginning of mass production of microcomputers in 1977, digital technology made its way into schools (Andrews & Haythornthwaite, 2007). With the development of the internet and computers, and greater interest in asynchronous discussion groups, the term 'e-learning' emerged in the middle of the 1990s (Garrison, 2011; Szücs et al., 2013).

It is expected that digitally mediated distance education in the 21st century will see further development of communication forms capable of simulating real-life interactions to the extent that instructors and students can communicate as they would in a real classroom (Cooke-Plagwitz, 2008). Development in augmented reality (AR) provides capacity to build virtual classrooms through 2D or 3D images or videos to give users a sense of real-world interactions (Höllerer & Feiner, 2004). The fate of distance education in the 21st century is premised on its success in exploiting digital technologies to facilitate seamless interaction between participants and comprehensive access to learning materials.

In general, as evident from the above excursus, computer- and internet-based communication technology has made noteworthy contributions to the field of education,

and attracted the attention of researchers in recent years (Pribilová & Mišút, 2011). A survey of synchronous distance education courses revealed that 16 to 22% of the courses used internet instruction as their main mode of delivery (Ndon, 2010). Ndon's study also showed that 43% of educational institutions used computer-based instruction across course offerings, and 62% expressed their desire to use internet instruction.

E-learning platforms in distance education are becoming more robust with fully integrated features of video conversations, messaging, information sharing and collaborative work that can be done remotely and at will (Harris, 2011). They can be a placeholder for instructional materials and retain the most important and desirable attributes through innovative instructional design (Howard, 2005; Zapf, 2008). The use of e-learning in distance education helps tackle two key issues; the first relating to information storage as well as efficient transfer and processing of information, and the second focusing on enabling interaction between students and teachers over long distances. In interactive online lectures, the lecturer can show the concept of a course by interactive tutorial lessons, design current activities for students, and set evaluation checkpoints such as prizes, penalties and timelines (Richmond & Cummings, 2005). Digitally-mediated communication permits simultaneous complex interactions and stimulates network formations in the absence of face-to-face contact (Bathelt & Glückler, 2011). These digital-mediated communication tools do not require face-to-face interaction and can be achieved regardless of differences in time and location between participants to support communication content in online learning environments (e.g. Facebook, Twitter, YouTube, email) (Abels, 2005; Harlow & Guo, 2014; Wright & Webb, 2011). Thus, using both video conferencing and social media could enhance the communication between lecturer and student, which may promote a sense of human behaviours in CMC to increase learning outcomes in online classrooms.

As well as being an immersive environment, the internet makes sharing documents more convenient (Frith & Clark, 2012). Students can present their views and participate in ways that are similar to the format of face-to-face interaction in a classroom, by using immediate feedback and synchronous conversations (Moore & Anderson, 2012). Furthermore, they can employ social networks with their lecturers to facilitate discussions around questions, comments and replies to provide a feeling of close communication and immediate interaction between learner and lecturer in online learning environments (Farwell, 2011). For example, instant messaging can occur between single individuals or among groups at any time and web-based chat services can be organised around a particular purpose. Student participation can be personalised in the virtual setting as students can participate in threaded dialogues and view their classmates' posts as if they were speaking in a traditional classroom. Discussion forums can be created to feature text messages that also include photographs and other types of visual materials. User identity can be projected, the presence of others felt online, and communities created with common conventions and norms.

'Web 2.0' is another enhancement that revolutionised interaction and sharing over the internet, compared to traditional web pages that could only display information and graphics (Shum, 2008). Contrary to traditional websites where people are typically accustomed to passively watching and listening to media, Web 2.0 allows creation of user-generated content in a virtual community. In the distance education context, participants in synchronous classes can participate and accomplish their task in real time. Moreover, users can actually interact with their chosen content by ranking, commenting and sharing it. Teachers on the other hand can scan the 'feeds' and see how students are participating, thinking and exchanging ideas (Muchnick, 2011).

This type of learning provides learners with opportunities to communicate with their teachers outside traditional teaching times. Moreover, since information technology increases opportunities for interaction between students and teachers, students may be able to learn more effectively (Arbaugh, Duffy, & Kirkley, 2005; Edmunds, Thorpe, & Conole, 2012). As time constraints have reduced face-to-face student socialisation, these forms of internet-based learning can also promote student relationships via online meetings or membership of a social network (Farwell, 2011; Mazer, Murphy, & Simonds, 2007). Internet-based interaction can actually facilitate relationships that may be inhibited in face-to-face situations. As cues, such as age, gender, race, and appearance, are not visible in text-based interactions, such internet discussions tend to form around topics of mutual interest. Furthermore, the Information Resources Management Association (2011) found that cognitive ability, teaching utility and social presence were created as participants tend to act in a socially encouraging manner, and anticipation of future interaction was fostered. Additionally, social presence can help create and sustain a community of committed learners to facilitate effective learning (Caulfield, 2011; Denis, 2005; Halverson, 2009; Luppicini, 2007; Moore, 2007).

The main problem with implementing e-learning in distance education courses emerges from the fact that it is a capital-intensive business requiring enormous investments in state-of-the-art technology, computers, networking equipment, technical support, hardware and software upgrades (Discenza, Howard, & Schenk, 2002; Rudestam & Schoenholtz-Read, 2010; Visser & Visser, 2005). In Saudi, there is lack of experience in the use of computer and digital media amongst both teachers and students, which could create frustration, anxiety and confusion when they encounter complex interfaces and procedures. Although the internet and computers have been employed for many years, their use may be problematic for some students and add complexity to their

learning experience (Hall, 2008). When e-learning is used in the distance education context, participants need to master the process of navigating the online platform (Cleveland-Innes & Garrison, 2010; Vrasidas, 2002). Additional effort and time may be required for the orientation of users, particularly those that are new to the technology and online-based modes of teaching and learning (Feldman & Alexander, 2012).

This discussion of distance education has elaborated the centrality of e-learning to online learning and its communication methods, and the student barriers in this electronic learning environment. In distance education, internet-based platforms can create a sense of a virtual classroom enabling social interactions between teachers and students separated by space and time. In the electronic learning environment, participants can be more focused on the topic and discussion without the distractions that can occur in the live setting of a traditional classroom. The key issue for instructional delivery modes in online distance education is to overcome problems in electronically-mediated communications simulating real-life classroom interactions as much as possible. The next section is focused on these communication patterns in online learning environments.

***Communication styles***

Since communication and interaction in distance education is delivered by either synchronous or asynchronous modes, it is important to explore these types of interactions and their expected impacts on learning outcomes. Synchronous interactions refer to those that occur between participants at the same time where they respond to each other simultaneously as in real-life communications. Synchronous communication in distance education involves real-time interaction between teachers and students and therefore requires all students to be online at the same time (Frith & Clark, 2012; Novotny & Davis, 2006). The only limitation with synchronous communication is the

fact that a set time has to be fixed for the meeting or lecture, which can be problematic, particularly when members of the class are living in different time zones.

Direct contact between teachers and students is replicated through 'in class' experience provided by audio-visual technologies (Annetta, Folta, & Klesath, 2010). Not all synchronous modes of communication in distance education can mimic direct interaction between teacher and student. Teaching and learning through audio-based systems is evidently different from face-to-face instruction as it lacks the ability to transmit live visual and non-verbal information, which can be necessary to facilitate rapport, interaction, feedback, and optimal learning (Moller & Huett, 2012; Willis, 1994; Zapf, 2008). Today, synchronous distance education is not limited to voice communication as participants can transmit both data and images in real time. These virtual meetings encourage collaborative interactions between participants similar to traditional face-to-face courses as people can listen to the lecture, talk to each other, and watch interactions in real time. This real-time interaction is enabled through two-way video conferencing where learners see and hear their teacher and interact with them by either typing responses or by responding directly through videoconferencing. Synchronous communication can be conducted via media, including: text chat (humour and first names feature); videoconferencing via Skype (facial expressions are clear); audio conferencing; 3-D virtual world construction; and social networking services, including, Facebook and Twitter. The other mode of communication in distance education classes is the asynchronous style.

By definition, asynchronous modes of communication in distance education involve a teaching and learning environment where instruction offered by the teacher is accessed by students at a time convenient to them (Hall, 2008; Novotny & Davis, 2006; Simonson, 2003). Without having to be online at the same time as other members of the

class, the instructor and student participating in asynchronous communication can log in at different times and continue the conversation. They record their video or text messages at the common portal, which is accessible at any time, and the addressee can subsequently view the message and reply back through the threaded discussion, e-mail, or social network. The asynchronous environment, particularly in adult education, enables flexible access to teaching material, self-study, and collaborative learning (Lytras, De Pablos, & Damiani, 2009; Politis, 2008). This form of communication is characterised with self-paced learning through intermittent access and delayed interaction (Frith & Clark, 2012; Simpson, 2009). Most distance education courses deliver their course material and lecturer instruction using asynchronous mode through the internet. Learning management systems designed for this purpose typically provide asynchronous tools, such as, discussion forums, internal e-mail, text-based chat, file exchange, audio/video conferencing, and whiteboard (Novotny & Davis, 2006; Visser & Visser, 2005). However, out of these six tools, text-based communication and interaction are favoured over audio/video as it is more convenient and prevents speaker monopoly of a discussion common in a voice environment (Lau, 2000; Moller & Huett, 2012). Distance education instructors and students participating in this mode usually use asynchronous tools, such as, e-mail, Facebook, WhatsApp and so on, to send text-based instructions or messages.

Asynchronous forms of distance education have several advantages in terms of flexibility and instructional content. This format allows greater flexibility as participants can attend classes at a time that is convenient to them. Most asynchronous instructional content and communication is file-based, so its transmission can occur without problems even at lower bandwidths of internet connectivity. Moreover, participants usually have more time to read and reflect on messages they receive before responding.

On the other hand, delayed interaction in asynchronous learning environments means that the instructor may not see the responses of students immediately which slows the development of their understanding of the subject. Asynchronous modes of communication in distance education prevent concurrent and spontaneous exchanges of ideas essential to synergy and new knowledge building (Reisman, Flores, & Edge, 2003; Rogers, 2009). As students are expected to post their comments, instructors may also be overwhelmed by a high volume of messages that accumulate and may be unable to respond in a timely manner.

Both the synchronous and asynchronous modes of communication in distance education have their own strengths and weaknesses, but researchers have suggested that students register higher numbers of responses and reactions in synchronous interactions as compared to threaded discussions (Oztok et al., 2013) . In specific situations, the asynchronous mode may be preferable over the synchronous mode, as shown in Table 1 below.

***Table 1 – Opportunities of asynchronous mode in specific situation***

| SYCHRONOUS MODE | ASYNCHRONOUS MODE |
|---|---|
| **Learners need reliable technology as breakdown can significantly depreciate level of learning.** | Technology breakdown has little effect as student can wait, have it fixed or replaced, and continue the following day. |
| **Learners often need to have high-level technological skills, particularly in on-line video meetings run by complex communication software.** | Demand on technological skills may be similarly high but since there is no time constraint, learners have plenty of time to experiment and learn their way around. |
| **Requires fast typing skills (text-based) and knowledge of common abbreviations, emoticons, text speak expressions.** | Typing skills are less important. |
| **Attendance is critical as missing a session can greatly reduce learning.** | Learning materials are always available. |
| **Requires significant amount of participation and interaction with peers to get motivated.** | Only requires self-discipline and self-motivation. |
| **Learners must always come prepared.** | Less need to prepare as learning material can be reviewed over and over again. |
| **Protocol based on short questions and answers thus less time for reflection.** | Detailed responses can be thought out. |

*(Source: Attwell & Hughes, 2009)*

### *Interaction and Communication in Online Distance Education*

The synchronous and asynchronous communication approaches have provided effective interaction in distance education (Connell, 1998) which may promote social connectedness and facilitate better understanding of common behaviours between teacher and student (Yuzer, 2014). Better interaction between teacher and student can improve collaboration, encourage participation, and aid self-direction on one's own learning path (Remenyi, 2009; Yuzer, 2014). Interaction in distance education can be between learner-content, learner-teacher, learner-learner, and learner-interface (Moore & Kearsley, 2011; Szücs et al., 2013).

Primarily, distance education employing e-learning is based on human-machine or human-technology interaction rather than human-to-human activity. Interaction in distance education involves feedback loops where teacher and learners exchange responses in a mutual discourse through teaching technologies afforded by audio and video or computer-mediated communication (Belanger, 1999; Information Research Association, 2010; Stephanidis, 2011; Vrasidas, 2002). Achieving interaction success in distance education is important for instructor guidance, student activities, feedback, and other social exchanges or collaborative activities (Luckin et al., 2013).

A lack of co-presence or the influence of teacher and learner proximity and physical interaction can be compensated for by the extensive connectivity offered by modern electronic networking systems (Haythornthwaite, 2011), thus, reducing the remoteness of an educational environment (Farwell, 2011). The implementation of these electronic communication functions enables a certain degree of behavioural communication in place of body language interactions in traditional classroom situations (Harry et al., 2013). For instance, the instructor using a smart board and camera at the same time can position his mouse pointer on a particular place to draw the student's attention to some

important detail as he would by pointing with his finger in a traditional classroom. The time of response is an effective factor to improve the communication and increase interaction between students and lecturer in an online classroom (Farwell, 2011; Walther, 2006).

The incorporation of newer technology does not necessarily mean that digital communication can completely simulate face-to-face interactions between teacher and students as happens in traditional classrooms. Indeed, mediated communication is often assumed to be less effective compared to traditional classrooms because it lacks the sense of understanding that can be imparted in a face-to-face conversation (Dabaj, 2011; Peters, 2001; Simonson, Schlosser, & Orellana, 2011). It can be difficult for the teacher and students to participate in the conversation in a seamless manner as in real life interactions (Richardson & Swan, 2003) with the lack of proximity leaving it open to misinterpretation and misunderstanding (Rothmund, 2008). This is because communication in a distance education environment lacks the three-dimensionality of physical communication, often provided by gestures, local context, and other cues to aid mutual understanding (Haythornthwaite, 2011).

## Opportunities, Challenges and Concerns Relating to Distance Education

Literature considering the rudiments of distance education consistently discusses opportunities and advantages, however, the negative effects on student learning are rarely discussed (Besser & Bonn, 1996; Bond, 2002; Daft & Lengel, 1986). This section will discuss both the benefits and concerns related to distance education particularly in contrast to conventional face-to-face educational frameworks.

The main rationale behind distance education is the fact that students can study anytime and anywhere. The distance education classroom is independent of constraints associated with location based meeting and physical proximity as long as learners accept the requirement to tackle their workload independently (Arnold, 2011). This gives students the clear advantage of studying at their own pace whereby they can schedule their study load in line with work and family commitments. With these features of flexible scheduling and convenience of learning, distance education allows people with other work or life commitments to access higher education.

In terms of student learning, instructions can be individualised, and students can exercise greater control over their learning outcomes. Distance education allows greater control of content, permitting students to spend more time on subjects of interest. With the core principles of student-centred and flexible learning, distance education courses allow learners the freedom to decide what, where, when, and how they learn. Moreover, students can also benefit from individualised teaching, minimal travel requirements, increased time responding to questions posed by the teacher, and opportunities to speak anonymously in chat rooms. There is an emphasis on flexible learning in distance education with its adaptability to learners' needs and circumstances unlike traditional classrooms (Arfield, Hodgkinson, Smith, & Wade, 2013; Taylor, 2002; Zheng, 2007).

For educational institutions, distance education can lead to increased enrolment, address the needs of students who have specific needs (e.g., job demands, disability), and increase retention and graduation rates. The improvement in the academic experience for the students will help in building a good reputation for the institution, foster technological advancement in pedagogical delivery and create a good public impression. The flexibility provided by distance education can make instructors more creative and can reduce expenditures associated with building and maintenance.

Distance education makes education accessible to all and supports the use of best practices in teaching and learning via ICT (Harry et al., 2013).

The main concern on the other hand primarily relates to poor communication because teachers and learners are located in different places. There are additional challenges associated with synchronising provider and learner schedules. Extra work must be performed by the assigned teacher in resolving glitches during course delivery as technological failures can hamper the delivery of courses. Teachers also do not have the opportunity to keep a casual eye on a learner's performance and progress, and development of a beneficial teacher-learner relationship is inhibited due to less face-to-face contact. Thus, distance education has not achieved the same level of acceptance as exists within face to face delivery courses because it does not let both teachers and students experience traditional teaching practices and social interactions accessible in traditional classrooms (Ferreira, Klein, Freitas, & Schlemmer, 2013).

There can also be an absence of group work in distance education because learners may not be available at the same time to work in a group. Although there is greater flexibility and autonomy in distance education, it can result in social isolation and loneliness due to absence of social links where students can share difficulties and solve problems with others. According to Moore and Kearsley (2011) and Unger (2006), distance education provides students with fast and economical learning compared to conventional education, but it also requires students to virtually attend classes and complete work on one's own. If not managed correctly, self-paced learning can lead to delays in feedback resulting in impediments in the learning process (Monolescu et al., 2004).

**Student Retention in Distance Education**

Several studies have shown that there are many reasons underlying student retention rates in distance education or online classroom programs (Anderson, 2006; Boston et al., 2014; Dahan, 2008). According to Rovai and Downey (2010), there are seven important factors leading to successful online courses, which are "planning, marketing and recruitment, financial management, quality assurance, student retention, faculty development, and online course design and pedagogy" (p. 141). The communication quality in distance education is an important factor relating more to student motivation than to teaching and course content (Serwatka, 2005). Anderson (2006) proposed that the reason for low student retention in distance education courses is lack of motivation in their learning. Anderson stated that, "the best predictor of student retention is motivation. Retention services need to clarify and build on motivation and address motivation-reducing issues. Most students drop out because of reduced motivation" (p. 77). Because of the sense of isolation among students, the social presence element of a lecturer is one of many factors affecting online courses (Nichols, 2010). According to Shin (2003) transactional presence "refers to the degree to which a distance student perceives the availability of, and connectedness with, people in his/her educational setting" (p. 71). This degree of transactional presence is related to interpersonal communication between students and lecturer, which serves to decrease the students' feelings of isolation in online classrooms, which in turn is likely to reduce students' dropout rates from online classrooms. Thus, interpersonal communication can be an effective tool applying verbal and non-verbal practices of lecturer immediacy to retain students in distance or online education environments (Shin, 2003).

The lecturer's immediacy represented by timely responses can support both the social presence of the lecturer and students' learning and achievement. Rovai and

Downey (2010) found that the 24/7 availability for responses in online courses can be considered as an active element of support and social presence. Hence, lecturer immediacy behaviours practised in verbal and non-verbal forms may not only improve learning outcomes but also help in reducing the high dropout rate in distance education.

## Lecturer Immediacy in the Distance Education Environment

The lecturer immediacy concept is considered as "behaviour that communicates approachability and closeness between interactants" (Mehrabian, 1971, p. 1), and capable of promoting the relationship between lecturer immediacy behaviours and students' learning. This relationship through immediacy behaviours has the ability to reduce the sense of distance for students by receiving highly immediate lecturer behaviours such as vocal variety, gestures, humour, and personalised examples during class (Andersen, 1986). Additionally, the lecturer that engages in immediacy behaviours can support social presence, which leads to a reduced feeling of physical and/or psychological distance with remote students and this improves their learning outcomes (Gorham & Zakahi, 1990, p. 354). Bodie (2009) examined the effect of teacher immediacy on students' perceptions of their cognitive learning, achievements and satisfaction with their online courses, based on video and still photos of high and low immediacy behaviours in virtual classroom. The results, gathered from 576 undergraduate students, showed that students who were taught using high immediacy lecturer practices saw positive effects on their satisfaction and learning outcomes – more so than students who received low immediacy behaviours from their lecturer in the virtual classroom. In addition, the findings indicated that lecturer immediacy behaviours have a positive relationship with social presence in online environments.

Witt and Wheeless (2001) investigated four experimental video immediacy conditions: first, higher verbal and non-verbal immediacy; second, lower verbal and non-verbal immediacy; third higher verbal and lower non-verbal immediacy; and fourth, lower verbal and higher non-verbal immediacy. The responses of 587 graduate students disclosed that higher practices of verbal and non-verbal immediacy had a greater positive effect on their affective and cognitive learning than those who received lower practices of verbal and non-verbal immediacy.

In the present study, lecturer e-immediacy behaviours incorporating text-based communication present verbal and non-verbal cues. Verbal e-immediacy behaviours focus on textual communication that present "feedback, uses humor, gives personal examples in discussion boards/forums, and addresses the individual student by name" (Gorham, 1988, p. 2). Non-verbal e-immediacy behaviours provide textual communication cues such as facial expression, eye contact, or smiling to simulate face to face communications on video (Kanuka & Anderson, 2007; Short et al., 1976; Tu & McIsaac, 2002). The use of non-verbal digital gestures in chat rooms, e-mails, and tagging web pages, is widespread: for example, "WoW", "!", :-), "LOL", and/or  ,  ,  ,,  , and  (Shachaf, 2008; Walther, 2008). A content analysis undertaken by Walther and D'Addario (2001), revealed that people engaging in online media often include non-verbal cues such as "emoticons" or "smileys" to indicate emotions, and use various expressive disclaimers such as LOL, *sigh*, and *shrug*, to fine-tune verbal messages.

The table below displays some items of lecturer e-immediacy that applied in this current study design.

***Table 2 – Delivery methods of lecturer immediacy in online learning***

| Verbal Immediacy<br>Gorham (1988) | Non-Verbal Immediacy<br>Farwell (2011) |
|---|---|
| ▪ *Uses personal examples or talks about experiences she/he has had.*<br>▪ *Asks questions or encourages students to comment.*<br>▪ *Gets into discussions based on something a student brings up, even when this doesn't seem to be part of his/her course plan.*<br>▪ *Uses humour.*<br>▪ *Addresses students by name.*<br>▪ *Refers to the class as "our" class or what "we" are doing.*<br>▪ *Provides feedback on my individual work through comments on papers, discussions, etc.*<br>▪ *Asks students how students feel about an assignment, due date, or discussion topic.*<br>▪ *Invites students to call or meet with lecturer.* | ▪ *My instructor uses social verbs (e.g., ":wave:" to translate a physical action when communicating.*<br>▪ *My instructor uses words typed in all capital letters or italics to indicate emotion when communicating.*<br>▪ *My instructor uses acronyms (e.g., "LOL" for "laughing out loud") when communicating.*<br>▪ *My instructor uses punctuation (e.g., "!!!") to indicate expressiveness when communicating.*<br>▪ *My instructor uses interjections (e.g., "Wow!") to express emotion when communicating.*<br>▪ *My instructor uses emoticons (e.g. ☺ or ☹, ?) when communicating.*<br>▪ *My instructor gives prompt feedback on questions, often answering questions within 24 hours.* |

**Lecturer Immediacy Strategies in Distance Education Environments**

Lecturer immediacy strategies can be developed through adoption of a positive attitude towards distance learning and willingness to utilise instructional technologies (Burgoon, Guerrero, & Floyd, 2016), both of which are likely increase awareness with students and lecturers of non-verbal and verbal immediacy behaviours. Baker (2014) contends that the lack of social presence of the lecturer in front of the learners significantly impacts their learning and satisfaction. The lack of direct interaction and immediate presence will limit the strategies that the lecturer can use to encourage learners. In this situation, immediacy behaviours employing verbal and non-verbal techniques can be used by the lecturer in the online learning environment to encourage positive attitudes towards distance learning (Burgoon et al., 2016).

Interaction based upon immediacy behaviours is imperative in enhancing the success of the distance learning. Bork (2014) found that there can be high level of interaction with modern synchronous audio/video communication, such as, frequent contact with students (in and out of the class), and giving prompts and appropriate feedback (e.g. acknowledging good work) between the instructors and the students. Fahara (2015) indicated that video-mediated communication is paramount in enabling both relational and content components of discourse as an essential element of effective collaborative learning. These communication portals can be used for setting realistic goals and appropriate tasks respecting students' diverse talents in the online classroom (Buskist & Benassi, 2011; Wankel, 2011). Furthermore, text-based communication behaviours can be effectively delivered by email and/or instant chat messages, which have been effective in supplementing the usefulness of the online classroom over conventional courses. Additionally, there are other electronic approaches of communication to present the lecturers' immediacy behaviours such as video and audio presentations (e.g. MS PowerPoint, Slide share, Slide Rocket, etc.), video/screen casting tools (e.g. Screencast-O-matic, Screener, Sketch Cast, etc.), and photographs (Ray, 2012; Smyth & Volker, 2013).

In interactive synchronous and asynchronous communication students can type comments and questions without any form of interruption, which is likely to promote e-immediacy conversation with the lecturer in online classrooms. Evidently, such questions benefit the students as well as the entire class because all students can see the questions (Martin 2014). This can enhance students' learning outcomes as direct online interactions replicate real classroom discussions where students are compelled to reflect on the questions and present answers to the teachers themselves. For instance, the distance education faculty can provide course content in the modern form, which

includes threaded discussions, use of animated emoticons, 3D animated characters in lecture content, and retrieving information from online journals, periodicals, and newspapers (Ginsberg, Friberg, & Visconti, 2011). Nurturing effective student engagement in virtual classrooms increases their critical thinking capabilities, problem-solving skills and written communication skills (Martin, 2014).

Lecturer immediacy strategies can have positive effects on students' perceptions of their online courses. For example, they can create a sense of closeness and sense of community (Staudinger, 2009; Torrens & Amador, 2012), facilitate interaction, collaboration, and dialogue (Buskist & Benassi, 2011; Veletsianos, 2010), improve non-verbal skills and support the implementation of creative teaching technologies (Goh, 2009; Hamilton, 2010), build trust, encourage student reflection, and motivate participation in an informal way (Tynan, 2013; Wankel, 2011). This approach can, in fact, create high satisfaction levels for communication between students and lecturers, and promote higher academic performance and greater enjoyment in comparison to the classroom lecture (Fahara, 2015). According to Greenberger (2016), activities creating and delivering instruction that actively involve students' cognitive processes are important. Learning activities and assignments that engage learners in an online class environment should focus on improving student engagement in the online classroom context (Imlawi et al., 2015; Dietz-Uhler, 2016).

Lecturer immediacy in online courses can be promoted via:

a) *frequent communication and contact with students*
b) *quick and useful feedback*
c) *creating more opportunities for cooperative learning between students*
d) *being clear about assessment submission deadlines and providing advice and tips on how to promote effective time-management*

e) *differentiating teaching and learning and supporting gifted/talented students (Hutchins, 2003).*

The aforementioned strategies to stimulate lecturer immediacy behaviours enable clarity in teaching that may eventually reduce students' apprehension, increase participation, improve achievement, and increase their communication satisfaction (Clouder, Broughan, Jewell, & Steventon, 2013; Richmond, McCroskey, & Mottet, 2015). Utilising verbal and aural cues in online teaching can increase communication and encourage active participation (Lee & McLoughlin, 2010; Neeraja, 2011). Enhanced interaction through targeted pedagogical and communication based techniques can elevate the degree of perceived reality among students in the classroom and desire for meaningful engagement (Backer, 2014). This improvement in learning can be achieved with a holistic communication approach with implementation of verbal and non-verbal e-immediacy behaviours that target students' engagement participation communication, understanding, cognition and affective learning. Consequently, improving online learning outcomes with heightened perception of social presence will likely enhance student retention over time (Alam, 2014; Jeffreys, 2010; Seo, 2012; Tomei, 2009).

## The Locus of this Study: Review of Previous Studies on Lecturer Immediacy

During the last two decades, verbal and non-verbal immediacy behaviours have been evaluated in the context of distance education or virtual classrooms to promote a productive relationship between students and lecturers. Most of the previous studies of teacher immediacy behaviours focused on how teacher immediacy influences student experiences and learning outcomes, reducing the psychological distance between the

teacher and students, increasing sensory stimulation through numerous communication channels, and aiding the learning process in a positive manner (Bodie, 2009; Kear, Chetwynd, & Jefferis, 2014; Mehrabian, 1971).

Since teacher immediacy behaviours support the humanisation of an online course and may reduce perceived distance between teachers and students, the practice is capable of increasing closeness, encouraging communication, facilitating student input and self-disclosure, creating a sense of belonging, and establishing cognitive presence (Asiri, 2013; Bodie, 2009; Smyth & Volker, 2013). All of these behaviours greatly affect the teacher-student relationship (Hattie & Anderman, 2013; Knapp & Hall, 2009; Powell & Powell, 2010). Students who receive a high level of teacher immediacy have been shown to achieve better learning outcomes than those who received a lesser level of personal immediacy (Pogue & Ahyun, 2006). Teacher interpersonal behaviours can greatly enhance students' behaviour by building a positive relationship and facilitating cooperative behaviour in the learning environment (Springer & Roberts, 2011). In fact, such textual cues contribute to a feeling of social presence and encourage interaction (Garrison, Anderson, & Archer, 1999; Kafai, Sandoval, & Enyedy, 2012; Wei & Wang, 2010), and support students to become active learners working closely with their peers and teachers (Bourdillon & Storey, 2013; Lin & Huang, 2011). Schoenfelder (1995) observed that the use of interactive video, verbal humour, and sharing of personal information lessened the online gap between teachers and students. Moreover, other cues of teacher behaviours, such as, tone of voice, facial expression, body movement, and so on, are critical to the development of students' appreciation of the quality of instruction and benefits of a distance education course (Corry, 2012; Moller & Huett, 2012; Willis, 1994). Due to the absence of physical face-to-face communication in distance education, the reliance on teacher immediacy behaviours through synchronous

and asynchronous communication channels is essential in promoting physical and psychological closeness and supporting students' learning experiences in an online environment (Kim, Kwon, & Cho, 2011; Martin, Myers, & Mottet, 2006).

Table 3 provides a summary of existing research that will serve to clarify the differences and similarities between the present study and previous studies. The table details researcher and location of research, purpose of study, measures, sampling, methodology of study, data collection and analysis techniques, types of learning and a brief overview of results.

***Table 3 – Previous studies of teacher immediacy behaviours***

| No | Researcher & location of research | Purpose of study | Measures | Sampling | Method of data collation | Analysis technique | Type of learning | Results |
|---|---|---|---|---|---|---|---|---|
| 1 | Bailie (2012)<br>Kaplan University | Is there consensus in faculty and students' opinions of the verbal immediacy important in an online setting? | -verbal immediacy, behaviour | 10 faculty members 10 online course students Male and Female | Quantitative study<br>Comparison data between faculty and students' opinions of verbal immediacy behaviours<br>Online survey - 17- Verbal Immediacy behaviours | Descriptive statistic included mean and standard deviations for each item of verbal immediacy | Online students and faculty in higher learning course | Instructor immediacy behaviours exhibited by faculty at all levels of instruction are fundamental to the learning process, and affective and cognitive development in a variety of instructional settings. They can have a positive effect on student communication behaviours and their affective and cognitive learning. |
| 2 | Baker (2010b)<br>Tarleton State University | The study explored the relationship between instructor immediacy and presence with online student affective learning, cognition, and motivation. | -instructor immediacy<br>-instructor presence – student's variables:<br>-affective learning<br>-cognition<br>-motivation | Online undergrad students 443 females and 256 males | Treatment study - Quantitative approach<br>Online Survey send to student email in the seventh week after they have enough time to observe their instructor immediacy of verbal and non-verbal | -Bivariate correlation analysis<br>- Multiple regression<br>- Variance (ANOVA) | Online courses synchron-ous and asynchron-ous | There is a positive correlation between instructor immediacy and presence in student affective learning, cognition, and motivation. There is no significant in term of gender based on instructor immediacy or presence. |
| 3 | Witt and Wheeless (2001) | What is the impact of teachers' verbal and nonverbal immediacy on students' affective and cognitive learning in an e-learning classroom? | -verbal and non-verbal immediacy<br>-students' affective and cognitive learning | 400 undergrad students. 173 males and 226 females | The survey has completed after students received video recording of teacher immediacy during experimental design within four groups and one of them is control group. | Two-way ANOVA analysis to analysis differences between four conditions of teacher immediacy:<br>-high verbal with high non-verbal (NV) immediacy<br>-high verbal with low-NV immediacy<br>-low verbal with high NV immediacy<br>-low verbal immediacy with low NV immediacy | e-learning classroom | There was strong relationship between verbal and non-verbal immediacy of teacher and student affective and low relationship with cognitive learning. |

| No | Researcher & location of research | Purpose of study | Measures | Sampling | Method of data collation | Analysis technique | Type of learning | Results |
|---|---|---|---|---|---|---|---|---|
| 4 | Kucuk (2009)<br><br>Anadolu University | This study examined the effect of teacher immediacy behaviours on students' participation in computer mediated communication | -teacher verbal immediacy<br>-student participation | Five tutors And students | Quantitative approach. Survey has completed for verbal immediacy of teacher based on text-based communication and its effect on students' participation | Correlation, mean Definition And percentage of messages in asynchronous | Distance education of English Language Teaching Program in asynchron ous approach | -There was significant relationship between instructor moderately use of verbal immediacy and student participation in asynchronous discussions<br>-interactive text-based immediacy indicators determine students 'participation level more than affective and cohesive immediacy in asynchronous computer-mediated communication. |
| 5 | Ni (2008)<br><br>Da-Yeh University, Taiwan | This study examined the effect of perceptions about teacher verbal immediacy and sense of classroom community on students' levels of satisfaction, perceptions of learning and online discussion frequency in online classes. | -teacher verbal immediacy<br>-sense of classroom community<br>-perceived learning - course satisfaction | 214 undergrad and graduate students | Quantitative approach<br><br>online survey link has sent to students' email who completed course. | -Bivariate correlation analysis<br>- Multiple regression<br>- Variance (ANOVA) | college level courses delivered on the Website | -Positive correlations among teacher verbal immediacy, and community sense of classroom, with student satisfaction, and perceived learning.<br>-sense of classroom community was the only significant predictor on both students' satisfaction and perceived learning<br>-Teacher verbal immediacy was found to be important factor of posting frequency in online discussion. |

| No | Researcher & location of research | Purpose of study | Measures | Sampling | Method of data collation | Analysis technique | Type of learning | Results |
|---|---|---|---|---|---|---|---|---|
| **6** | Hoyer (2011)<br><br>San Diego University | This study investigated the relationship between teacher immediacy and perceptions on their class midterm scores, motivation and classroom achievement, as well as the relationship between teacher and student immediacy and their interactivity and learning. | -self-perceived immediacy<br>-teachers' perceptions of class achievement<br>- perceived class immediacy<br>- teacher motivation<br>- students' perceptions of their class learning. | 42 teachers<br>20 males<br>22 females | Quantitative approach<br><br>Survey Monkey has sent by link to their emails. | Use SPSS statistical analysis for:<br>- Reliability<br>- Correlation matrix between variables | colleges in the United States (traditional classroom) | -There is significant relationship between teacher immediacy and class midterm scores.<br>-Teacher immediacy has positive effect on their motivation and affect in the class.<br>-Student immediacy positive effected on their perceptual, performance and cognitive learning in classroom |
| **7** | Baker (2010c)<br><br>Regent University | This study investigated the perceptions of instructor immediacy, students' groups' cohesiveness, and learning in online courses. | -instructor immediacy,<br>-students' groups cohesiveness<br>-affective and<br>-cognitive learning. | 138 online graduate students | Mixed methods approach<br>The participants have completed their responses by online survey. | Data analysis has employed<br>-Pearson Correlation<br>- multiple regression | Online courses for undergrad students | -Instructor immediacy has strong relationship with student affective and cognitive learning,<br>-No significant relationship between instructor immediacy and students' cohesiveness.<br>-Instructor immediacy has improved communication & interaction |
| **8** | Wolfe (2012)<br><br>Various public universities in the southern United States | This study examined teacher immediacy in the classroom and the effectiveness of gender and teaching experience. | -teacher immediacy behaviour both<br>-verbal<br>-and non-verbal | 311 undergrad students<br>% 32 males and % 67 female | Quantitative approach<br><br>Survey with Web-based Qualtrics for verbal and non-verbal immediacy with demographic information of gender and teaching experiences | MANOVA and ANOVA test | Traditional classroom | -Female teachers were not nonverbally immediate than male.<br>-Males teachers scored higher in verbal immediacy than female. |

| No | Researcher & location of research | Purpose of study | Measures | Sampling | Method of data collation | Analysis technique | Type of learning | Results |
|---|---|---|---|---|---|---|---|---|
| **9** | Bodie (2009) | This study examined the influence of instructor immediacy behaviours and communication media on students' perceived learning, cognitive learning and satisfaction with instructor teaching. | -instructor immediacy<br>-social presences<br>-students' perceived learning and satisfaction | One instructor and 500 undergraduate students' male and female | Quantitative – experimental study<br>Online survey (pre-test and post-test) by four treatment groups and one control group | One-way ANOVA, Repeated Measure ANOVA, and Pried Sample T-test | Virtual classroom | -High immediacy practices of instructor with full video or still photos increase students learning, satisfaction of their instructor teaching.<br>-Students has low rated of their learning and satisfaction of their instructor teaching by received low instructor immediacy with full video and still photos. |
| **10** | Asiri (2013)<br><br>King Khalid University in Saudi Arabia | Examined the impact of instructor immediacy on college student communication and learning outcomes in Saudi Arabia | -teacher immediacy verbal and non-verbal and<br>–students: participation satisfaction with communication motivation, affective and cognitive learning. | 115 undergraduate students and three teachers | Mixed Methods approach – quasi-experimental study<br>And structure interview<br><br>Survey has completed by distributed to them in the class. | SPSS package<br>-Repeated Measure data<br>- Pearson correlation | Traditional classroom | -The positive correlation was found between teacher verbal and non-verbal immediacy and students' participation, motivation, satisfaction, affective and cognitive learning.<br>-Based on based on high level practices of teacher immediacy in the classroom:<br>-the significant differences between experimental and control groups was found in students' perceptions of teacher verbal and non-verbal immediacy.<br>-Also, in students' participation, motivation, satisfaction, affective and cognitive learning. |

| No | Researcher & location of research | Purpose of study | Measures | Sampling | Method of data collation | Analysis technique | Type of learning | Results |
|---|---|---|---|---|---|---|---|---|
| **11** | Current study<br>Al Ghamdi (2016)<br><br>King Abdu Al Aziz University Saudi Arabia | This study examined the effects of lecturer immediacy verbal and non-verbal behaviours on students participation, communication satisfaction, affective and cognitive learning | -verbal immediacy<br>-non-verbal immediacy<br>-student participation<br>-student communication satisfaction<br>-students' affective learning<br>-students' cognitive learning | 413 undergraduate students male and female and four lecturers | Mixed methods approach – quasi-experimental study and sim-structure.<br><br>Survey Monkey link has sent to students' emails.<br><br>two experimental groups male and female.<br>Two control groups male and female.<br><br>The verbal and non-verbal immediacy of lecturer was examined by text-based communication which not included videoconference or still photos. | SPSS package;<br>-Pearson correlation<br>-Independent Sample t-test.<br>-ANCOVA analysis<br>-Repeated Measure MANOVA analysis. | Distance education environment | -there were significant relationship between verbal and non-verbal immediacy of lecturer and all students' variables in treatment groups male and female.<br>-there were no significant correlation between lecturer verbal and non-verbal immediacy and all students' variables in control groups male and female.<br><br>-there were significant differences in students' perceptions of lecturer verbal and non-verbal immediacy in treatment groups while did not found it in control groups participants' perceptions.<br>-there were significant differences in students' perceptions of all variables between pre- and post-test scores in treatment groups. While, this did not found it in students' perceptions in all variables between pre- and post-test scores in control groups<br><br>-Based on gender, there were significant differences in students' perceptions in all variables except affective and cognitive learning. |

**An Overview of Previous Studies**

As discussed in the previous sections, there is a strong association between lecturer immediacy behaviours and an effective teaching and learning environment in distance education, where such immediacy behaviours increase human-to-human interaction in computer-mediated communication. In order to replicate the effectiveness of face-to-face interactions, lecturer immediacy behaviours may act as a bridge to improve interaction in distance education settings. This is important for establishing the credibility and effectiveness of distance education as an alternative to traditional face-to-face instruction. Facilitating the interaction process with effective teacher-student communication therefore is as critical as the quality of instructional materials and connectivity using reliable technologies to replicate the positive attributes of face-to-face teaching.

Distance education focusing on teacher immediacy (verbal and non-verbal) has been examined in different contexts using different research methods. These types of investigations to employ the immediacy concept in the context of distance education or the online classroom protocol are very rare in Saudi Arabia and in the Gulf region. For this reason, the sample for this study was selected from King Abdulaziz University in Saudi Arabia. The structure of distance education courses/programs at this selected study location is quite unique and different from other programs around the world mainly due to the issue of gender segregation. In other words, female students can receive lectures from female lecturers but the male students cannot receive lectures from female instructors and vice versa. Female instructors cannot undertake communication with their female students by video or photo, only through text-based communication. Previous studies have focused on distance education courses in majors ranging

from marketing, to computer science, to business studies. This study will focus on the Arabic Language major offered as a distance education course at King Abdulaziz University.

In Saudi teaching methods the lecturer assumes the position of authority in the classroom, so the learning process is not interactive but rather one where the student is expected to listen to the lecture and then later memorise the main ideas (Mahrous & Ahmed, 2010). When this model of teaching is adopted in the virtual classroom in the distance education setting, the lack of proximity further reduces the sense of distance between the teacher and the students. Saudi researchers have focused on how Saudi educational institutions can improve their online learning processes and teaching methods in consonance with norms of sociality defined by its culture, especially for women (Alrashidi, 2014; Tinley, 2008; Yamada & Akahori, 2007). This study explores how text-based immediacy behaviour can overcome the barrier of psychological distance in online interactions between teachers and students in distance education, particularly for female students in Saudi universities.

The current study has applied measures of text-based verbal and non-verbal immediacy behaviours with consideration of previous studies' outcomes and translated these variables for use in the context of the virtual classroom environment in distance education. It employs both qualitative and quantitative methods of statistical analysis methods to analyse the data. While previous studies in distance education or online classrooms have examined the impact of teacher immediacy on three variables of students' motivation, affective learning and cognitive learning (Asiri, 2013; Fassett & Warren, 2010; Zhang et al., 2007), this study recruits four variables (students' online participation, students satisfaction with communication, affective learning and cognitive learning). This study considers the role of teacher immediacy in a more holistic manner by accounting for students' experiences (communication satisfaction and online class

participation) and their learning outcomes (affective and perceived learning) in online distance education. The last section of this chapter now turns to the hypotheses formulated from the theory of teacher immediacy in relation to these variables on the basis of past literature.

**Lecturer Immediacy and Students' Classroom Participation**

Surveying forms of participation in online distance education, Lipponen, Rahikainen, Lallimo, and Hakkarainen (2003) state that "One can define at least two forms of participation in CSCL [computer-supported collaborative learning] environments: writing notes and reading notes". Effective learning requires a supportive and challenging learning environment that develops a community of learners through discussion, collaboration, and exchange of ideas (Spector, 2012). Raising questions and offering comments enhances students' abilities to explore knowledge and develop critical thinking skills. This can help encourage constructivist learning among students through thoughtful and reflective learner participation with more exchange experiences between the students in the class (Rudestam & Schoenholtz-Read, 2010).

Classroom participation is concerned with activities that promote talking, thinking, and feeling that enable a student to be an active member in the class (Hrastinski, 2009). Class participation can provide optimal learning for students as they become able to communicate their expectations (Fritschner, 2000). Students' participation in the traditional classroom is generally characterised by students' active involvement in class activities in the learning process, current activity and communication with each other or with the lecturer. Handelsman, Briggs, Sullivan, and Towler (2005) found that 90% of students engaged more actively in the class and also achieved high grades after the researcher applied high levels of participation in his teaching and learning approach. Online learning can be more interactive when lecturers encourage students to join in the group discussion, give them useful information to facilitate the discussion, and

moderate the discussion (Ho, 2002). Public exposure to an unknown audience in distance education causes anxiety for some learners, and learners can further feel a sense of shame and embarrassment when they are unable to complete the tasks (Rogers, 2009). In online interactions, participants could be initially nervous about seeing themselves on the video screen, and may feel hesitant about speaking directly to the instructor. Thus, improved lecturer verbal and non-verbal immediacy behaviours in computer-mediated communication within textual communication could enhance interaction and increase levels of online classroom participation. The study of Roberts and Friedman (2013a) examined the influence of teacher immediacy on the participation of a sample of 474 undergraduate art students who observed professors' immediacy behaviours. The result of a regression analysis showed that professors who showed a high level of immediacy behaviours increased students' participation in the classroom.

There is a common consensus that students closer to the teacher participate more in the class. Since dialogue and contact between teacher and students can enhance immediacy in online courses, it may also improve student participation and learning (Portelli, 2010). Furthermore, Ni (2013) argues that teacher immediacy makes the online classroom less intimidating, thus encouraging greater student participation, quality interaction, and enhanced learning. Thus, lecturer immediacy behaviour is an important element to bridge these feelings of distance between lecturer and student (Duncan-Howell, 2010; Lim, Morris, & Kupritz, 2014; Witt, Wheeless, & Allen, 2004). Previous studies on teachers' immediacy behaviours demonstrated that online discussions are perceived by students as more equitable and democratic than traditional classrooms. Immediacy afforded by rich synchronous communication facilitates better exchange of ideas and immediate feedback encourages a high level of student participation (Dunn, Wilson, Freeman, & Stowell, 2011). Research conducted by Balaji and Chakrabarti

(2010) regarding students' interactions in relation to media richness theory reinforces that interaction with students in the online environment can be increased by incorporating immediate feedback and continuous dialogue through more direct online practices such as the virtual classroom. A survey was completed by 227 male and female undergraduates at a private Indian university. The measure included items related to facilitating discourse, personality traits, reflective thinking, personalisation, community, media richness, interaction and perceived learning measures. The results of a Hierarchical regression analysis revealed that immediate instructor feedback within textual communication has a significant effect on students' participation and promotes communication between teacher and students. This could support the notion that textual communication has the ability to provide opportunities for lecturer immediacy behaviours, which probably promote students' participation in online classrooms.

There are numerous ways to encourage students to communicate with each other or the lecturer in the virtual classroom to increase participation levels of students and enhance their attention and a sense of closeness in the classroom'. Lecturers can call a student by his or her first name to foster a sense of familiarity, leave encouraging comments in the discussion board, and give prompt feedback to their questions (Farwell, 2011; Salmon, 2013). Instructors engaging in both verbal and non-verbal immediacy in online classrooms could raise students' confidence levels as well as eagerness to participate. Unless the tutor becomes involved with students in an engaging and encouraging manner, they may feel a sense of uncertainty in their role and within their dialogue.

Asiri (2013) conducted a treatment study involving 115 undergraduate students to determine the effect of instructor immediacy behaviours on students' participation, satisfaction, motivation, and their affective and cognitive learning in a traditional classroom at a Saudi university. The

design involved two treatment immediacy behaviours groups and one control group, and the data was analysed by mixed model ANOVA. Results showed that there were significant differences in participation for those who received a high level of instructor immediacy behaviours compared to those who received normal immediacy behaviours in control groups. In addition, his study reported that the Person correlation revealed that there was a significant relationship between high levels of instructor verbal and non-verbal immediacy and students' participation in the classroom. Moreover, the results of a mixed model analysis found that there were significant differences in students' participation between those who received a high-level of instructor immediacy practices in treatment groups and those who received normal practices in control groups.

The efficacy of interpersonal behaviour in encouraging student participation in the virtual classroom can stimulate a positive result in students' learning outcomes. Previous studies have asserted that lecturer immediacy behaviour has a strong relationship with students' participation in the virtual classroom (Blignaut & Trollip, 2003; Du, Havard, & Li, 2005; Kear, 2010; Sargeant, Curran, Allen, Jarvis-Selinger, & Ho, 2006). Kucuk (2009) suggested that interactive immediacy and immediate feedback enhances students' participation in asynchronous discussions. Similarly, the study of ShuFang (2008) investigated the impact of teacher verbal immediacy behaviours and sense of community on students satisfaction, perceived learning, and frequency of participating in online discussions. A survey was completed by 214 undergraduates and graduate students participating in online courses. Pearson correlation reported that there is a strong correlation between teacher verbal immediacy and a sense of classroom community leading to frequent posting or active student participation.

**Lecturer Immediacy and Students' Communication Satisfaction**

Satisfying students' functional, participatory, and relational communication needs or interests is key to effective learning (Goodboy & Myers, 2008). Communication satisfaction is a significant factor for enhancing students' continuing engagement in virtual classrooms as online learners are prone to feeling isolated and they can achieve greater satisfaction when they have a strong sense of community. In an online classroom, students' communication satisfaction is achieved through effective communication practices, such as giving and receiving feedback, extended interaction between students and students, and community building (Simonson & Schlosser, 2008). Students' learning in the online classroom is dependent on satisfying students' individual expectations through dialogue and interaction for the purpose of maintaining their enthusiasm in the online activities. Dialogue between faculty and students can increase enthusiasm among students, while the lack of timely and appropriate responses can lead to frustration or anger. Kuo, Walker, Belland, and Schroder (2013) investigated the effect of internet self-efficacy, interaction, and self-regulation on students' levels of satisfaction. The online survey was completed by 111 education majors and results of an ANOVA found that teacher behaviours had a positive effect on student satisfaction, which increased interaction between teacher and students in online courses.

Research has demonstrated that students' communication satisfaction can be achieved if the instructors adopt immediacy behaviours in online learning environments (Ladyshewsky, 2013; Melrose, Park, & Perry, 2013). Several researchers have confirmed that verbal and non-verbal forms of behaviour that impart a sense of lecturer immediacy can strengthen communication between students and lecturers (Andersen, 1978; Goodboy, Myers, & Bolkan, 2010). When the teacher expresses behavioural cues projecting warmth and receptiveness, this enhances students'

interest in the topic as well as a sense of security in the interaction. This, in essence, is the key importance of teacher immediacy in satisfying students' communication needs through discussions, reactions, regular feedback, reports, exploration of issues etc. The role of immediacy in interpersonal behaviour in virtual classrooms in enhancing affective learning is addressed in the next subsection.

**Lecturer Immediacy and Students' Affective Learning**

According to Gorham (1988), "the product in an instructional process-product model is learning: cognitive, affective, and behavioural" (p. 41). Most research has emphasised the positive impact of teachers' verbal and non-verbal immediacy behaviours on students' affective and cognitive learning (Baker, 2010a; Christophel, 1990; Farwell, 2011; Kim et al., 2011; Lee, 2007). Affective learning in general is considered a pedagogical goal in a humanistic approach to education where the impact of individual thinking, emotions, and feeling on learning are taken into account. The theory of affective learning emphasises the partnership between cognition and emotion and the role of a person's views and values in his or her understanding and effective use of knowledge and skills (Kamardeen, 2013). Students' beliefs, emotions and attitudes do not merely manifest within their experience of the program but may influence their learning outcomes (Asiri, 2013; Baker, 2010a; Farwell, 2011; Hooker, 2015). Affective learning is critical, particularly, for students who are more spontaneous and less linear in their approach to learning, and seek emotional experience to truly assimilate knowledge (Sims & Sims, 1995).

Immediacy behaviours that signal accessibility, involvement, and interest have been directly linked to affective learning (Vangelisti, Daly, & Friedrich, 2013). Affective learning approaches are already present in online communities where learners practice online democracy and acquire cognitive skills (Wheeler, 2009). The study conducted by Hooker (2015) incorporated an

experimental design to assess the impacts of teacher immediacy on students' cognitive and affective learning. The participants were 176 male and female first year undergraduates from a Midwestern University in the United States and they provided their perceptions of three measures of teacher immediacy, cognitive and affective learning. The study procedure involved video recording of teacher immediacy, incorporating high and low level practices of non-verbal immediacy behaviours in the traditional classroom. The data collected was analysed using MANOVA and showed that there were significant differences in students' perceptions of their cognitive and affective learning scores when receiving high-level teacher immediacy behaviours in comparison to those who received low-level immediacy behaviours. In addition, the earlier results of Crump (1996) were aligned with Hooker's (2015) findings whereby it was reported that teacher immediacy behaviours increase three types of learning: that included affective learning, which is heightened by motivation, the teacher-student relationship, and reduction of psychological distance in the traditional classroom. According to Hattie and Anderman (2013), immediacy of the lecturer is critical for stimulating students' attention, enhancing their motivation, and creating a positive environment in the class. When teachers are perceived to be less immediate, students' affective learning ability falls below those students who experience their teacher's immediacy (Deetz, 2012). Lack of immediacy can cause frustration and negative student perceptions, thus reducing levels of affective learning (Cheney & Sanders, 2011; Szücs et al., 2013).

In fact, some studies show that there is a strong relationship between teacher immediacy behaviours and students' affective learning (Hoyer, 2011; Witt & Wheeless, 2004). Baker (2010c) conducted a study to explore the relationship between students' perceptions of instructor immediacy, and group cohesiveness with their learning in online courses. The study involved

145 undergraduate students who completed an online survey incorporating four measures assessing instructor immediacy, group cohesiveness, cognitive and affective learning. The data was analysed by multiple regression and determined that there was a significant predictive influence of instructor immediacy on affective learning and a strong relationship between instructor immediacy and affective learning. Results also showed an immediacy effect on affective learning, indicating that 55% of the variation in affective learning was related to the effectiveness of instructor immediacy behaviours.

**Lecturer Immediacy and Students' Cognitive Learning**

Cognitive learning in general refers to higher mental processes such as attention, remembering, perceiving, and use of memory that enables better understanding of the world around us ( Dzulkifli, 2013; Greenwald, 1968). In one of the earliest studies in the field of teacher immediacy behaviours in the traditional classroom Bloom (1956) categorised mental aptitudes associated with cognitive learning into six classes: information (review of data), perception (comprehends the importance and can give an understanding), application (applies learned ideas in new circumstances), dissection (partitions more intricate ideas into its parts and can give association), composition (can draw from different ideas to make new thought structures and thoughts), and assessment (can make judgments about the quality and estimation of plans and materials). Learning happens when any of these six are achieved, but a full scale of cognitive learning involves moving up this grade of categories, signalling progress from less difficult to more complex learning. This approach to learning sees it as an actively constructivist process where students select and organise informational input, evaluate it with previous knowledge, identify the most relevant ideas, apply the information effectively, and reflect on the outcome of the learning process (Oxford, 1996). In online classrooms, cognitive learning is also related to

the ability of online students to construct meaning through sustained communication (Palloff & Pratt, 2007).

As teacher immediacy enhances teacher presence in online classrooms, higher levels of cognitive thinking are achieved by students due to targeted feedback and facilitation of social discourse (Hinrichs, Wankel, & Hinrichs, 2011). Cognitive learning is one type of learning that can be increased by teacher immediacy (Vossler & Sheidlower, 2011). In this regard, quantitative results derived by Baker (2010c) show a moderate relationship between cognitive learning and instructor immediacy behaviours and supporting the strength of the instructional relationship. Results show that 46% of the variance in student cognition scores is explained by instructor immediacy behaviours and social presence.

All the four variables (students' participation, communication satisfaction, affective and cognitive learning) assessed in the current study have been previously shown to be related to teacher immediacy. Previous research has also shown that strengthening students' participation in the classroom by teacher verbal and non-verbal immediacy behaviours can create a better foundation for building their affective and cognitive learning (Umphrey, Wickersham, & Sherblom, 2008; Yen, 2010). Similarly, research on communication satisfaction supports the notion that communication satisfaction with teacher immediacy behaviours enhances both affective and cognitive learning (Ondrejka, 2013; Rafferty & Anderson, 2013).

## Conceptual Framework

Given the issue of physical and psychological separation in the distance education environment, this study focuses on the TDT, SP and SIP theories associated with the lecturer immediacy concept relative to closing the distance between lecturer and students in the on-line teaching and

learning environment. Thus, lecturer e-immediacy has been implemented as the primary concept to enhance human interaction in computer-mediated communication in distance education classes (Kucuk, 2009). All of these theories have been considered within computer mediated-communication in this study related to lecturer text-based immediacy to enhance sociality in interactions in online classrooms. These theories (TDT, SP and SIP) are likely to provide improved understanding as to how lecturer immediacy as a behaviour technique could enhance teaching engagement practices to reduce transactional distance challenges. The social presence theory has been considered to provide a support framework for the evaluation of the development of lecturer immediacy by the incorporation of interpersonal behaviours. This could promote positive perceptions by students of lecturer immediacy behaviours in online classroom. In addition, the SIP theory considers the development of relationships through messages in emails and other textual content, which provide the feeling of non-verbal cues from other people in computer-mediated communication. This aspect has merged with the Chronemic concept that considers the time of response by lecturers. The "time-related cues such as pauses, conversational rhythm, or time of day play an important role in CMC, substituting for non-verbal cues available in face to face and influence online interaction" (Guirdham, 2015, p. 63). Using SIP theory and the Chronemic concept may enhance this study and provide improved understanding of the physical and psychological distance issue in a distance education environment

Given the fact that the main issue in distance education is to facilitate the learning process despite the physical distance between the teacher and student, the thesis focuses on how immediacy behaviours adopted by the teacher incorporating textual communication, serve to convey the verbal and non-verbal immediacy cues in distance education. The theories described

above have been adopted in computer-mediated communication to create greater awareness of the transactional distance concept. Creation of the lecturer text-based e-immediacy (verbal and non-verbal) with the aid of such a theoretical framework has more probability to afford high-level communication and interaction between student and lecturer in distance education classes. Both synchronous and asynchronous e-communication greatly aid in development of verbal and non-verbal lecturer e-immediacy within the delivery of content.

Lecturer immediacy communication formats can be operationalised within computer-mediated content (e.g. textual communication) to promote social presence in distance education settings (Simonson & Schlosser, 2008). From this perspective, social immediacy can be supported through communication with verbal and non-verbal cues. Social immediacy refers to the behaviours lessening the psychological distance between communicating parties (Howard, 2005; Ondrejka, 2013). Generally, face-to-face conversations are assumed to be more effective for the purpose of instruction than those delivered through electronic media, thus, more favourable in terms of learning. Since the lecturer's immediacy is mediated to the student in online learning, this type of virtual classroom lacks the kind of behavioural cues that deepen face to face interaction (Arbaugh, 2001; Baker, 2010c; Button, Harrington, & Belan, 2014; Katt, 2007).

This study focuses on the importance of lecturer immediacy as lecturers facilitate the learning process by directing learners to appropriate resources, tasks, and learning outcomes (Koumi, 2013; Mason & Rennie, 2006). Lecturers act as promoters of collaborative learning, provide expertise, monitor performance, and respond to feedback. From an immediacy behaviours perspective, the relationship between lecturer and student influences how students feel about their study responsibilities, relationship with peers and lecturer, and overall perception

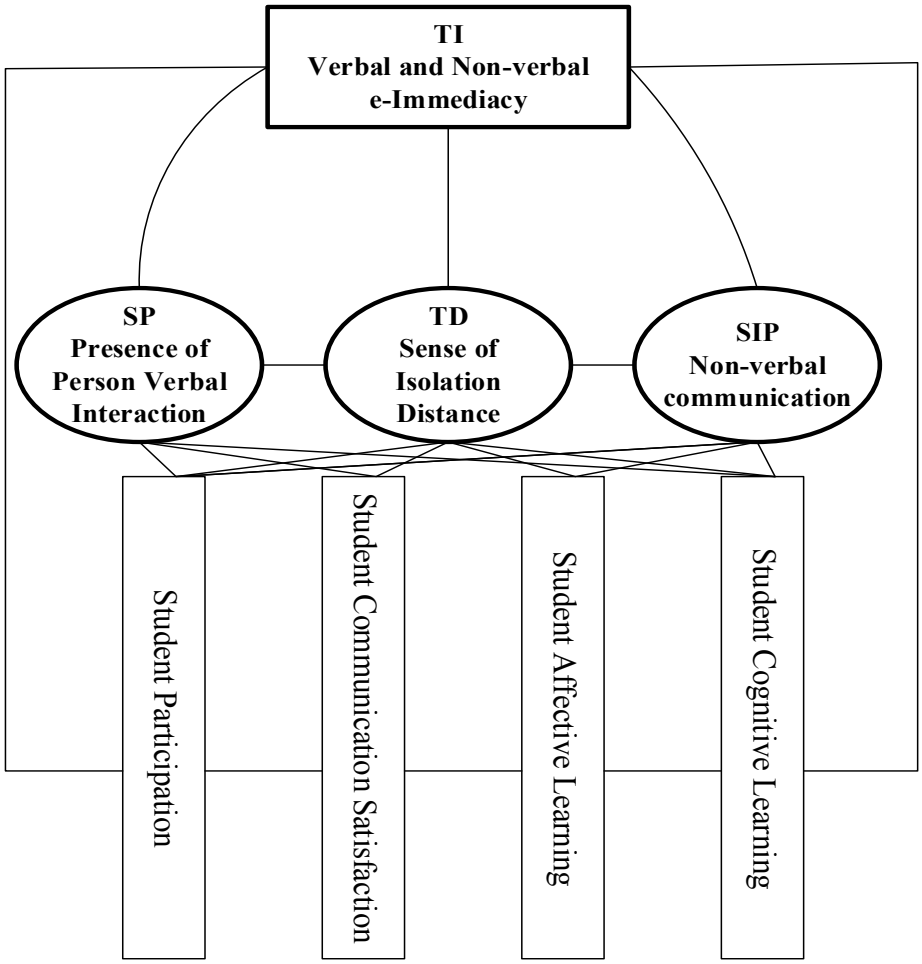
of the course (Boston et al., 2014; Mehrabian, 1977). An effective learning facilitator is key for directing the discussion, lecture content, online questions, and other interactions in online-based distance education classrooms (Tucker, 2008). The lecturer is responsible for structuring the amount of time and energy spent by students in educationally sound activities, and accommodating diverse levels of student competencies by introducing an open atmosphere and showing genuine regard for diversity.

A number of scholars purport that teacher immediacy supports the reduction of psychological or physical distance between the teacher and students (Bolls et al., 1997; Mehrabian, 2010; Tinley, 2008). Similarly, Khoo (2010) reinforces that immediacy results in psychological as well as physical closeness, which can promote effective communication between people in a learning environment. Greater immediacy results in increased perceptions of physical proximity and availability, resulting in closer interaction and effective learning (Bourdillon & Storey, 2013; Mortensen, 2009). This sense of lecturer e-immediacy relative to direct interaction and communication between lecturer and students can be created when the lecturer utilises online media to symbolically communicate non-verbal cues of body language and verbal cues of expressive phrases as they would in a real-life conversation. The lecturer can implement his or her e-immediacy behaviours through electronic communication approaches as alternative expressions of human e-immediacy through these verbal and non-verbal techniques.

The conceptual framework of this study has focused on lecturer immediacy behaviours based upon text-based communication and incorporated TDT, SP, and SIP theories, in considering the efficacy of strategies to reduce the sense of distance between sender and receiver. The employment of these theories (i.e., TDT, SPT and SIPT) in the current study will provide valuable knowledge on which to create programs that support the development of lecturers'

verbal and non-verbal e-immediacy behaviours. These behaviours focus on promoting students' communication and enhancing their satisfaction of the lecturer verbal and non-verbal behaviour in an online classroom. Therefore, the research proposed that student participation be supported by lecturer immediacy behaviours focussed on increasing their engagement within discussions, willingness to talk with others and full participation in the online classroom environment. In addition, students' affective and cognitive processing are connected with lecturer immediacy practices and can be represented by the "student's motivation to learn, his or her ability to learn affectively and cognitively, and his or her overall feelings of competence and meaningfulness towards the subject matter" (Roberts & Friedman, 2013b). The conceptual framework of this study thus has the potential to support a deeper inquiry into the lecturer immediacy behaviours (verbal and non-verbal) and its impact on students' satisfaction, communication, affective, and cognitive learning.

***Figure 2 – Relationship of theories to lecturer immediacy in distance education***



# CHAPTER 4: THE PILOT STUDY

As surveys constitute the first phase of the mixed-method approach adopted in this research, it is necessary to evaluate the translation of each survey from English to Arabic. A pilot study was needed in order to assess the psychometric qualities of the translated versions, and ensure that their content correctly reflected the English originals. This chapter outlines the process followed in the pilot study of this research and details the analysis of the results gathered from the respondents. It commences with a general literature review exploring the definition and significance of pilot studies for research (particularly within the field of education research) in conjunction with specific details about the objectives of the pilot study. This is followed by an overview of the content and development of the questionnaires to be used for the pilot study and the procedures undertaken to establish reliability. The verbal and non-verbal questionnaires as independent variables of this study have key impacts on other dependent variables (OCPQ, SCSQ, ALQ and CLQ). Thus, examination of the structure and meaning of the verbal and non-verbal questionnaires was very important. The final two sections review the procedure of the pilot study and data analysis to present the reliability of results then finalising of the pilot study.

## Defining the Pilot Study

Prior to commencing any empirical study that will involve the administration of new or modified questionnaires, it is important to conduct a pilot study, as this allows researchers to assess the usefulness and feasibility of their data collection methods. On the basis of a pilot study, researchers can subsequently conduct a thorough exploratory study. Mackey and Gass (2005) define a pilot study as a “small-scale trial” of the methods, procedures and techniques that a

researcher proposes to use for conducting a study. Comparing a pilot study to the test piloting of an aeroplane before the first real flight, Taylor, Kermode, and Roberts (2006) state that it is like a "mini-replica of a research project" (p. 261) which aims to test multiple aspects of the research methodology study before commencing it.

**The Importance of the Pilot Study**

A pilot study is an excellent tool for the purpose of reviewing the translated questionnaires of this study. Testing questionnaires with a large sample of the target population using a pilot study assists in the identification of potential issues, and allows for the opportunity to correct these in a timely manner. This limits possible problems pertaining to the measures in the actual research and saves the researcher from the risk of wasting time, money and effort. According to Taylor et al. (2006) a pilot study can be useful in gauging the reaction of the participants who are involved in a research study, and gives the researcher an opportunity to "test the research instruments in a real world setting" (p. 251). Moreover, Yin (2010) states that a pilot study helps to refine and test several aspects of the study relating to instruments, data collection, and research design or analysis plans.

An effective pilot study serves multiple purposes. It plays a significant role in selecting a sample, anticipating logistical issues, determining the timeframe for the actual research and assisting with instrument design. The pilot study can assist in the acquisition of accurate participant feedback by evaluating the clarity and relevance of the questionnaire, with questions and statements that are worded in clear, non-offensive and answerable language (Yin, 2011).

The basic premise behind conducting such a study is to gauge and identify potential problems as the research methodology is carried out. Reflecting on the importance of conducting a pilot study, Yin (2010) expresses that it helps in refining and testing multiple aspects of the study.

These can be related to the instruments, data collection, research design or the analysis plans. Anderson and Anderson (1998) view a pilot study as the way to "test the research instruments and procedures" that a scholar plans to use. With the help of this "small-scale study", a researcher can test procedures and decide if they would work to a satisfactory degree. According to Blessing and Chakrabarti (2009) the basic aim behind carrying out a pilot study is the "identification of potential problems" that may come forth during the research and may affect the validity and quality of its results (p. 114). A pilot study can reveal potential faults in questionnaires or other research instruments so that they can be fixed in a timely manner. Utilising these advantages of a pilot study within its result and analysis, the researcher can present the improvement of survey version for the participants before procedure data collection of the main study.

In general, researchers who conduct a pilot study are able to get a more refined idea about what they can expect to find in their research study. McBurney and White (2004) point out that the credibility and success of a study is amplified when it is preceded by a pilot study. By doing so, researchers get the chance to formulate the methods that they want to base the study on. With that additional information, researchers can improve and refine their study further so that they can fulfil their objectives more efficiently. Once a researcher conducts a pilot study, they can tell whether amendments are needed to support the efficacy of results from the actual study. The level and type of modifications are guided by the results of the pilot study in relation to the requirements of the study and its objectives.

**Pilot Studies in Higher Education**

There is extensive research showing the importance of pilot studies in education, along with areas like media, technology and health. Apart from these academic studies by education

researchers, institutions such as the *Higher Education Research Centre in Saudi Arabia* have been conducting pilot studies on a large-scale to help facilitate full, in-depth education research. Bryman and Bell (2011) consider pilot studies to be beneficial and desirable in education research, especially for studies involving the use of a self-completion questionnaire.

There are a number of new teaching strategies that are yet to be evaluated for credibility and effectiveness, especially in the field of distance education. These new strategies allow a lot of scope for educational research in terms of understanding student reactions when these strategies are utilised in distance education classrooms, and evaluating the effectiveness of new methods and materials in this context. A review of the current literature shows that this study is the first to investigate distance education in terms of immediacy in Saudi Arabia and other Arabic speaking nations. Hence, the adopted pilot study was created to test Arabic translations of the original English language questionnaires.

**Plan of the Pilot Study**

Whilst there are many different kinds of data collection methods available, the use of questionnaires is one of the most reliable methods for this kind of research in order to provide some context. In order to ensure that the data a questionnaire collects is reliable, researchers ought to look at the strategic direction and the objectives of the study and then construct or configure the questionnaire so that it is designed to serve the intended purpose. McNabb considers pilot studies to be especially important for studies based on survey research. Lodico, Spaulding, and Voegtle (2010), point out that before administering the survey samples, it is common for researchers to carry out pilot studies to get all the kinks out.

The pilot study data was collected in three stages. Firstly, colleges from King Abdulaziz University were selected by the researcher, and study participants were invited by the relevant

distance education faculty. In the second stage, study information and consent forms were provided to participants and lecturers via email. The third stage involved the questionnaire being completed by the participants and subsequently collected by the researcher.

**Aim of the Pilot Study**

In this thesis, the pilot study played an important role as a preparatory phase before conducting the main study. The opinions, comments and data collected from the sample in the pilot study alerted the researcher to amendments and corrections needed to improve the survey instrument. It also allowed the researcher to gauge the process involved in survey research so that the actual study could be undertaken effectively with confidence in how it had been translated from English to Arabic. The participants gave feedback on the clarity of the survey questionnaires (verbal, non-verbal aspects of immediacy and students online participations, communication satisfaction, affective and cognitive learning) and the time needed to complete the survey. In addition, analysis of the data collected via the pilot study allowed the researcher to test the reliability and correlation of adapted questionnaires and sub-questionnaires.

The pilot study of this research was conducted in order to achieve five key objectives:

(1) To test the Arabic content and context of the questionnaire using the Survey Monkey Website (SMW) prior to adopting it in the main study.

(2) To explore the ability, arrangement and setup of SMW when using Arabic copies of the questionnaire.

(3) To examine the reliability and information quality of the questionnaire prior to the main study.

(4) To verify the timing and sequence of the questionnaire in SMW and its ability to function with Arabic language content.

(5) To ensure SMW's ability to provide SPSS and Excel compatible data in order to facilitate data analysis prior to conducting the main study.

These objectives were targeted in the pilot study to ensure the accuracy and efficacy of results to be collected within the main study.

## Translation and Verification of Research Instrument

The English versions of the surveys were submitted to the Ethics Committee of Victoria University for approval for use with the proposed sample of university students. The questionnaires were then translated from English to Arabic by the researcher. The translated version of the questionnaire was verified for accuracy in a two-way process. Firstly, the translation was reviewed by two Saudi lecturers with high competency and academic qualifications in the English language: both had acquired degrees from universities in English speaking nations – one had obtained a doctoral degree, whilst the other was completing their PhD after acquiring a Master's degree in linguistics. Secondly, the Arabic questionnaires were rechecked by four people with professional expertise in the Arabic language: a supervisor in Arabic at the Ministry of Education and Teaching, a lecturer in Arabic at Taif University, and two high school Arabic teachers. The researcher used their comments and suggestions to improve the content and context of the six Arabic questionnaires. Finally, the researcher rechecked all the questionnaires' copies of VIBLQ, NVIBTQ, SCSQ, OCPQ, ALQ and CLQ before implementing them in both the pilot and main studies.

The translation process had to be undertaken with caution, as the Arabic language has changed with the addition of new phrases over time. Some words and phrases from English could not be easily translated into Arabic – for instance, the English expression of 'High Five'

has no immediate equivalent in Arabic and was replaced with (انت كذا) which translates to 'you are fantastic'. The right-to-left Arabic language format also caused some difficulties in arranging the questionnaires, since the Survey Monkey website language doesn't support it. Additional HTML code was used to organize the Arabic text and ensure correct formatting.

To ensure that the ideas and concepts behind the questionnaires were relevant to online education courses, the questionnaire was reviewed by two e-learning lecturers, one from the e-learning college at Hail University and one from Al Baha University. Their comments and suggestions were used to improve the content and presentation of the six questionnaires in Arabic. It was crucial to ensure the content reliability of the questionnaire for distance education practices in Saudi Arabia, because this was the first time that such questionnaires were being used to research this field. Establishing the content reliability of the translated questionnaire would support that research instruments originally developed by Western scholars for education research were relevant to the context of both Saudi culture and distance education practices. After taking all appropriate steps to alleviate any difficulties or issues, the researcher was confident enough to progress onto the pilot study.

## Methods

### Sample

The sample for the reliability phase of the pilot study consisted of undergraduate male and female students from the distance education faculty at King Abdulaziz University in Jeddah. The participants were invited to participate with an email from the researcher informing them of the study. All the participants were from different colleges, enrolled in Islamic culture, History, English language, and Communication e-courses. Before proceeding to the pilot study, study

information and consent forms in Arabic were provided to the undergraduate students via email. Once the students had read and checked the consent box prior to commencing the study, web-links to the survey website containing demographic questions and the six questionnaires (VIBLQ, NVIBLQ, SCSQ, OCPQ, ALQ and CLQ) were forwarded to them. The researcher attached his email on top of the electronic survey to provide an opportunity for further inquiry or comments regarding the survey questions. The students were given three weeks to complete the six e-questionnaires. The available number of participants was 612, but of this group only 413 respondents completed all of the questionnaires. The distribution of participants by gender showed that 296 female students and 117 male students completed the study.

**Survey Instrument Development**

The instruments of this study were compiled as an electronic survey developed within the Survey Monkey Website (SMW). The SMW was chosen for a number of reasons that were beneficial to the study: 1) speed and cost; 2) the ability to reach a large number of participants in various places; 3) it could be sent electronically over email and social media; 4) it would avoid the repetition of data from the same participants; and 5) the possibility to update the survey at any time (Fricker & Schonlau, 2002).

The survey instrument utilised self-report measures to examine the effect of lecturer immediacy behaviour on students' experiences and learning outcomes in distance education courses. The lecturer immediacy measure involved two types of questionnaires. The first questionnaire was used to assess the independent variables of lecturer immediacy behaviour – it included questions related to the verbal immediacy behaviour of the lecturer (VIBLQ) and the non-verbal immediacy behaviour of the lecturer (NVIBLQ). The second questionnaire was based on measures related to four dependent variables associated with students' experiences and

learning outcomes. The dependent variables of students' experiences included two measures – Student Communication Satisfaction Questionnaire (SCSQ) and Online Class Participation Questionnaire (OCPQ) – while the other two dependent variables of learning outcomes were assessed using the Affective Learning Questionnaire (ALQ) and Cognitive Learning Questionnaire (CLQ).

The survey was prefaced by three questions: a) the participants' consent to the study, b) their gender, and c) their student ID. The items were distributed across eight sub-questionnaires applied in traditional classrooms, but with small alterations to better reflect the structure and process of online course content. For instance, "when holding class discussions" was rephrased into "when holding online class discussions".

***Verbal Immediacy Behaviour Lecturer Questionnaire (VIBLQ)***

The measures of Verbal and Non-verbal Immediacy Behaviour were developed by Gorham (Farwell, 2011; Gorham, 1988). This section details the components of verbal immediacy behaviour in the VIB questionnaire. Mehrabian (1972), described this behaviour as as a set of comportments that "Reduce distance, enhance closeness, reflect liking and affect, and increase sensory stimulations between communicators" (p. 1). According to Gorham (1988), lecturer immediacy is a key communications practice in teaching and learning procedures, as it helps to reduce the feeling of distance between lecturers and students. Interpersonal communication and communicative relations between lecturers and students are central to the teaching-learning process, and the degree of immediacy between lecturer and students is an important variable in those relationships.

The lecturer text-based immediacy questionnaire used two forms of text-based immediacy behaviour in order to present verbal and non-verbal practices as independent variables. The first of these, the VIBL questionnaire, is an assessment tool with 14 items that participants rate on a 5 point Likert scale (Appendix A). As this measure was originally developed to assess the degree of lecturer text-based verbal immediacy practices in traditional classrooms (Gorham, 1988), the VTIBL questionnaire was slightly modified by Farwell (2011) to make it appropriate for measuring the impact of lecturer immediacy in text-based distance education courses. In the revised form of the questionnaire, three items that were inapplicable to online learning courses were removed. The three items were: integration in discussion, student-lecturer meeting outside of class time and asking a student to respond to a question even when they have not indicated that they want to talk. The items of the questionnaire include verbal cues such as using humour in discussion, referring to the lecturer in an informal manner (without calling them Mr, Dr or Ms), and lecturers praising students in their work. The participants reported their perceptions of lecturer immediacy of verbal text-based behaviour using a 5 point = Likert Scale, where 1 = never, 2 = rarely, 3 = occasionally, 4 = often, and 5 = very often. The Cronbach‘s Alpha reliability of this scale reported .86 in distance education classes.

***Non-verbal Immediacy Behaviour Lecturer Questionnaire (NVIBLQ)***

Lecturer non-verbal immediacy behaviour was the second independent variable used to evaluate non-verbal text-based practices in online classrooms (see Table 2). The NVIBQ was initially created to measure the effect of a lecturer’s physical behaviour and mannerisms during class on students’ learning benefits (Andersen, 1979; Richmond, 1987) in order to evaluate the non-verbal immediacy behaviour of lecturers in traditional classrooms. Because of the differences in

teaching styles between traditional classrooms and online classrooms, the non-verbal questionnaire was modified by Farwell (2011) to make constructs for measuring behaviours in traditional classroom proxies for similar behaviours within text-based communication in online courses.

The NVIBT questionnaire includes 14 items measured on a Likert-scale (Appendix B). Farwell (2011) has developed six of the 14 items based on past studies of non-verbal behaviour and computer-mediated communication concepts. The six items determined for online course practises were designed to be alternative versions of items measuring face-to-face non-verbal behaviours in traditional classrooms, which are measured separately to verbal immediacy. The first item is when the lecturer translates social verbs to physical action online, as an alternative to gestures used in a traditional classroom. Typing all the letters of a word in uppercase to indicate emotion (Ledbetter, 2008) is considered to be comparable to the use of heightened vocal tone in traditional classrooms. The second item equates the use of acronyms such as “LOL for “laughing out loud” (Neumann, 2009) in online interactions to the gestures that they signify. The third item considers interjections, such as “Wow” (Neumann, 2009) to indicate vocal expressiveness. The fourth item relates to the use of punctuation marks, such as exclamation points or question marks (Carey, 1980; Riordan & Kreuz, 2010), to signify surprise or puzzlement expressed in face-to-face interactions in the traditional classroom. The fifth item adopts the use of emoticons or animated facial expressions created by keyboard symbols (Ledbetter, 2008) as a proxy for facial expressions. The sixth item deals with the use of verbs to signify a physical gesture (Neumann, 2009). The participants reported their perceptions of lecturer immediacy of non-verbal text-based behaviours in the online classroom via a 5 point Likert Scales, where 1 = never, 2 = rarely, 3 =

occasionally, 4 = often, 5 = very often. The Cronbach‘s Alpha reliability of this scale reported .88 in online classrooms (Farwell, 2011).

***Online Classroom Participation Questionnaire (OCPQ)***

The online classroom participation questionnaire (OCPQ) created by Fassinger (2000) consists of five questions designed to measure the level of student participation in the classroom. In addition to lecturer immediacy behaviour, student participation is a crucial indicator of the success of learning in a classroom (Berge & Collins, 1995; Kucuk, 2009). A high level of involvement in the class is related to how the communication behaviour of the lecturer affects students' experiences (i.e., participation and motivation) (Frisby & Martin, 2010) by assessing students' willingness to contribute to the discussion or stay connected with lecturer or peers (Fassinger, 2000). The five statements of OCPQ are based on sub-scale items involving class participation – for instance, students' willingness to contribute questions or comments during the class is considered one of the key indicators of active student learning. The five items were modified by the researcher in order to be more relevant to distance education practices. The modifications were minimal and only involved adding the phrase "online classroom" in each statement of the five sub-questions. Participants reported their responses using a 5 point Likert scale, where 1 = never, 2 = rarely, 3 = occasionally, 4 = often, 5 = very often. The Cronbach‘s Alpha reliability of this scale was reported as .83 (Fassinger, 2000).

***Student Communication Satisfaction Questionnaire (SCSQ)***

The student communication satisfaction questionnaire (SCSQ) was designed by Goodboy, Martin, and Bolkan (2009) to measure student satisfaction with a lecturer's communication in traditional classrooms. Student satisfaction with lecturer communication has a significant impact

on student experience and learning outcomes (Goodboy et al., 2009). For example, whether or not a student enjoys speaking with a lecturer, or has feelings of satisfaction following a discussion can contribute to their communication satisfaction. Lecturer immediacy communication also has a strong impact on the student satisfaction in courses. Again, as this instrument was designed for use in traditional classrooms, the researcher modified the questions by incorporating the phrase "online classroom" to make the statements more specific to online classroom practices. Participants reported their satisfaction with lecturer immediacy via a 7 point Likert Scale, where 1 = strongly disagree, 2 = moderately disagree, 3 = slightly disagree, 4 = neutral, 5 = slightly agree, 6= moderately agree, 7 = strongly agree. The Cronbach's Alpha reliability of this scale was reported as .94 (Goodboy et al., 2009).

***Affective Learning Questionnaire (ALQ)***

The affective learning questionnaire (ALQ) was created by McCroskey, Morreale, and Brooks (1994). It has 16 questions probing student perception on course content and the attributes of the lecturer. Changes in trends and the impression of students in their feelings, attitudes, thinking and behaviour are among the elements that constitute forms of affective learning. This questionnaire was chosen because a lecturer's verbal and non-verbal immediacy behaviours have an effect on students' affective learning. Affective learning during the course was assessed using the following items: firstly, whether the student was considering opting for a degree in the course; secondly, the chance of the student taking the same course content in the future; thirdly, the student's general attitude to the lecturer in his or her course; and finally, the likelihood of the student taking the same course with the same lecturer in the future. This questionnaire was created to be used in traditional classrooms, so statements were modified by adding "online

classroom" to each question statement. The participants have reported their impression of affective learning on a 7 point Likert scale, where 1 = very strong positive feeling, 2 = strong positive feeling, 3 = fairly weak positive feeling, 4 = undecided/don't know, 5 = fairly weak negative feeling, 6 = strong negative feeling and 7 = very strong negative feeling. The Cronbach's Alpha reliability of this scale reported .96 (McCroskey et al., 1994).

***Cognitive Learning Questionnaire (CLQ)***

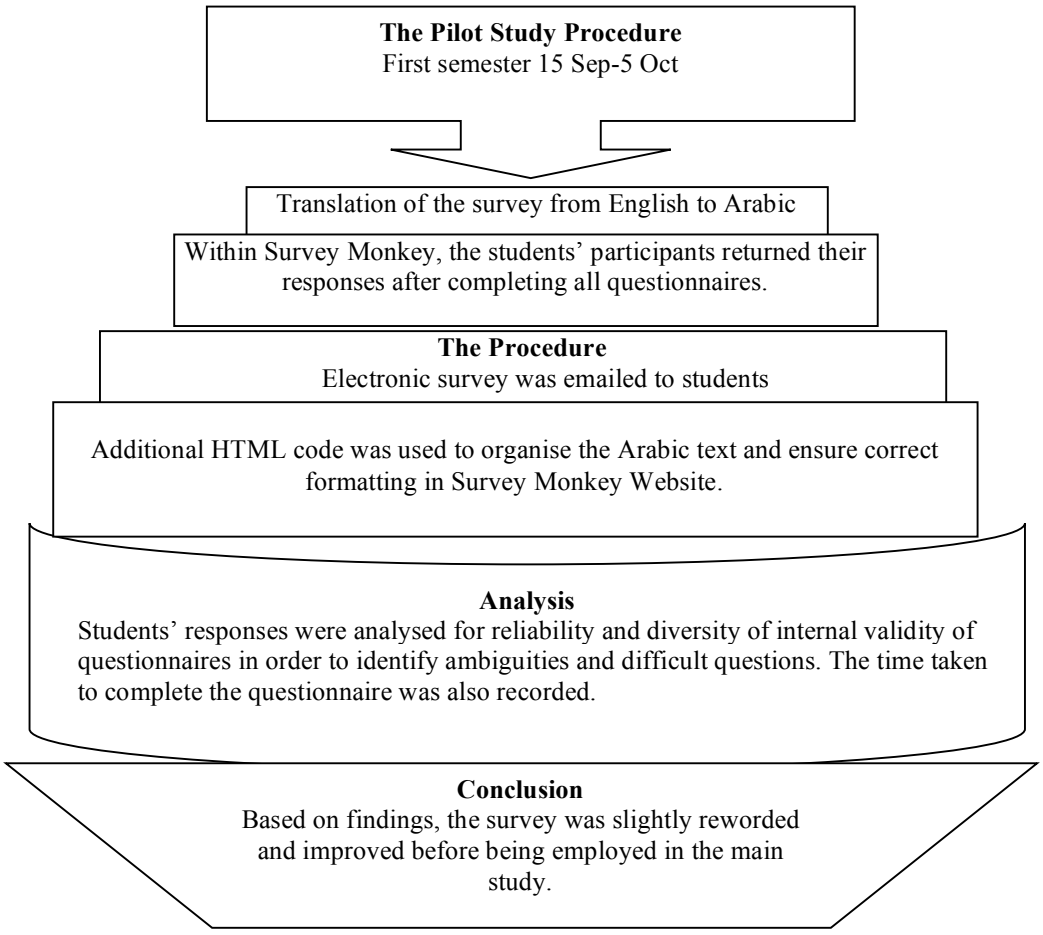
The cognitive learning questionnaire (CLQ) was developed by Hiltz (1988). The six CLQ items used in this study are derived from the 28 items listed in the original cognitive learning questionnaire, and were selected on the basis of their appropriateness and relevance to this study. Cognitive learning involves a measure of how students receive and understand basic concepts of the course. The six questions were used to measure students' learning and their evaluation of distance education courses. Cognitive learning was measured using the following items: 1) students learn how to get the best deal from the material in their course; 2) student capability to develop his or her ability to merge facts and summarise the course content; and 3) the style in which students learn and lecturers teach. These items were rated on a 5 point Likert scale where 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree. The questionnaire was completed by student participants based on lecturer immediacy practices (Hiltz, 1988). The aim of the original questionnaire was to understand student evaluation of cognitive learning in the traditional classroom. The researcher modified the items by adding "online classroom" to each statement to make it suitable for distance education. The Cronbach's Alpha reliability of this scale reported .92 (McCroskey et al., 1994).

## Procedure of the Pilot Study

The scale of the pilot study is dependent upon the research topic and its context. The participants were told that they were participating in a pilot study for a larger research project, and that their feedback would be appreciated. After getting responses from a specific number of students, the researcher was able study the responses and use their feedback to improve the research instrument. A smaller number of participants were chosen so that a realistic test survey could be run. Feedback regarding the survey was collected via email.

Following the procedures detailed, the researcher conducted the pilot study in four stages of data collection. In the first stage, the researcher chose the survey website which would act as the platform to provide the electronic survey to participants. Apart from making the survey available for access, the researcher had to ensure that he had added relevant information about the research on the website. The second stage involved the selection of the sample, in this case, the university and colleges were selected and after the researcher selected students of distance education course, the distance education faculty invited them by their emails to participate in the pilot study. In the third stage, the survey Web link was sent to the student participants' emails with attachments of information and consent forms. The final stage was data collection, with return of all the completed questionnaires from the participants.

***Figure 3 – Procedure of the Pilot Study***




## Data Analysis

In this study, two procedures were adopted to analyse the data gathered from the pilot administration of the questionnaires. Internal consistency reliability was examined by computing the respective Cronbach Alpha coefficients of the measures using SPSS version 21. Cronbach's Alpha was determined for each of the six dependent questionnaires: VIBLQ, NVIBLQ, OCPQ, SCSQ, ALQ and CLQ.

## Results

As described previously, the present study reports the means, standard deviations, and Cronbach's Alpha coefficient of internal consistency for the questionnaires representing the two independent variables (VIBTQ and NVIBQ) and questionnaires representing the four dependent variables: OCPQ, SCSQ, ALQ and CLQ.

### *Descriptive Analyses*

Table 4 shows Cronbach's Alpha, the means, and descriptive statistics scores of all six questionnaires:

***Table 4 – Statistical analysis of questionnaires***

| Participants (n = 413) | | | | |
|---|---|---|---|---|
| Questionnaires Variables | No of Items | Mean | Standard Dev. | Cronbach Alpha |
| VIBTQ | 14 | 3.00 | .64 | .85 |
| NVIBTQ | 14 | 2.82 | .60 | .84 |
| OCPQ | 5 | 3.88 | .77 | .83 |
| SCSQ | 5 | 5.38 | 1.15 | .85 |
| ALQ | 16 | 3.16 | 1.25 | .95 |
| CLQ | 6 | 3.96 | .81 | .91 |

***Reliability Analyses***

**I. Verbal Immediacy Behaviour of Lecturer**

The internal consistency reliability analysis of the *VIBT* questionnaire was conducted to assess how appropriate it would be for use in relation to distance education practices. The Cronbach's alpha coefficient for the Arabic version of the *VIBT* questionnaire was .85, which matches favourably with the Cronbach's alpha for the English version of the questionnaire (.88) (Farwell, 2011).

**II. Non-Verbal Immediacy Behaviour Lecturer**

Reliability analysis of the internal consistency of the *NVIBT* questionnaire was conducted to assess how appropriate it would be for use in the context of distance education practices. The Cronbach's alpha coefficient for the Arabic version of the *NVIBT* was .84. Again, this is close to the Cronbach's alpha recorded for the original English version of the questionnaire (.87) (Farwell, 2011).

**III. Online Class Participation**

The reliability analysis of the internal consistency of the *OCP* questionnaire was conducted to find how appropriate it would be for use in relation to distance education practices. The Cronbach's alpha coefficient for the Arabic version of the OCP was .83. This matches the Cronbach's alpha for the English version of the questionnaire (.87) (Fassinger, 2000).

**IV. Students Communication Satisfaction**

The reliability analysis of internal consistency for the *SCS* questionnaire was conducted to test how appropriate it would be for use in relation to distance education practices. The Cronbach's alpha coefficient for the Arabic version of the *SCS* was .84, which is an acceptable score when compared with the original English version of .96. (Goodboy et al., 2009).

### V. Affective Learning

The reliability analysis for internal consistency of the *AL* questionnaire tested its appropriateness in relation to distance education practices. The Cronbach's alpha coefficient for the Arabic version of the *AL* was .95, which is close to the score recorded for the original English version of .96.

### VI. Cognitive Learning

The reliability analysis for the internal consistency of the *CL* questionnaire was conducted to assess the appropriateness of its measures for use in relation to distance education practices. The Cronbach's alpha coefficient for the Arabic version of the *CL* questionnaire was .91, which matches favourably with the score for the English version of the questionnaire (.86) (Hiltz, 1988).

#### *Correlational Analyses*

The results of correlation across all variables show a moderate positive correlation between the verbal immediacy and non-verbal immediacy, student communication satisfaction, affective and cognitive learning questionnaires (r = .44 to .65). A moderate positive correlation was found between the verbal immediacy questionnaire and online class participation questionnaire (r = .31 to .32). The non-verbal immediacy questionnaire with verbal immediacy, the student communication satisfaction, affective and cognitive learning questionnaire correlations were in the moderate positive range (r = .38 to .65). There were weak positive correlations between the non-verbal immediacy questionnaire and online class participation questionnaire (r = .27).

## Summary

This pilot study was conducted with the aim to anticipate, solve and minimise possible measurement or administration difficulties prior to the main study. The translation validity and reliability of all the questionnaires were evaluated, and results justify the efficacy of the instruments for the main study. Any limitations associated with the translation and formatting of the questionnaires into Arabic were addressed, and the reliability of the Arabic language questionnaires were equivalent to the English language versions. Ultimately, the suitability of the instruments for use in the context of Saudi distance education was supported. The pilot study provided an acceptable measurement baseline for progression to the full-scale examination of lecturer immediacy behaviour through VIBL and NVIBL assessment, in conjunction with the additional measures of OCPQ, SCSQ, ALQ and CLQ.

# CHAPTER 5: THE RESEARCH DESIGN

The initial focus of this chapter is to describe the general study aims and design for examining the impact of teacher verbal and non-verbal immediacy behaviours on university students' experiences and learning outcomes in distance education environments within Saudi universities. The first section of the chapter will detail various aspects of the general methodological framework adopted in the study. The section outlines the research design, an overview of the mixed methods research process, and the research questions of the study.

The main purpose of this chapter, however, will be detailing the quantitative phase of the study. This includes addressing the procedures of data collection, statistical analysis, study sample, research instruments within the characterisation of the variables and measurement instruments, results, and a discussion of findings. The next chapter of the thesis will detail the qualitative phase, including procedure of interviewing, data collection and analysis, samples and interviews measurements, and results, concluding with discussion of interview data and a summary.

## Research Design

The study was designed to utilise mixed methods to collect and to analyse data. This type of research method is "a procedure for collecting, analysing, and mixing both quantitative and qualitative methods in a single study or a series of studies to understand a research problem" (Clark & Creswell, 2011). According to Creswell (2009) it is complex to design a significant research method; however, the mixed approach has become common and is accepted by many researchers. In addition, in this kind of study, the procedure of data collection has included

"gathering both numeric information (e.g., on instruments) as well as text information (e.g., on interviews); thus, the final database represents both quantitative and qualitative information" (Clark & Creswell, 2011).

The mixed research method is one "in which both quantitative and qualitative methods are used to answer research questions in a single study", and "are those studies that are part of a larger research program and are designed as complementary to provide information related to several research questions, each answer with a different methodological approach" (Mertens, 2005, p. 112). Creswell and Clark (2007), proposed that a research design is concerned with the philosophical assumptions and methods of inquiry used in a study. The type of research design, adopted for a study, guides the process of collecting data and analysis at various stages of the research (Creswell, 2007). According to Creswell and Clark, this choice of research design is made on the basis of particular parameters including:

a) Philosophical assumptions underlining the fundamental ideology or epistemological assumptions of the method.

b) Inquiry logics of the research questions, and purposes which drive the inquiry.

c) Guidelines for practice that describe the procedures and tools used for conducting the research and analysis (Greene, 2006).

**Research of Mixed Methods**

Wellington (2006) defines the term methodology as "an activity or business of choosing, reflecting upon, evaluating and justifying the methods you use" (p. 22). In social science research, most methodologies follow a quantitative or qualitative approach. Creswell, Clark, Gutmann, and Hanson (2003) state that "a mixed methods study involves the collection or analysis of both quantitative and qualitative data in a single study in which the data are collected

concurrently or sequentially, are given a priority, and involve the integration of the data at one or more stages in the process of research." (p. 212).

Extant literature has established the efficacy of mixed methods research. This design of mixed methods allows the researcher to use a multitude of tools for data collection (Creswell, 2007; Fraenkel et al., 2012). It can enhance the credibility of the collected data, as more than one method is used to interrogate the research questions (Flick, Garms-Homolová, Herrmann, Kuck, & Röhnsch, 2012). It has been argued that the mixed method design is able to provide the researcher a more in-depth understanding of the participants' views by synthesising both their qualitative and quantitative responses (Onwuegbuzie, Turner, & Johnson, 2007). According to Creswell and Clark (2007), individuals tend to solve problems using both numbers and words, and mixed methods research enables reasoning in both these formats to arrive at a more precise result. Thus, stronger research outcomes are generated when the researcher uses both quantitative and qualitative approaches rather than a single approach (Fraenkel et al., 2012; Mary, Hanne, & Frank, 2011). According to Mertens (2009), mixed methods research is characterised with many advantages over alternative approaches. Using two separate methods in mixed method design enables the researcher to evaluate one set of results on the basis of the other through triangulation of results. It also enables a more in-depth enquiry that is able to illuminate different aspects of events and issues. Melding the two approaches can enable the research design to compensate for their individual weaknesses (Spratt, Walker, & Robinson 2004). It has been argued that adopting a mixed design of methods "provides strengths that offset the weaknesses of both quantitative and qualitative data" (Creswell & Clark, 2007, p. 9).

The mixed method approach is expected to provide more comprehensive answers to the research questions. Hoshmand (2003) proposed that the best opportunities for answering

complex research questions are created when using mixed methods. Integration of data in mixed methods research can yield results of greater value than those derived individually from quantitative and qualitative data. Merging the two sets of data can yield evidence with inferential value that is greater than the sum of their parts (Creswell & Plano Clark, 2007). This is also synonymous with the triangulation of results, which enables the researcher to clarify a one-sided result from a single method to arrive at a more complete picture of the data from both the quantitative and qualitative components of the research.

The triangulation of results from these sets of data increases the trustworthiness of the research and the potential for extrapolation (Punch & Oancea, 2014). Results acquired from one type of data analysis can be compared against the results from another. This also enables the researcher to identify contradictions, patterns of convergence and hidden biases (Yin, 2008).

In using a mixed method strategy, researchers have to consider the timing element in both quantitative and qualitative approaches (Creswell & Plano Clark, 2007). This element was taken into account in this research in order to answer the research questions with more efficacy. When considering timing, the researcher must choose between parallel and sequential methods. The parallel method involves collection and analysis of quantitative and qualitative data independently, without any consideration of order (Mertens, 2014). Using the sequential method, the researcher gathers one type of data (quantitative or qualitative) first, subsequently collecting the second type of data on the basis of the first (Onwuegbuzie & Johnson, 2006). The order in which the data is obtained is an important consideration as the first round of data determines the nature and collection of data in the second round (Creswell & Plano Clark, 2007). Depending on the extent of data collection in each phase, as well as the relevance of each method to the final

results of the study, the researcher may prioritise and place greater emphasis on one of the two methods.

During the review and compilation of the related literature and development of the research agenda, the researcher found the parallel design of mixed methods to be the most suitable model for investigation. As a result, this study adopted a parallel approach, using a combination of qualitative and quantitative techniques to conduct this examination. The adoption of this mixed methods approach allowed the research to benefit from the strengths of both quantitative and qualitative methods.

The qualitative data of this study includes students' individual responses about their satisfaction with communication, participation and learning outcomes regarding teacher immediacy. The quantitative data presents the effects of teacher immediacy on personal and communal competencies. In addition, this study has provided an overall understanding of teacher immediacy and students' perceptions of participation, communication and affective and cognitive learning outcomes via the extensive qualitative data regarding participants' opinions and experiences

**Challenges of Mixed Methods**

Mixed methods research is often confronted with key challenges such as legitimation and integration. The use of two methods in a single research project means that there may be less time and resources to recruit an adequate number of participants for the study that will lead to a satisfactory level of sampling to effectively address the research questions. To avoid this, the researcher must carefully monitor the sample to ensure it is of sufficient size, otherwise the results and relationships may be invalid due to smaller samples not being representative of the overall population (Collins et al., 2006). Usually, a sample of twelve is considered sufficient if

the objective is to highlight collective perceptions, beliefs or behaviours among a reasonably homogenous group (Collins et al., 2006).

Legitimation problems relate to difficulties in deriving plausible and reliable results from using methods that are able to capture real experience (Collins et al., 2006). Legitimation not only concerns the validity of the collection of qualitative and quantitative data, but also the interpretations of the data in a reliable format (Onwuegbuzie & Johnson, 2006). Legitimation is a continuing problem throughout the research process rather than a sporadic issue fixed at one stage of the study. To counter any legitimation issues, concepts of validity and reliability need to be applied with rigour to produce research that is reliable, transferable, consistent and conformable (Guba & Lincoln, 2005).

Integrating different research approaches also involves assessing the extent to which they can be combined in light of the research purpose and questions. Decisions have to be made to determine whether the data should be merged, embedded, linked or maintained separately (Mertens, 2009; Onwuegbuzie & Johnson, 2006). Integration problems can also be particularly complex if the data collected using each method turns out to be contradictory. In such a case, the researcher must think carefully about the proper course of action and what conclusions, if any, can be drawn from the study (Onwuegbuzie & Collins, 2007).

With mixed methods research, findings of the qualitative investigation can be used to corroborate the findings of the quantitative investigation and vice versa. This process combines both quantitative and qualitative data, compares the sets of data, and conducts analyses to determine whether they support or contradict each other. Mixed method approaches to managing the data approaches to promote convergence and corroboration of the individual findings from

each phase of the research for a deeper understanding of the collected data as well as the research problem at hand.

The study of text-based immediacy behaviours as mixed methods research allows for the mixing of qualitative and quantitative data from researcher observations and the grading system used in the study, helping to establish credibility and eliminate bias (Hepworth et al., 2009). The researcher has selected the mixed methods approach for the following reasons: firstly, in mixed methods, the researcher can collect the data by the strengths of each method and overcome weak points in each of these methods (Gall et al., 2010). Secondly, strong results can be obtained by using both qualitative and quantitative data (Drew et al., 2008). Third, the validity of conclusions gained from data triangulation is improved by the use mixed methods (McMillan & Schumacher 2010). This study methodology can be considered quasi-experimental research within mixed methods which applied by qualitative and qualitative methods because they provide the necessary framework and theoretical principles to clarify the methodological guidelines for how to carry out this study within this specific context (Sarantakos 2012).

The current study approach has the capacity to effectively explore, analyse, present, and discuss information about the effects of lecturer text-based immediacy practices on students' experiences and learning outcomes in KSA universities. The mixed method approach adopted for this study utilised data drawn from two sources:

1. A questionnaire, in which students evaluated their lecturers' verbal and non-verbal text-based immediacy behaviours and described their class participation, communication satisfaction, affective learning, and cognitive learning.
2. Interviews, in which students discussed their lecturer's text-based immediacy behaviours and their communication satisfaction and learning outcomes in more detail.

## Research Questions

In order to fulfil the objective of inquiring into the impact of teacher immediacy in virtual teaching and learning settings, this study sought to answer a primary research question: what are the verbal and non-verbal immediacy behaviours of lecturers in distance education in KSA universities that impact students' experiences and learning outcomes?

This main research question comprises several sub questions:

a. What is the relationship between the perceptions of verbal and non-verbal text-based immediacy practices by female and male students in control and experimental groups before and after working with lecturers who either focussed on immediacy behaviour or delivered classes in their typical immediacy style?
b. What is the relationship between verbal and non-verbal immediacy behaviours with students' experiences (participation and communication satisfaction) and learning outcomes (affective and cognitive learning) in control and experimental groups before and after the test?
c. Are there significant pre- and post-test differences in perceptions of verbal and non-verbal lecturer text-based immediacy behaviours, student experiences, and student learning outcomes between control and experimental groups after working with lecturers who either focussed on text-based immediacy behaviours or delivered classes in their typical immediacy style?
d. Are there significant pre- and post-test differences between female and male students' perceptions of their experiences, and learning outcomes between control and

experimental groups after working with lecturers who either focussed on text-based immediacy behaviours or delivered classes in their typical immediacy style?

# CHAPTER 6: THE QUANTITATIVE STUDY PHASE

## Overview

The first phase of this study incorporated a quantitative approach based on a statistical analysis of the numerical data (Tolmie, Muijs, & McAteer, 2011). The quantitative approach is characterised by many steps, such as finding out whether there is agreement on the exact problem, providing evidence through identification of cause and effect relationships by use of measures, sampling, and the process of data analysis. Quantitative measures have provided this study with suitable tools to obtain a clear view of factors contributing to change. For instance, data collection results may be expressed descriptively in words, or visually through graphs and diagrams that can clearly illustrate variations in the participants' responses. The usefulness of the quantitative method in this research was to provide statistical analysis of the surveys conducted, which focussed on students' communication satisfaction, online class participation, and affective and cognitive learning in a setting of limited/minimal lecturer text-based immediacy versus a setting of high-level immediacy behaviours.

In this study, the quantitative method allowed the researcher to examine and evaluate teachers' immediacy behaviour and students' experiences and learning outcomes in a virtual classroom. Two sets of quantitative data were obtained in a pre-test and post-test model. Students completed the pre-test survey in the second week of semester in March 2011, assessing instructor immediacy and student communication and learning outcomes. These participants subsequently completed the post-test survey in the twelfth week of semester, assessing their instructor's immediacy and their communication and learning outcomes for that class.

The questions in the quantitative survey were formulated to provide evidence to support the assessment of the relationships between specific variables, and a Likert Scale was used to rank the participants' feelings in regards to the items which gave them "A Technique for the Measurement of Attitudes" (Likert & Likert, 1976) such as strongly disagree, disagree, undecided, agree, strongly agree. According to Kumar (2008), the Likert Scale is not only simple to construct but reliable and versatile enough to be used in different domains. The graded responses on a Likert scale can provide a quantifiable measure for the different variables within the participants' views on the given set of items, and it can provide a much clearer view of a subject's opinion on a particular question. Thus, the use of a Likert scale is not only helpful in verifying individual opinions – it means that the resultant data can also be easily quantified and understood.

## Treatment Research Design

Gay and Airasian (2000) state that experimental research design is "the only study that can test hypotheses so as to set up cause-and-effect relationships, and symbolises the most reliable system of reasoning about the links among variables" (p. 355). According to Gall and Borg (1996), the experimental method is "the most powerful quantitative research method for establishing cause-and-effect relationships between two or more variables" (p.365). This type of research method provides an effective explanatory framework, as it doesn't merely describe the fact or phenomenon – it also examines the impacts of two or more variables on a particular situation (Johnson & Christensen, 2010; Mertens, 2010). Using the experimental method, "the researcher manipulates at least one independent variable, controls others relevant variables, and observes the effect on one or more dependent variables" (McKechnie & Pettigrew, 2002, p. 17).

Experimental research methods involve creating a controlled environment where the conceptual variables are explicitly integrated into the research sample to deliver clear inferences on these variables and their relationships. The experimental aspect of a research design also allows the researcher to exercise greater intervention and control over who, what, where and how the experiment is to be piloted. In addition, the sample should be random in the empirical study, otherwise it will be closer to a quasi-experimental study wherein the design does not allow full control over the research experiment, such as the sample or activity, and is not manipulated or created in a completely controlled environment (Robson, 2002).

Experimental designs have four types: single experimental, quasi-experimental, true-experimental and non-experimental fixed design. Broota (1989) describes single experimental designs as involving a single subject or case study which is used both before and after testing. According to Jackson (2014) the types of experimental research as time series designs are; (1) one group pre-test – post-test subject design, (2) the time-series design, and (3) the multiple time-series design.

The study of this thesis was designed to involve pre-test and post-test groups in matched pairs as exploratory tools. This design provides an indication about related or associated variables (Robson, 2002). The experimental study was carefully examined and rechecked by the researcher to check if any differences between variables within groups and times were present. There were several characteristics such as age, gender, socio-economic background, and awareness of the distance education system used to match the groups (Wallen & Fraenkel, 2013). All the participating students within the groups were undergraduate female and male students enrolled in distance education courses with the same unit content.

***Table 5 – Control and Treatment Groups Design***

| Group | Pre-test of six questionnaires | Lecturer Text-based immediacy V & NV treatment | Post-test of six questionnaires | Interview |
|---|---|---|---|---|
| T Male | √ | √ | √ | √ |
| T Female | √ | √ | √ | √ |
| C Male | √ | | √ | √ |
| C Female | √ | | √ | √ |

**T: Treatment, C: Control**

## Study Sample

Sampling is defined by Gay (1976, p. 66) as "the process of selecting a number of individuals for a study in such a way that the individuals represent the larger group from which they were selected". The sample for a study should include individuals from the target population who are willing to participate in the study and provide their feedback to the researcher's questions. According to Cochran (2007) sampling is necessary due to practical limitations, as "in every branch of science we lack the resources, to study more than a fragment of the phenomena that might advance our knowledge". Therefore, samples should be representative of the target population of the study and provide data on the problem or phenomenon under study (Nowak, Jurie et al. 2006; Entwistle & Nisbet, 1970; Gay, 1976; Owdah & Alkalily, 2000; Obydat, 2003). The current study adopted the method of non-random sampling which is a purposeful sample. The purposeful sampling has chosen to obtain data from participants who walling and possess knowledge or experience information. This information should be related with objects and depth

understanding of theoretical framework of the current study (Etikan, 2016). The sample of recent study were male and female students in distance learning education willing to participate in the study were non-randomly selected for the study.

The sample for this study was chosen from a Saudi University at KSA city during fieldwork conducted in 2012-2013. Jeddah city is on the coast of the Red Sea, located in the centre of western KSA. It is largest city in KSA in population and geographical area after the capital city Riyadh. The population in the city is currently estimated to be more than half a million and the city spans a geographical area of more than 2,743 sq. km. Currently, there are 849 public and private schools and about 15 private and public universities and colleges in Jeddah city, for both male and female students.

The Distance Education Deanship of Saudi University has two different academic faculties in Jeddah city, located in Jeddah's centre and Rabigh. The Deanship provides two separate sets of programmes in three faculties. The first faculty for Arts and Humanities spans four departments, including Arabic Language, Psychology, Sociology and English. The second faculty for Economics and Administration covers two departments, Public Administration and Administrative Sciences. The third faculty for Business is located in Rabigh and covers six departments, including Health Services Management and Hospitals, Marketing, the Human Resources Management Division, Management Information Systems and Law. All of these faculties and their respective departments run distance education programmes under the Distance Education Deanship. The distance education courses are conducted through electronic and digital means for all participating groups, where teaching and learning is mainly web-based and managed by electronic learning management systems (LMS) and online classrooms. In distance education, the tools for teaching and learning used by all groups are:

a. computers: hardware, software, and accessories (e.g., desktop/laptop, CD-ROMs, DVDs, microphones, cameras, Windows, Microsoft Office, SPSS, etc.)
b. internet based tools (e-mail, social media, wikis, blogs, etc.)

The researcher selected the Arabic Language course (101) as the source for both the experimental and control groups, with the same unit and material for all students. The Arabic Language course unit is concerned with the basic grammar of the Arabic language. This is a required unit for all students of all faculties to complete in order to graduate into the second year of their course. The lessons in this unit involved basic grammar, spelling, reading and writing. Educational content and learning objectives for this unit were provided by the Arabic language faculty at KSA University. The materials for the Arabic Language course were accessible to all participants, and contained academic content, technical support, teacher information, a timetable of lectures, common objectives of the course, lecture notes, exercises and activities. The e-learning module included tools such as CD-ROMs, PowerPoint presentations and PDF documents provided by the deanship of distance education, in keeping with modern technology used by e-learning practices.

## Participants

The criteria for recruiting participants within all groups were determined by researcher after discussing the requirements for the study sample with the principal and co-supervisors. The researcher chose to focus on undergraduate students in their first year of university study because a higher number of students are enrolled at that level of the course, whereas many students have opted out or changed preference at higher levels of the course. The teachers of the first year course were more willing to participate in this study, while other academics at more advanced

levels were less willing because of their task load. There were more teachers for the undergraduate course at the first year level, giving the researcher more opportunity to interact with academics.

Fieldwork research with participants was conducted during the second semester of the 2012/2013 academic year. However, some discrepancies occurred over the course of the research, as some students were absent in both pre-test and post-test phases and some students withdrew from the course entirely. In addition, some students changed their group from one sample to the other in the same course, while some students were excluded from the course as they were enrolling for a second time.

The study sample comprised four groups, and the final size of the sample was 271 participants. The distribution of non-random sampling into four groups of the Arabic Language course (101) and the study sample was 333 participants, with 85 males and 84 females in the experimental groups and 78 males and 86 females in the control groups. Because some responses were not completed, the statistical analysis of study results was limited to 271 students: 65 males and 68 females in the experimental groups, and 68 males and 68 females in the control groups.

In this study design, the sample size of each group is acceptable and proportional with experimental study design. Fogelman and Combar (2007) suggest that the number of participants in a sample in experimental studies is acceptable when each group has 15 or more participants. The final number of control and treatment students in sample groups is displayed in the following Table 6.

***Table 6 – The number of students in the study sample groups***

| Group | Number of participants |
|---|---|
| Male Treatment Group | 65 |
| Female Treatment Group | 68 |
| Male Control Group | 68 |
| Female Control Group | 68 |

## Instruments

The current study seeks to uncover the impact of verbal and non-verbal lecturer text-based immediacy behaviours on the classroom experiences and learning outcomes of students in the distance education course of the Arabic language (course no. 101) organised by the distance education deanship at Saudi University. Given this aim, the researcher needed appropriate scales to measure the effect of the independent variables of lecturer text-based verbal and non-verbal immediacy behaviours on the dependent variables of students' experiences (online class participation and students' communication satisfaction) as well as learning outcomes (affective and cognitive learning).

In this study, the researcher used a combination of research instruments to address all aspects of the impact of lecturer text-based immediacy practices on students' learning outcomes and experiences. The measures included: the verbal text-based immediacy behaviour lecturer scale (VTIBL) across 14 items (Farwell, 2011), the non-verbal immediacy behaviour lecturer scale (NVTIBL) across 14 items (Farwell, 2011), the Online Class Participation scale (OCP) across 5 items (Fassinger, 2000), the Student Communication Satisfaction scale (SCS) across 8 items (Goodboy et al, 2009), the Affective Learning scale (AL) across 16 items (McCroskey et al,

1994), and the Cognitive Learning scale (CL) across 6 items (McCroskey, 1994). All these scales are discussed in a previous chapter in detail, and the following paragraphs present a concise summary of each scale.

**Verbal Text-Based Immediacy Behaviours Lecturer Scale (VTIBL)**

The aim of lecturer verbal linguistic text-based immediacy behaviours is to reduce the distance between lecturers and students (M. G. Moore, 2013). Participants in the study evaluated their lecturers' text-based immediacy in verbal behaviour using the survey designed by Farwell. This survey included 14 items related to verbal immediacy, such as the use of personal experience when talking to students, encouraging or asking students to comment, calling students by name, and the use of humour. The participants rated these items on the following scale: 1 = never, 2 = rarely, 3 = occasionally, 4 = often, and 5 = very often (Appendix A). The reliability of the measure was demonstrated in the pilot study with a Cronbach alpha of r =.85.

**Non-verbal Text-Based Immediacy Behaviour Lecturer Scale (NVTIBL)**

The second type of lecturer text-based immediacy is non-verbal behaviour. The participants evaluated their lecturer's immediacy in non-verbal behaviour using the survey designed by Farwell. The survey included 14 items concerning the lecturer's use of non-verbal text-based cues to communicate with his or her students in the online classroom, such as social verbs (e.g., "::wave::" or "::high five::") to translate a physical action, or words typed in all capital letters or italics (e.g., "GOOD" or "not") and punctuation (e.g., "!!!") to indicate expressiveness. The participants rated these items on the following scale: 1 = never, 2 = rarely, 3 = occasionally, 4 = often, and 5 = very often (Appendix B). The reliability of the measure was demonstrated in the pilot study with a Cronbach alpha of r = .88

**Online Class Participation Scale (OCPS)**

The online class participation scale measures the extent of the students' participation in their online classroom. This questionnaire involves 6 items designed by Fassinger to assess different forms of student participation, such as contributing comments or questions, volunteering comments or questions, or volunteering comments when the answer is known. The participants rated these items on the following scale: 0 = never; 1 = rarely; 2 = occasionally; 3 = often; 4 = very often (Appendix C). The reliability of the measure was demonstrated in the pilot study with a Cronbach alpha of r = .83

**Student Communication Satisfaction Scale (SCSS)**

The participants assessed their level of satisfaction using the Student Communication Satisfaction Scale (SCSS) designed by Goodboy, Martin, and Bolkan (2009). This questionnaire contained 7 items intended to assess students' satisfaction with their teacher's communication in the online classroom. These items included: students' level of satisfaction with communication with the teacher, their level of dislike in talking with the teacher, whether or not they were satisfied after talking to the teacher, and their sense of accomplishment after talking to teacher. The participants rated these items on the following scale: 1 = strongly disagree, 2 = moderately disagree, 3 = slightly disagree, 4 = neutral, 5 = slightly agree, 6= moderately agree, 7 = strongly agree (Appendix D). The reliability of the measure was demonstrated in the pilot study with a Cronbach alpha of r = .87

**Affective Learning Scale (ALS)**

The students answered questions on the affective learning scale designed by McCroskey, Morreale, and Brooks (1994). This questionnaire is intended to measure the students' position on the course content and teacher. The scale involved 6 items. In contrast to the Likert scale used

for the other scales, the students responded to these questions with semantic-differential categories, such as, valuable/worthless, positive/negative, and fair/unfair (Appendix E). The reliability of the measure was demonstrated in the pilot study with a Cronbach alpha of r = .95

**Cognitive Learning Scale (CLS)**

The students answered questions on the cognitive learning scales intended to assess perceived learning outcomes. The questionnaire was based on the original scale designed by McCroskey. This questionnaire focused on the extent of the student understanding of basic concepts in the unit content. The participants rated these items on the following scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree (Appendix F). The reliability of the measure was demonstrated in the pilot study with a Cronbach alpha of r = .91.

## Procedures

**Treatment Protocol**

The lecturers in the control group taught the way they normally would in the course. The researcher was present in order to closely observe their teaching and learning practices, identifying any immediacy behaviours the teacher might adopt and the extent of these behaviours (e.g. occasional, regular, ad hoc, etc.).

The researcher developed the treatment protocol for lecturers who agreed to participate in experimental groups. The treatment protocol introduced and explained the 14 items of verbal immediacy and 14 items of non-verbal immediacy to the experimental teachers' groups (see Table 2). In this manner, the researcher administered these variables of VIBL and NVIBL for both male and female students in the experimental groups. It was possible that the lecturers may already be using some immediacy behavioural patterns in the control groups. However, they

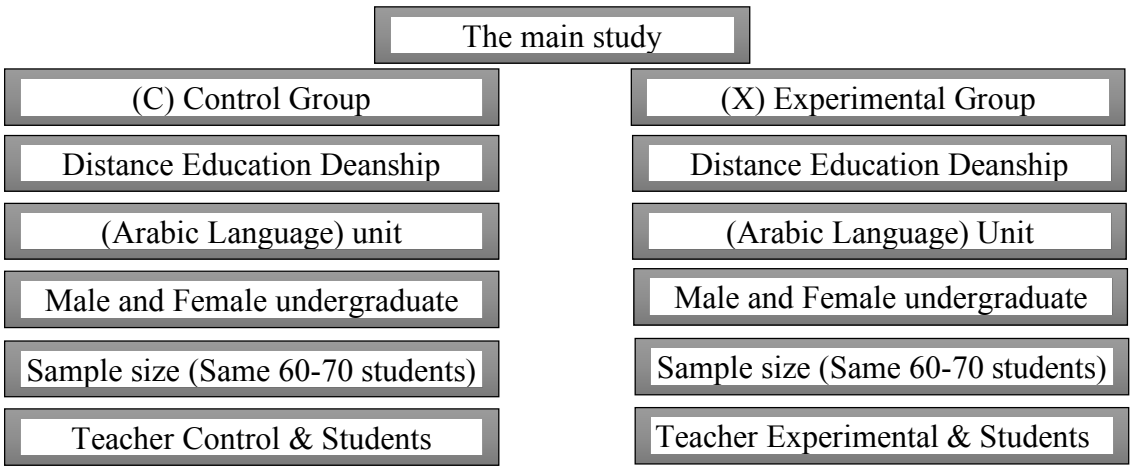
were expected to only involve low levels of immediacy practices, and certainly not all of the identified verbal and non-verbal immediacy effects identified by Farwell (2011). The treatment protocol of this study has a pre-test and post-test set of six questionnaires within four groups of control and experimental male and female students. The teachers in the experimental groups in semester 2 received a treatment plan of lecturer text-based immediacy (14 items of verbal and 14 items of non-verbal) practices to be adopted during the semester. In the experimental groups, the lecturer was asked to implement various text-based immediacy practices following the researcher's intervention. They were asked to take note of the ideas in these variables and implement the behavioural elements in their teaching practice. In contrast, the lecturers in the control groups did not receive any of these variables. In discussion between the researcher and lecturer participants, there was consideration for cultural and religious rules specific to Saudi Arabia. Thus, the researcher met with the male lecturer while the researcher's wife met with the female lecturer of the control and experimental groups. After recruiting the participating teachers for the study, the information sheet and consent form were sent to students by the technical manager of the Distance Education Deanship. All participants of the study checked the tick point on the form if they agreed to participate in this study – if not, they could withdraw from the study but remain a part of the course program.

**Data Collection**

After the Human Research Ethics Committee of Victoria University accepted the program, the approval letter was sent to the Dean. The researcher also received permission for data collection from the Deanship of Postgraduate Studies and Scientific Research of Saudi University at Jeddah City (Appendix J). Before beginning the study, the researcher sought advice and consultation with the Distance Education Deanship.

The researcher received a list with the names of lecturers and courses from the Deanship of Distance Education. After the researcher selected the lecturers and course participants, the researcher organised a meeting with the lecturer and principal of the course to explain the research and identify potential respondents. The Dean of Distance Education received the plan of the research procedure from the researcher along with the information sheet and designation of the lecturers (both male and female) who were willing to be participants in the project. The participating lecturers signed their formal consent to the study and the researcher met with these lecturers to give them further information. The female lecturers participating in this research met with the researcher's wife due to cultural norms set under the university's rules in KSA.

***Figure 4 – Procedure of data collection from control and experimental group***

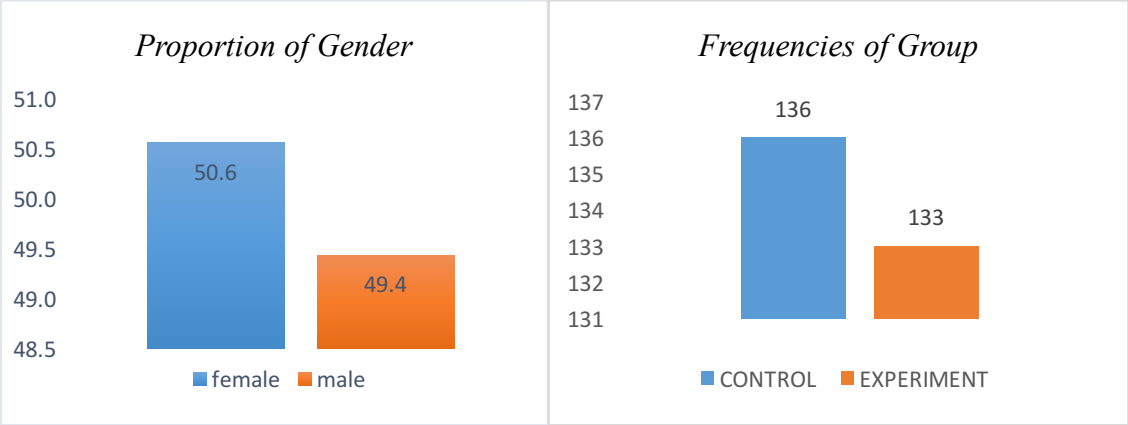



The researcher selected lecturers for the experimental groups who had frequently expressed interest in adopting the 28 elements of verbal and non-verbal immediacy during their online classes, whereas lecturers in control groups did not indicate a willingness to apply all immediacy elements. All lecturer participants in each group were asked to encourage student participants to complete the questionnaires pre-test and post-test while engaged in the same distance education course, semester and teaching facilities (Emas and Centra systems). All research groups

answered six questionnaires pre-test at the beginning of semester 2, while the post-test was applied to all the groups at the end of the semester. In the beginning of the second week of semester 2 students in the control and experimental groups were invited to undertake a questionnaire focused on their perceptions of their lecturers' verbal and non-verbal immediacy, and its effects on their communication satisfaction, online participation, and potential learning outcomes in their current unit of study. The survey was re-administered at week 12 of the semester as a post-test for all control and experimental groups, and all six questionnaires were completed in approximately 12-16 minutes. The researcher considered there would be bias in participants' response which reduce as much as can by anonymous participant. Also, the lecturers' participant asked their students to provide the true information based on Islamic culture in Saudi community. Moreover, the researcher provided his contact email address to give an opportunity for participants to clarify any misunderstanding or other issues related to the questionnaires if required. There were some comments and questions from participants, which were immediately clarified and resolved by the researcher.

Frequency for group and gender shows that there were a total of 136 (50.6%) respondents in the control group and 133 (49.4%) respondents in the experimental group. As for gender, there were 136 (50.6%) female respondents and 133 (49.4%) male respondents. The frequencies for gender and group represented in the following bar charts shows an equal distribution of respondents in both these categories.

***Figure 5 – Distribution of gender and group***




**Data analysis**

The stage of data analysis is an important phase of any study, wherein appropriate analytical techniques are implemented to translate the raw data into useful information to support answering of the research questions (Creswell, 2009; Johnson & Christensen, 2008). This study employed mixed methods, using quantitative and qualitative methods that were suitably matched to the intended aims of the data collection. The descriptive analysis of data was done with the use of a range of statistics, such as frequency, percentage, means, and standard deviation. The responses from participants on the 60 items in the six questionnaires were keyed into Microsoft Excel software. The data was coded according to the construct focus (e.g., verbal immediacy, student communication satisfaction) of each questionnaire by test period, group and gender. The Statistic Package of Social Science (SPSS) version 21 was used to analyse the data for significant differences and correlation across all variables, and Microsoft Excel was used to translate the information collected from Arabic to English so it would be suitable for analysis in SPSS (Bryman, 2008). The frequencies and percentages were analysed to describe the distributions of demographics and of categorical variables of the study questionnaires.

There were five main phases of data analysis, each addressing a specific question of the study, which are explained and described in this chapter. The first phase was the descriptive analysis utilised for gender range, standard deviation and distribution variance of each variable (Coakes & Steed, 2009). The second phase applied the Pearson correlation technique to the first research question in order to identify the existence of any significant relationships between the dependent variables (DV) of verbal and non-verbal text-based immediacy practices and students' experiences (OCP and SCS) and learning outcomes (AL and CL). In the third phase of analysis, independent sample t-tests were conducted to examine if significant differences existed between genders and between groups at pre-test in relation to the six dependent variables, in order to generate evidence in relation to the second and third research questions. In the fourth phase of analysis, ANCOVA was used to examine post-test differences for all dependent variables identified within the independent sample t-test findings that revealed significant differences in pre-test scores.

The fifth phase of test analysis involved the repeated measures ANOVA technique, and was applied to the second and third research questions to determine if there were significant differences for the dependent variables of immediacy (VTIBL and NVTIBL), and the dependent variables of students' experiences (OCP and SCS) between pre-test and post-test experimental and control groups, analysed separately for each of the male and female groups. Because no significant differences were found in pre-test scores within the independent sample t-tests for the learning outcome scores (AL and CL), treatment differences were examined using repeated measures ANOVA, in which gender and group were the between subject factors. One of the objectives of using repeated measures ANOVA is that it allows the researcher to find if there are significant differences between the timing (i.e., pre-test and post-test) and groups' (i.e., treatment

and control) means as one or more variables (i.e., verbal and non-verbal e-immediacy, and students online participation, communication satisfaction, affective and cognitive learning) (Fraenkel &Wallan, 2006; Huberty & Olejnik, 2006).

Prior to the use of repeated measures in ANOVA, it is recommended that the assumptions of the ANOVA technique are checked to ensure that it is valid for the data collected in this study. The first assumption requires that the dependent variables are measured two times pre-test and post-test. In the present study, the dependent variables were represented by scores (VTIBL, NVTIBL, OPC, SCS, AL, and CL) that students achieved in the pre- and post-test surveys. A lower score amounts to a lower level of achievement, while higher scores refer to higher levels of achievement.

The second assumption is that the independent variable should consist of two or more categorical or independent groups. In the present study, the independent variables include gender and group. The gender variable comprises male and female participants, while the group variable comprises control and experimental groups. Thus, both the independent variables have two categories, satisfying the second assumption for ANOVA. The third assumption requires adequate sample size with a greater number of participants than dependent variables. If there were only one participant in any one of the combinations of conditions, it would be impossible to determine the amount of variance within that combination (since only one data point would be available).

Furthermore, the statistical power of any test is limited by a small sample size. A greater amount of variance will be attributed to error in smaller sample sizes, reducing the chances of a significant finding. In the present study the sample size is more than adequate and each group is adequately represented in the study. The fourth assumption requires that there are no univariate

or multivariate outliers in the data. For the purpose of satisfying this requirement, outliers were checked using SPSS, and no extreme outliers were found. The fifth assumption requires multivariate normality, in which each dependent variable has to be checked for normality. In most of the cases in the present study normality was attained. Even in cases where normality wasn't attained, this did not present an issue, as the Central Limit Theorem states that when the sample size is over 30 the sample means are approximately normally distributed (Bajpai, 2011).

The sixth assumption is that there is a linear relationship between each pair of dependent variables for each group of the independent variable. The dependent variables in ANOVA need to conform to the parametric assumptions. In this study, it was decided that it would be better to not place highly correlated dependent variables in the same model. In the present study, where some correlation is observed in the dependent variables and this correlation allows us to use the ANOVA analysis technique. The seventh assumption asks for homogeneity of variance-covariance matrices. Since sample sizes are equal, homogeneity of variance is checked in groups for ANOVA. Box's M test is used, and it is recommended that it is not significant which indicated that there were no more than two covariance matrices are equal and to present homogeneity of variance. ANOVA has been shown to be robust to violations in some variables (Leech, Barrett, & Morgan, 2008), so homogeneity of variance test was not an issue in this case.

Effect sizes were calculated for all the inferential analyses in the study. The Cohen's d-statistic was reported for the independent samples t-test analyses, and partial eta squared was reported for the ANCOVA and ANOVA analyses (Allen, 2014; Allen, Bennett, & Heritage, 2014). Generally, if the study has an adequate sample size with a reasonable number of participants in each group, and outliers have been checked before conducting the analysis, then a repeated measure ANOVA test will still be valid despite modest violations of the other

assumptions (Brace, Kemp, & Snelgar, 2000). Given this, we can conclude that the present study satisfies these main criteria even though there have been slight violations of other assumptions (Brace, Kemp, & Snelgar, 2000).

**Results**

***Descriptive Results***

The descriptive statistics for pre-test and post-test scores on the six dependent variables of verbal and non-verbal immediacy behaviour and students' experiences (OCP and SCS) and (AL and CL)

***Table 7 – Means and Standard Deviations of VI, NVI, OCP, SCS, AL and CL by Gender and Groups Treatment.***

| | **Control Groups** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Female** | | | | **Male** | | | |
| | Pre-test | **N 68** | Post-test | | Pre-test | **N 68** | Post-test | |
| **Variables** | Mean | Std. Dev | Mean | Std. Dev | Mean | Std. Dev | Mean | Std. Dev |
| VTIBL | 29.94 | 2.99 | 30.12 | 2.93 | 26.78 | 3.52 | 25.93 | 3.74 |
| NVTIBL | 29.65 | 3.58 | 30.00 | 3.91 | 28.21 | 3.71 | 29.03 | 3.95 |
| OCP | 8.69 | 2.62 | 8.84 | 2.73 | 8.32 | 2.54 | 8.41 | 2.26 |
| SCS | 17.21 | 3.86 | 17.72 | 3.85 | 22.31 | 3.66 | 22.32 | 4.43 |
| AL | 41.04 | 14.48 | 40.99 | 14.64 | 42.85 | 12.59 | 42.76 | 12.66 |
| CL | 13.5 | 4.00 | 12.29 | 3.39 | 14.15 | 4.32 | 14.54 | 4.05 |

| Variables | Experimental Groups | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Female | | | | Male | | | |
| | Pre-test | | N 68 | Post-test | Pre-test | | N 68 | Post-test |
| | Mean | Std. Dev | Mean | Std. Dev | Mean | Std. Dev | Mean | Std. Dev |
| VTIBL | 30.6 | 2.82 | 43.56 | 7.16 | 26.06 | 3.21 | 35.2 | 3.35 |
| NVTIBL | 30.44 | 3.31 | 43.47 | 6.86 | 28.28 | 2.67 | 34.08 | 3.24 |
| OCP | 9.09 | 2.66 | 14.76 | 2.21 | 8.00 | 1.79 | 12.05 | 1.86 |
| SCS | 17.81 | 3.60 | 31.87 | 4.81 | 22.91 | 3.19 | 30.95 | 3.21 |
| AL | 42.65 | 12.45 | 65.47 | 4.71 | 43.34 | 12.3 | 59.02 | 7.49 |
| CL | 13.09 | 3.56 | 21.65 | 3.98 | 14.05 | 3.23 | 20.06 | 3.21 |

Abbreviation Note: VTIBL = Verbal Text-based Immediacy Behaviour Lecturer; NVTIBL = Non-Verbal Text-based Immediacy Behaviour Lecturer; OCP = Online Class Participation; SCS = Student Communication Satisfaction; AL = Affective Learning; CL = Cognitive Learning.

## Research Question 1

The Pearson correlation has answered the first main research question:

*What is the relationship between the dependent variables (DVs) of verbal and non-verbal immediacy behaviours and students' experiences (OCP and SCS) and learning outcomes (AL and CL) among female and male respondents in the control and treatment group for pre-test and post-test assessments?*

### *Correlation of Immediacy Variables with Student Variables for Pre-Test Female Groups*

Table 8 presents the correlation results for female participants in the control and treatment groups at pre-test for all variables. The correlations for the control group are presented in the lower diagonal and the correlations for the treatment group are presented in the upper diagonal. Results for the female participants in the control and treatment group showed no significant associations between all variables.

***Table 8 – Correlations pre-assessment cross six dependent variables for both control and treatment groups' female participants***

| Groups | Variables | NVTIBL | OCP | SCS | AL | CL |
|---|---|---|---|---|---|---|
| Control | VTIBL | .19 | .17 | .16 | .13 | .12 |
| | NVTIBL | | .13 | .10 | .12 | .11 |
| Treatment | VTIBL | .19 | .19 | .20 | .18 | .17 |
| | NVTIBL | | .13 | .10 | .12 | .11 |

***Note: IV: VTIBL=Verbal Text-based Immediacy Behaviour Lecturer, NVTIBL = Non-Verbal Text-based Immediacy Behaviour Lecturer, DV: OCP= Online Participation, SCS=Students Communication Satisfaction, AL=Affective Learning, CL=Cognitive Learning***.

### *Correlation of Immediacy Variables with Student Variables for Pre-Test Male Groups*

Table 9 presents the correlation results for male participants in the control and treatment groups at pre-test for all variables. The correlations for the control group are presented in the lower diagonal and the correlations for the treatment group are presented in the upper diagonal. Results for the male participants in the control and treatment groups

showed no significant associations at the .01 level (2-tailed) and .05 level (2-tailed) between all variables.

***Table 9 – Correlations pre-assessment cross six dependent variables for both control and treatment groups' male participants***

| Groups | Variables | NVTIBL | OCP | SCS | AL | CL |
|---|---|---|---|---|---|---|
| Control | VTIBL | .22 | .20 | .14 | .14 | .15 |
| | NVTIBL | | .17 | .14 | .15 | .15 |
| Treatment | VTIBL | .15 | .12 | .19 | .14 | .12 |
| | NVTIBL | | .18 | .14 | .10 | .11 |

***Note: IV: VTIBL=Verbal Text-based Immediacy Behaviour Lecturer, NVTIBL = Non-Verbal Text-based Immediacy Behaviour Lecturer, DV: OCP= Online Participation, SCS=Students Communication Satisfaction, AL=Affective Learning, CL=Cognitive Learning***.

### *Correlation of Immediacy Variables with Student Variables for Post-Test Female Groups*

Table 10 presents the correlation results for female participants in the control and treatment groups at post-test for all variables. The correlations for the control group are presented in the lower diagonal and the correlations for the treatment group are presented in the upper diagonal. Results for the female participants in the treatment group highlighted significant associations at the .01 level (2-tailed) and .05 level (2-tailed) between all variables. Correlations for the control group were not significant. Positive moderate relationships were found between VBIT and NVTIBL, and between OCP and CL. For the VTIBL correlations with SCS and AL, the strength of the linear relationships between these variables were positive and low. For the NVTIBL variable, significant positive moderate relationships existed with OCP, SCS, AL and CL.

***Table 10 – Correlations post assessment cross six dependent variables for both control and treatment groups female participants.***

| Groups | Variables | NVTIBL | OCP | SCS | AL | CL |
|---|---|---|---|---|---|---|
| Control | VTIBL | .53** | .41** | .38** | .34** | .37** |
| | NVTIBL | 1 | .59** | .41** | .39** | .39** |
| Treatment | VTIBT | .20 | .17 | .12 | .12 | .11 |
| | NVTBIL | 1 | .15 | .13 | .11 | .12 |

***. Significant at the 0.05 level (2-tailed). **. Significant at the 0.01 level (2-tailed).**

***Note: IV: VTIBL=Verbal Text-based Immediacy Behaviour Lecturer, NVTIBL = Non-Verbal Text-based Immediacy Behaviour Lecturer, DV: OCP= Online Participation, SCS=Students Communication Satisfaction, AL=Affective Learning, CL=Cognitive Learning***

***Correlation of Immediacy Variables with Student Variables for Post-Test Male Groups***

Table 11 presents the correlation results for male participants in the control and treatment groups at post-test for all variables. The correlations for the control group are presented in the lower diagonal and the correlations for the treatment group are presented in the upper diagonal. Results for male participants in the treatment group highlighted significant associations at the .01 level (2-tailed) and .05 level (2-tailed) between all variables. Correlations for the control group were not significant. Positive moderate relationships were found between VTIBL and NVTIBL, OCP, SCS, AL and CL. For VTIBL, SCS, and AL variables, the strength of the linear relationships between these variables were positive. For the NVTIBL variable, significant positive moderate relationships existed with SCS and CL while, the significant positive low existed between OCP and AL.

***Table 11 – Correlations post assessment cross six dependent variables for both control and treatment groups male participants***

| Groups | Variables | NVTIBL | OCP | SCS | AL | CL |
|---|---|---|---|---|---|---|
| Control | VTIBL | .56** | .49** | .53** | .54** | .57** |
| | NVTIBL | 1 | .34** | .38** | .33** | .49** |
| Treatment | VTIBT | .16 | .10 | .15 | .13 | .12 |
| | NVTBIL | 1 | .16 | .12 | .19 | .13 |

****. Significant at the 0.01 level (2-tailed).**

***Note: IV: VTIBL=Verbal Text-based Immediacy Behaviour Lecturer, NVTIBL = Non-Verbal Text-based Immediacy Behaviour Lecturer, DV: OCP= Online Participation, SCS=Students Communication Satisfaction, AL=Affective Learning, CL=Cognitive Learning***.

## Research Question 2 and 3

***Result of Gender and Groups Differences in VTIBL scores.***

Separate independent-sample t-tests were conducted to identify if significant pre-test differences in VTIBL existed between gender groups and between the experimental and control groups. This was undertaken to determine if statistical control was required for any existing pre-test difference within gender and groups. Results indicated that there

was no significant pre-test difference in the VTIBL scores of the female participants in the treatment and control groups, t (133.529) = - 1.325, $p$ >.18, $d$ = -.22), and males in treatment and control groups, t (130.711) = 1.22, $p$ >.22, $d$ = .21). However, for the gender variable, the results showed significant differences between female and male control participants, t (130.591) = 5.63, $p$ <.01, $d$ = .96), and between male and female treatment group participants in the pre-test scores of VTIBL t (127.141) = 8.63, $p$ <.01, $d$ = 1.50).

For groups, an analysis of covariance (ANCOVA) was conducted, treating pre-test VTIBL as the covariate, enabling comparison of the scores of post-test VTIBL scores for male and female participants. The homogeneity-of-regression (slopes) assumption of the relationship between the covariate and the dependent variable was also examined. This analysis indicated that there is no interaction between the groups and the covariate, ($F$ (1, 265) = 2.41, $p$ = .121), thus the interaction between covariate and dependent variables assumption of ANCOVA is not violated. The ANCOVA revealed significant differences in VTIBL2 between groups, ($F$ (1, 266) = 30.06, $p$ =.001, $\eta_p^2 = .102$). Means scores of VTIBL2 for females ($M$ = 36.55), were higher than the male respondents ($M$ = 30.74).

For all groups, repeated measure ANOVA analysis was conducted to assess if there were significant differences in pre-test and post-test VTIBL between the experimental and control groups for each gender. The results of the within-subject contrast, showed significant main effects of groups on female participants ($F$ (1, 134) = 154.15, $p$ < .001, $\eta_p^2$ = .535) and male participants, ($F$ (1, 131) = 152.37, $p$ < .001, $\eta_p^2$ = .538). Moreover, the result of the between-subjects analysis revealed significant results for the main effect of groups on female participants (Wilks' Lambda = .452, $F$ (1, 134) = 165.44, $p$

< .001, $\eta_p^2$ = .553) and male participants (Wilks' Lambda = .556, (*F* (1, 131) = 92.08, *p* < .001, $\eta_p^2$ = .413).

***Result of Gender and Groups Differences in NVTIB Scores***

Separate independent-sample t-tests were conducted to identify if significant pre-test differences in NVTIBL existed between genders and between the experimental and control groups. This was undertaken to determine if statistical control was required for any existing pre-test differences within gender and groups. Results indicated that there were no significant pre-test difference in the NVTIBL scores of female participants in the treatment and control groups, t (133.160) = -1.34, *p* >.18, *d* = -.22), and male participants in treatment and control groups, t (121.851) = -.127 p >.89, *d* = -.02). However, for the gender condition, the results showed significant differences between female and male control participants, t (133.841) = 2.303, p <.02, *d* = .40), and between male and female treatment group participants in the pre-test scores of NVTIBL t (127.455) = 4.156, p <.01, *d* = .77).

For groups, an analysis of covariance (ANCOVA) was conducted, treating pre-test NVTIBL1 as the covariate variable, enabling comparison of the post-test NVTIBL scores for male and female participants. The homogeneity-of-regression (slopes) assumption of the relationship between the covariate and the dependent variable was also examined. This analysis indicated that there is no interaction between groups and the covariate, (*F* (1, 265) = .040, *p* = .842), thus the assumption of ANCOVA is not violated. The ANCOVA revealed significant differences in NVTIBL2 in groups, (*F* (1, 266) = 31.87, *p* =.001, $\eta_p^2$ = 107). Means scores of NVTIBL2 for females (*M* = 36.60), were higher than the male respondents (*M* = 31.36).

For groups, repeated measure ANOVA analysis was conducted to assess if there are significant differences in pre-test and post-test NVTIBL scores for separate gender respondents in experimental and control groups. The results of the within-subject contract showed significant main effect of groups for female participants ($F$ (1, 134) = 123.34, $p < .001$), $\eta_\rho^2 = .479$) and male participants ($F$ (1, 131) = 38.66, $p < .001$, $\eta_\rho^2 = .228$). Additionally, the result of the between-subjects, significant results for the main effect of groups for female participants (Wilks' Lambda = .452, ($F$ (1, 134) = 165.43, $p < .001$), $\eta_\rho^2 = .552$) and male participants (Wilks' Lambda = .657, ($F$ (1, 131) = 33.37, $p < .001$, $\eta_\rho^2 = .203$).

***Result of Gender and Groups Differences in OCP Scores***

Separate independent-sample t-tests were conducted to identify if significant pre-test differences in OCP scores existed between genders and between the experimental and control groups. This was undertaken to determine if statistical control was required for any existing pre-test differences within gender and groups. Results indicated that there were no significant pre-test differences in the OCP scores of female participants in the treatment and control groups, t (133.966) = -.876, p > .38, $d$ = -.15), and male participants in the treatment and control groups, t (120.712) = .851, p > .39, $d$ = .14). However, for the gender condition, the results showed significant differences between female and male control participants, t (260.66) = 2.44, p < .01, $d$ = .30), and between male and female treatment group participants in the pre-test OCP scores, t (117.882) = 2.77, p < .01, $d$ = .48).

For groups, an analysis of covariance (ANCOVA) was conducted, treating pre-test OCP1 as the covariate variable, enabling comparison of the scores of post-test OCP1 scores for male and female participants. The homogeneity-of-regression (slopes)

assumption of the relationship between the covariate and the dependent variable was also examined. This analysis indicated that there is no interaction between groups and the covariate, ($F$ (1, 265) = 1.780, $p$ = .183), thus the assumption of ANCOVA is not violated. The ANCOVA revealed significant differences in OCP2 in groups, ($F$ (1, 266) = 12.96, $p$ = .001, $\eta_\rho^2$ = .046). Means scores of OCP2 for females ($M$ = 11.73), were higher than the male respondents ($M$ = 10.25).

For groups, repeated measures ANOVA analysis was conducted to assess if there were significant differences in pre-test and post-test OCP scores for separate gender respondents in experimental and control groups. The result of the within-subject contract, showed significant effect of groups for female participants ($F$ (1, 134) = 98.41, $p$ < .001), $\eta_\rho^2$ = .423) and male participants ($F$ (1, 131) = 260.30, $p$ < .001, $\eta_\rho^2$ = .327). Moreover, of the between-subjects (i.e., treatment and control) groups, significant results were found for the main effect of groups for female participants (Wilks' Lambda = .551, ($F$ (1, 134) = 86.28, $p$ < .001), $\eta_\rho^2$ = .392) and male participants (Wilks' Lambda = .654, ($F$ (1, 131) = 35.71, $p$ < .001, $\eta_\rho^2$ = .214).

***Result of Gender and Groups Differences in SCS Scores***

Separate independent-sample t-tests were conducted to identify if significant pre-test differences in SCS existed between genders and between the experimental and control groups. This was undertaken to determine if statistical control was required for any existing pre-test differences within genders and groups. Results indicated that there were no significant pre-test difference in the scores of SCS of the females in the treatment and control group, t (133.311) = -.941, p > .34, $d$ = -.16), and males in treatment and control groups, t (129.912) = -1.005, p > 31, $d$ = -.17). However, for the gender condition, the results showed significant differences between female and male

control participants, t (133.612) = -7.89, p < 01, *d* = -1.35), and between male and female treatment group participants in the pre-test SCS scores t (130.294) = -8.64, p <01, *d* = -1.50).

For groups, an analysis of covariance (ANCOVA) was conducted, treating pre-test SCS1 as the covariate variable, enabling comparison of SCS scores for male and female participants. The homogeneity-of-regression (slopes) assumption of the relationship between the covariate and the dependent variable was also examined. This analysis indicated that there was no interaction between groups and the covariate, (*F* (1, 265) = .505, *p* = .478), thus the assumption of ANCOVA is not violated. The ANCOVA revealed no significant differences in SCS2 in groups, (*F* (1, 266) = .377, *p* = .544, $\eta_\rho^2$ = .001). Means scores of SCS2 for female participants (*M* = 25.33), were higher than male participants (*M* = 25.98).

For groups, repeated measures ANOVA analysis was conducted to assess if there were significant differences in pre-test and post-test SCS scores for separate gender respondents in experimental and control groups. The result of the within-subjects analysis showed a significant main effected of groups on female participants (*F* (1, 134) = 214.81, *p* < .001, $\eta_\rho^2$ = .616) and male participants (*F* (1, 131) = 80.24, *p* < .001, $\eta_\rho^2$ = .380). Furthermore, the result of the between-subjects analysis revealed significant results for the main effect of groups on female participants (Wilks' Lambda = .350 (*F* (1, 134) = 200.34, *p* < .001, $\eta_\rho^2$ = .599) and male participants (Wilks' Lambda = .618, (*F* (1, 131) = 104.06, *p* < .001, $\eta_\rho^2$ = .443).

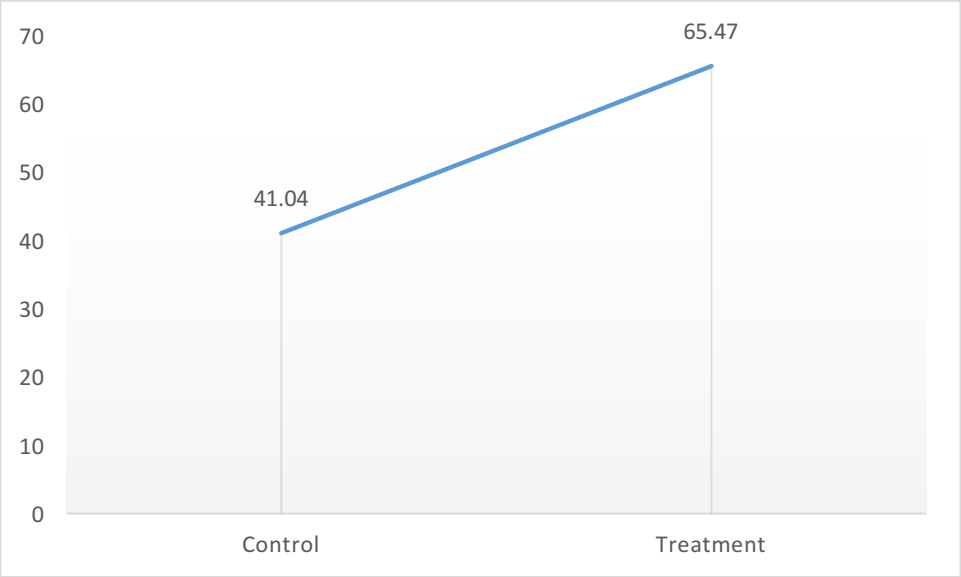
***Result of Gender and Groups Differences in AL Scores***

Separate independent-sample t-tests were conducted to identify if significant pre-test differences in AL existed between genders and between the experimental and control

groups. This was undertaken to determine if statistical control was required for any existing pre-test difference within genders and groups. Results indicated that there were no significant pre-test differences in the AL scores of female participants in treatment and control groups, t (131.056) = -.260, $p > 79$, $d$ = -.12), and male participants in treatment and control groups, t (130.933) = -.225, $p > 82$, $d$= -.04). However, for the gender condition, the results showed significant differences between female and male control participants, t (131.456) = -.348, $p > 72$, $d$ = -.05), and between male and female treatment group participants in the pre-test AL scores of AL t (130.853) = -.322, $p > 75$, $d$ = -.05).

Repeated measures of ANOVA analyses were conducted to assess if there were significant differences between pre- and post-test scores for affective learning between male and female participants in the experimental and control groups. The result of the within-subjects analysis indicated that there was no significant main effect for gender ($F$ (1, 265) = 2.28, $p > .05$, $\eta_\rho^2 = .009$), however, a significant effect was found for group, ($F$ (1, 265) = 94.23, $p < .001$, $\eta_\rho^2 = .262$). The interaction between group and gender was also found to be significant, ($F$ (1, 265) = 3.94, $p < .05$, $\eta_\rho^2 = .015$). Similarly, the result of the between-subjects analysis indicated that there was no significant effect for gender (Wilks' Lambda = .760, ($F$ (1, 265) = .594, $p > .05$, $\eta_\rho^2 = .002$), however, a significant effect was found for group, ($F$ (1, 265) = 103.03, $p < .001$, $\eta_\rho^2 = .280$). The interaction effect between group and gender was also found to be significant, ($F$ (1, 265) = 4.10, $p < .05$, $\eta_\rho^2 = .015$).

***Figure 6 – Groups-Timing-Affective Learning***



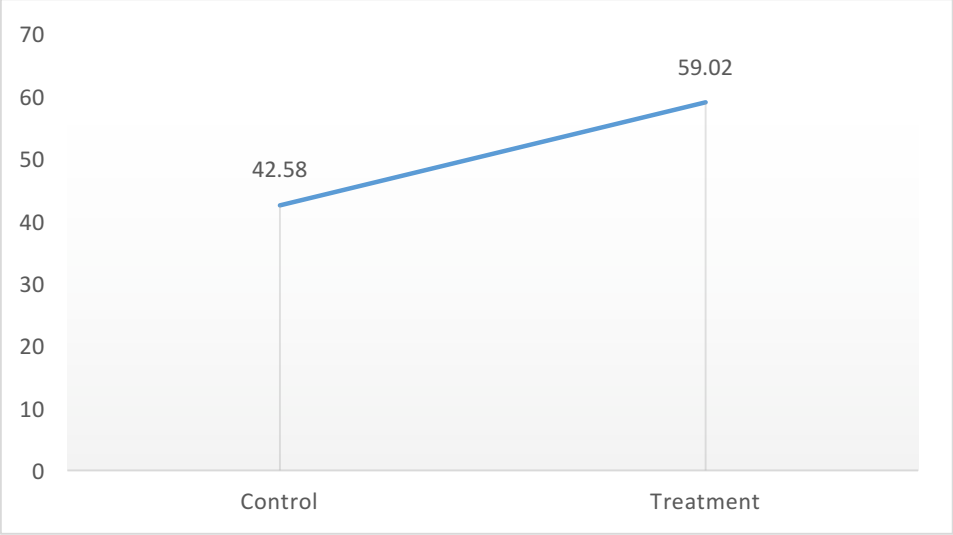

***Result of Gender and Groups Differences in CL Scores***

Separate independent-sample t-tests were conducted to identify if significant pre-test differences in CL scores existed between genders and between the experimental and control groups. This was undertaken to determine if statistical control was required for any existing pre-test difference within genders and groups. Results indicated that there were no significant pre-test differences in the CL scores of females participants in the treatment and control groups, t (132.227) = .633, $p > 52$, $d = .10$), and males in treatment and control groups, t (123.993) = .153, $p > 87$, $d = .02$). However, for the gender condition, the results showed significant differences between female and male control participants, t (133.243) = -.905, $p > 36$, $d = -.15$), and between male and female treatment group participants in the pre-test scores of CL t (130.648) = -1.622, $p > 10$, $d = -.28$).

Repeated measure ANOVA analyses were conducted to assess if there were significant differences between pre- and post-test scores for cognitive learning between male and female participants in the experimental and control groups, and whether there

was an interaction effect of gender and groups. The result of the within-subject contrasts indicated that there was no significant main effect for gender ($F$ (1, 265) = .472, $p$ > .05, $\eta_p^2$ = .002), however, a significant effect was found for group, ($F$ (1, 265) = 126.53, $p$ < .001, $\eta_p^2$ = .323). The interaction between group and gender was also found to be significant, ($F$ (1, 265) = 9.19, $p$ < .005, $\eta_p^2$ = .034). Moreover, the result of the between-subject analyses indicated that there was no significant main effect for gender (Wilks' Lambda = .760, ($F$ (1, 265) = 3.09, $p$ > .05, $\eta_p^2$ = .013), whereas, a significant effect was found for group, ($F$ (1, 265) = 139.63, $p$ < .001, $\eta_p^2$ = .345). The interaction effect between group and gender was also found to be significant, ($F$ (1, 265) = 8.41, $p$ < .005, $\eta_p^2$ = .031).

***Figure 7 – Groups-Timing-Cognitive Learning***



# Quantitative Discussion

**Students' Perceptions of Verbal and Non-verbal Lecturer Text-Based Immediacy**

An important aim of this study was to examine the impact of text-based teacher immediacy as an alternative to face-to-face communication practices in the distance education system at Saudi universities. A secondary intention of the study was to investigate the influence of verbal and non-verbal textual forms of lecturer immediacy behaviour on students in the distance education environment. The following discussion considers the differences in the immediacy perceptions that students formulate in relation to their lecturers.

The findings of this study are discussed based on the results of three phases of data analysis. Firstly, the independent sample t-test results revealed that there were differences between genders in the students' pre-test scores for perceptions of verbal and non-verbal text-based lecturer e-immediacy, in both the control and treatment groups. ANCOVA was then applied in the second phase of analysis to control for existing group differences in pre-test scores regarding students' perceptions of their lecturer's verbal and non-verbal e-immediacy variables. The ANCOVA results indicated that the treatment protocol of lecturer e-immediacy contributed to significant differences in the post-test responses of the treatment groups. The next phase of analysis again focused on gender, where repeated measure ANOVAs were used to compare scores between control and treatment groups that had been separated according to gender. The ANOVA results supported the ANCOVA outcome, revealing significant differences between the pre- and post-test responses of female students in the treatment groups for perception of lecturer communication by text-based practice of verbal and non-verbal immediacy behaviours. Similar significant results were found with male

students' perceptions of lecturer text-based immediacy behaviours in pre-test and post-test treatment groups (see Table 5).

Results of this study are consistent with the results of the experimental study undertaken by Violette (2002). Violette's study showed that there were significant differences in students' perceptions of their teacher's verbal and non-verbal immediacy after experiencing a higher level of teacher immediacy in distance education classes. Additionally, Chesebro (2003) explored the impact of teachers' verbal and non-verbal immediacy practices on students' perceptions of their learning outcomes in a class. The results of that study supported the current and similar findings (Bodie, 2009; Ni & Aust, 2008; Violette, 2002), when comparing outcomes of students' scores in their perceptions of teacher verbal and non-verbal immediacy behaviours. Collectively, all the findings show significant differences in scores between students who were more positively focussed on lecturer immediacy practices versus those who received standard immediacy behaviours.

In terms of relationship differences, the current results indicated that a strong correlation existed between the verbal and non-verbal text-based immediacy of the lecturer in treatment groups after the lecturer engaged in high immediacy practices, whereas patterns for the pre-test scores were not significant. Results for the control groups showed no significant associations between verbal and non-verbal e-immediacy text-based practices, either pre- or post-test. These results are consistent with those of Bodie (2009), who found that the implementation of teacher immediacy through text-based communication promoted the relationship between verbal and non-verbal practices, which increased students' positive impression of their online classroom. Arbaugh (2001)'s study of how instructor immediacy impacts on students' satisfaction and learning revealed that instructor immediacy has a positive impact on students'

perceptions of their distance education classes that can increase their satisfaction and as a consequence facilitate achieving learning outcomes. However, the lack of instructor immediacy behaviours (verbal and non-verbal) is likely to lead to a negative association between students' perceptions of their instructor experiences and their learning in the virtual classroom. The findings of previous studies and the current study emphasise that text-based, within computer mediated-communication can promote the relationship between verbal and non-verbal lecturer practices, which leads to an increase in students' positive attitudes towards the online classroom. This contributes to displaying the physical behaviours of lecturer verbal and non-verbal immediacy in online classrooms, and as a consequence students' positive perceptions increase their engagement and communication in online courses.

In relation to lecturer immediacy practices, the post-test treatment groups' scores show that students' perceptions of textual content are impacted positively by effective change in lecturer verbal and non-verbal text-based immediacy practices in the online classroom. Examples of verbal text-based immediacy practices adopted by the teachers included such behaviours as addressing a student by his or her first name, using personal examples, or referring to the class as "our" class. Examples of non-verbal text-based immediacy practices included targeted visual cues and body language such as gestures, the use of acronyms, punctuation and pronouns, (see Table 2).

These results of lecturer e-immediacy practices were consistent with Farwell's (2010) results. Farwell examined the effects of teacher verbal and non-verbal text-based immediacy on students' motivation and learning outcomes in both e-learning environments and traditional classrooms. That study found the use of text-based communication content that effectively incorporated verbal and non-verbal immediacy

practices had a positive association with how students perceived lecturer behaviours, and their own motivation and learning in the virtual classroom.

The current study demonstrated that there were certain practices of text-based immediacy that contributed to contrasts in students' perceptions of their lecturer's verbal and non-verbal immediacy. Differences were clearly apparent in both the group comparison and correlation results. These practices included response times to feedback or questions from students and the provision of clear and understandable responses. Practices such as these been shown to contribute to increasing the positive perceptions of students regarding their lecturer's text-based immediacy behaviours in the online classroom (Dietz, 2015). The current results are similar to those of Newberry (2001), who reported that quick and clear responses from lecturers helped stimulate students' interest and productivity in their online learning within the virtual classroom. Similarly, the examination of the responses by lecturers to students' emails in distance education settings revealed that "quick responses are key to making students feel part of a virtual class" (Young, 2002).

Results derived from the ANCOVA and ANOVA analyses highlighted that a lecturer's verbal and non-verbal text-based e-immediacy practices are advantageous in the absence of face-to-face communication. These practices are likely to reduce the feeling of distance between students and lecturers in learning classrooms (Bolls et al., 1997; Mehrabian, 1971; Tinley, 2008). The textual communication content of a lecturer (text-based e-immediacy) could be developed within two types of communication – synchronous or asynchronous – by "chat" or discussion boards, emails or blogs, or using facilities provided within the virtual classroom. Baker (2004) reported that teacher immediacy in terms of verbal and non-verbal textual communication content impacts on students' learning in online classrooms. Baker's study concluded that text

communication content was a critical element in teacher immediacy practices and could be promoted by a teacher's voice or text messages within asynchronous communication. The current findings have demonstrated that the text-based communication content enhanced verbal and non-verbal cues from the lecturer to convey online learning content. This enhanced the real feeling of lecturer presence and delivered close interaction via interpersonal behaviours in the online classroom. Consequently, again, students' positive perceptions of lecturer interpersonal behaviours were more likely to increase, which contributed to positively influence students' attitudes of their distance courses.

Responses from students in previous studies suggested that the text-based immediacy behaviours of their lecturers can promote social presence through interpersonal communication, reducing the feeling of distance in online classrooms (Kear, Chetwynd, & Jefferis, 2014). As in the results of this study, a focus on lecturer text-based immediacy practices (e.g., quick responses to students' questions, comments, emails, and posting emotions such as happy or sad face, etc.) can create an interesting and productive online learning classroom environment. Additionally, these text-based e-immediacy practices can be considered in relation to social presence theory. This theory posits that the feeling of distance between users (e.g., students and lecturers) using electronic communication can be reduced through e-immediacy behaviours, which can be considered as close alternatives to face-to-face communication in virtual classrooms (Walther, Anderson, & Park, 1994).

Overall, text-based communication has been shown to reduce the feeling of psychological and social distance between students and lecturers, and to be a viable alternative to face-to-face communication. The effective use of verbal and non-verbal immediacy practices in text-based communication within computer-mediated

communication contributed to the sense of community (i.e., social feelings) among students. This improvement of social feeling can be increased via synchronous communication (discussion board or instant chatting) or asynchronous communication (emails and social networks) between students and lecturers in an online learning environment (Walther, 1992).

The following sections will consider the impacts of a lecturer's text-based immediacy practices on students' perceptions of their participation, communication satisfaction, and their affective and cognitive learning. The analysed data of lecturer behaviour variables (i.e., verbal and non-verbal immediacy) linked to students' perceptions of their sense of social presence, cognitive learning, and engagement in discussion are considered within the context of the findings of both the current study and prior studies. The data analysis of this current study clarified the causes of significant differences in the students' perceptions of their communication satisfaction, online participation, learning outcomes within groups and gender scores in the virtual classroom.

**Students' Online Class Participation and Lecturer Text-based Immediacy**

This section provides an overview of results associated with the relationship between students and lecturers, in terms of verbal and non-verbal text-based immediacy behaviours. Prior studies have highlighted that a lecturer's verbal and non-verbal text-based e-immediacy and participation (e.g., engagement in discussion and volunteering to answer questions) can assist students in improving their learning in virtual classroom environments (Jung, Choi, Lim, & Leem, 2002; Kim et al., 2011; Rocca, 2010). Interpersonal verbal and non-verbal text-based immediacy can encourage students to increase participation in a task and complete tasks on time within the virtual classroom in both synchronous and asynchronous communication (Ho, 2002; Jung et al., 2002).

Overall, it is apparent that lecturer text-based immediacy behaviours can strengthen the lecturer-student relationship in the online classroom and provide a more effective delivery of course content.

Findings relating to classroom participation are again discussed in accordance with the three phases of data analysis. Firstly, gender differences in students' participation – analysed using independent sample t-tests – revealed significant pre-test treatment and control group differences in the participation scores of students, based on their lecturer's verbal and non-verbal text-based immediacy practices. Consequently, ANCOVA was applied in the second phase of analysis to control any pre-test score group differences in students' perceptions of their participation based on their lecturer's verbal and non-verbal text-based immediacy practices. The results indicated that the treatment protocol of lecturer text-based immediacy led to significant differences in the responses of students in post-test treatment groups. In the third phase of analysis, repeated measure ANOVAs were used to compare scores of student participation between control and treatment groups according to gender. The ANOVA results further supported the ANCOVA treatment influence outcome by revealing that significant differences existed between the pre- and post-test responses of female students' treatment and control groups. Similar results were found for male students in pre-test and post-test control and treatment groups (see Table 5).

Results of previous studies are consistent with the current findings in reporting a positive influence of lecturer textual behaviours such as posting motivational words (e.g. lecturer writes "that's great work", "good answer" or comments), and respecting students' opinions (Dallimore, Hertenstein, & Platt, 2004; Kucuk, 2009; Rocca, 2009). The current study found that students in the treatment groups evaluated their participation as being higher during the post-test than the pre-test period due to high

level practices of lecturer e-immediacy. Conversely, the participation scores of the control groups did not demonstrate any significant difference between pre- and post-testing in regards to the lecturers' basic immediacy practices. These contrasts in student perception of participation based on their lecturer's verbal and non-verbal text-based immediacy practices are consistent with the results of Asiri (2013), who found that students' participation scores were positively influenced by high-level lecturer verbal and non-verbal immediacy. On the other hand, in control groups, the students were not willing to participate more because of normal-level e-immediacy behaviours.

The present study found that it is possible to promote student participation through advanced lecturer verbal and non-verbal text-based e-immediacy practices in the online classroom, for instance, encouraging students to ask questions or participate in classroom activities. Bullen (2007) found that students in virtual classroom can enhance their participation when the lecturer encourages students to posit questions in written formats, for example, on chat boards or via emails. The findings of the current study emphasised the Bullen results, in that significant relationships were demonstrated between student participation and lecturer verbal and non-verbal immediacy when textual communication was enabled in the virtual classroom for treatment groups. This relationship was not evident in the control groups.

These results also support those of Asiri (2013), who showed a strong positive correlation between student participation and interpersonal attraction (e.g. positive feeling of the other person, including liking his or her communication behaviours, taken to be friendship) which can be promoted by lecturer immediacy behaviours via verbal and non-verbal behaviours, as was evident in the treatment groups but not in the control groups. In an earlier study, Gunawardena (1995) found that teacher immediacy as social

immediacy practices of verbal and non-verbal cues created a sense of presence, and this in turn encouraged student participation in the online classroom.

The current study found that student participation in the online classroom could also be facilitated when the lecturer gave students opportunities to both have, and express, opinions. This finding is consistent with the investigation of McBrien, Cheng, and Jones (2009), who also reported that student engagement in the virtual classroom was developed through the expression of student opinions. Other explanations of the significant differences in students' perceptions of their participation based on lecturer text-based immediacy may refer to lecturer behavioural characteristics involved in these immediacy practices. For instance, lecturers who demonstrate non-aggressive, warm or caring communication behaviours can positively impact on students' participation in the online classroom (Rocca, 2009). This is demonstrated by the results of Tu (2001), which indicated that the participation and interaction of students in the online classroom can be enhanced by the friendliness or intimacy of lecturer immediacy behaviours.

The present study results supported the proposition that a higher level of lecturer verbal and non-verbal text-based e-immediacy practices can help foster social interaction between students and their lecturers in the virtual classroom (Aragon, 2003; Farwell, 2011). Lecturer text-based immediacy is related to social presence, and cannot be separated from the learning and participation of students (Hrastinski, 2008; Vygotsky, 1980; Wenger, 1998). These behaviours are considered factors that encourage student participation in the online classroom. Therefore, lecturer text-based immediacy practices (for example, encouraging students to participate through email, discussion boards, portfolios and instant messaging) can improve students' participation in the online learning environment. This gives students an opportunity to engage in free dialogue with the lecturer, allowing them to express their opinions without hesitation,

which can lead to increased participation. The current results concluded that the lecturer's verbal and non-verbal text-based immediacy behaviour reduced the sense of psychological distance and promoted the social immediacy aspect in terms of the interpersonal relationship between students and lecturer. Finally, this e-immediacy behaviour can increase students' online engagement, strongly supporting social behaviours between students and their lecturer, such as interpersonal style, more self-confidence and being more comfortable in distance education classes (Asiri, 2013; Credence, 2010; Mehrabian, 1967).

**Student Communication Satisfaction and Lecturer Text-Based Immediacy**

This section outlines the relationship between lecturer verbal and non-verbal, text-based immediacy practices and students' communication satisfaction. The current study's findings of lecturer text-based immediacy protocol as high level practices emphasised the ability to create significant differences in students' perceptions in their satisfaction with the lecturer's communication behaviours in an online classroom. These differences emerged in the pre- and post-test scores as contrasts, which were evaluated for both male and female respondents in the treatment and control groups.

The findings of this study in term of students' communication satisfaction were similarly based on the three phases of analysis. Firstly, the gender differences in students' communication satisfaction were analysed using the independent sample t-test. The analysis revealed that there were gender differences in the pre-test scores of students, based on lecturer text-based immediacy practices in experimental and control groups. Thus, ANCOVA was used in the second phase of analysis to control for any group pre-test score differences in students' responses regarding communication satisfaction based on lecturer text-based immediacy practices. The results revealed that there were significant differences in the post-test treatment groups' responses, due to the

implementation of the treatment protocol of lecturer text-based immediacy practices. Repeated measures ANOVAs were employed in the third phase of analysis. This phase compared the scores of students' communication satisfaction in the treatment and control groups for each gender separately. The ANOVA results supported the ANCOVA outcomes, which showed that there were significant differences in female participants between the pre- and post-test treatment and control groups. Similar results were found with the male students in the treatment and control groups (see Table 5).

These results show that a lecturer's verbal and non-verbal text-based immediacy practices – such as calling students by their first name or posting emotions of social immediacy (e.g., ☺ ☹ or ??) can positively influence students' satisfaction with communications in an online classroom. Students' satisfaction with their lecturer's communication can be promoted by effective interpersonal behaviours (Garrison, Anderson, & Archer, 2010). This lecturer text-based behaviour has greater capacity to develop and broaden student-lecturer communication, prompting students to participate in question and answer sessions or engage in dialog. Consequently, in this study, students reported feeling satisfied after speaking or texting with their lecturer, and after finishing their conversation, particularly in the absence of face-to-face communication in distance learning courses. Additionally, students felt as though they had completed a task or course requirement in the online classroom.

Conversely, students in the control group of this study stated that they felt it was not rewarding or worthwhile speaking with their lecturer, as the lecturer did not present effective immediacy behaviours, such as calling students by their first name or immediately replying to comments or questions. Results showed that there was a positive relationship between students' satisfaction with lecturer communication when lecturers presented high-level text-based immediacy behaviours, as in the treatment

groups. In contrast, students in the control groups did not report any change in the relationship between their communication satisfaction and the normal practices of lecturer text-based immediacy.

The present results are consistent with those of Myers (2002), who found that lecturer text-based immediacy behaviours positively impacted student satisfaction with their communication in online classrooms. Students reported that high-level practices of teacher verbal immediacy increased their satisfaction with student-lecturer communication. Normal practices of text-based verbal immediacy did not significantly influence perceptions in students' satisfaction of their communication with the lecturer. Richardson and Swan (2003) also revealed a positive correlation between students' perceptions of communication satisfaction and lecturer text-based immediacy practices. This is in line with the results of previous studies that also showed that verbal and non-verbal immediacy behaviours are closely related to increased levels of student satisfaction with lecturer communication (Arbaugh, 2001; Asiri, 2013; Goodboy & Myers, 2008; Gorham, 1988; Westwick, 2012). These studies also revealed that lecturer interpersonal behaviours in text-based content can increase students' positive feelings of textual communication in virtual classrooms, which can in turn positively influence student satisfaction.

The current findings indicated that students' satisfaction with the communication they had with their lecturers could be developed through the lecturer's text-based immediacy practices. For instance, the students indicated that they were satisfied with their communication with the lecturer when the lecturer encouraged them to talk freely in the online classroom. Tu (2002) suggested that informal text-based communication of human behaviours can help increase students' satisfaction in online courses. Additionally, increased student satisfaction with student-lecturer communication can

reduce a feeling of distance (Walther, 1996). This, in turn, can promote students' satisfaction with the communication they have with their lecturer in the virtual classroom. In contrast, this satisfaction can be negatively impacted when the lecturer interrupts a students' answer or ignores their questions. This shows that a lecturer's text-based communication behaviours can promote students' satisfaction by increasing their willingness to communicate with the lecturer. This impacts positively on reducing the feeling of distance between students and lecturers in relation to the content of electronic human interaction in online classrooms. Consequently, students' learning achievements may improve in an online environment based on apparent levels of lecturer e-immediacy behaviours. The findings of Richardson and Swan (2003) emphasised that lecturer text-based behaviours (e.g. emotional intelligence ☺, ☹ and GOOD) can mimic lecturer body behaviours and this can enhance students' understanding of their lecturer's reaction to their questions, answers or comments. This can further develop students' satisfaction with their online learning classes, suggesting that other factors may have a positive influence on student satisfaction with their communication.

Students' positive perceptions of student-lecturer communication could be due to some elements related to variables not examined in this study. For example, the lecturer may have used electronic communication tools (such as video conferencing, or audio with live and/or digital photos) in the delivery of verbal and non-verbal immediacy practices. Additionally, other factors related to lecturer teaching methods – such as lecturer clarity (e.g. speaking clearly, explaining information effectively) – could have influenced the teaching style and effectiveness (Chesebro & McCroskey, 2001), and this could have influenced the students' satisfaction with the communication they had with their lecturer.

Additionally, in this current study, the lecturers' nationality was different to the students; there may have been a difference in the cultural context between lecturers and students and this may have affected students' perceptions of lecturer e-immediacy behaviours. For instance, Saudi lecturer culture tends to be more formal in the classroom, which could reduce students' communication level and affect their satisfaction with their learning environment, influencing the effect of student level of comfort with the lecturer relating to his or her e-immediacy behaviours. Zhang (2005) found that student satisfaction can differ based on lecturer or student nationality in a classroom; for example, Korean students tend to communicate more inside the classroom rather than outside, in contrast to Chinese students who communicate more outside the classroom. These cultural differences could be related to teacher immediacy behaviours, which can improve students' participation and communication. The lecturer can increase students' communication by presenting positive messages of e-immediacy (e.g., respecting students' reactions to their answers or questions), encouraging them to engage in conversation and express their opinions. This could have influenced the students in the current study, altering their perceptions of their communication satisfaction with the lecturer (Aydin, Miller, Xiaojun, Menteş, & Leblebİcİ, 2013; Richardson & Swan, 2003; Santilli & Miller, 2011).

In summary, lecturers use verbal and non-verbal immediacy when communicating with students to reduce the sense of distance between student and lecturer in their online classes. This sense of reduced distance is likely to increase student satisfaction when communicating with a lecturer. Considering these factors and high-level practices of lecturer verbal and non-verbal text-based immediacy within synchronous and asynchronous communication helps to create an alternative to face-to-face

communication in traditional classrooms. Consequently, this can increase students' satisfaction with their communication with lecturers in virtual classrooms.

**Students' Affective Learning and Lecturer Text-based Immediacy**

This section considers the findings examining the relationship between lecturer e-immediacy practices and students' affective learning outcomes. In the current study, the results of the analyses of students' affective learning scores revealed differences between pre- and post-test treatment and control groups. The students' perceptions of their affective learning incorporated their attitudes toward their lecturer's behaviour in class, as well as their attitude towards the course content. Previous research has reported a positive relationship between lecturer immediacy and students' affective learning outcomes (Asiri, 2013; Credence, 2010; Farwell, 2011; Toale, 2001). The results of this study in terms of students' affective learning were based on two phases of analysis. Firstly, gender differences in students' perceptions of their affective learning were not found within the independent sample t-test analysis based on lecturer text-based immediacy behaviours within scores of pre- and post-test treatment and control groups. Repeated measures ANOVA were then employed in the second phase of analysis, comparing the scores of students' affective learning in both male and female treatment and control groups. This analysis revealed significant differences between the pre- and post-test treatment and control groups (see Table 5).

In comparing the responses at pre-test and post-test in both groups, students' affective learning scores were higher for those taught by lecturers who utilised a change in their text-based immediacy behaviours (e.g., the treatment groups in which the lecturer gave prompt feedback on assignments, thoughtful responses on assignments and clearly communicated important course topics). Significant differences were not found for the control groups' perceptions of their affective learning when undertaking

normal lecturer text-based e-immediacy practices. These results are consistent with the findings of Rourke, Anderson, Garrison, and Archer (2007), who reported significant differences in students' affective learning based on the impact of asynchronous textual communication – such as emails and bulletin-board systems – in online courses. Richardson and Swan (2003) emphasised that students can utilise social presence by applying teacher e-immediacy behaviours in computer-mediated communication (e.g., individual or group discussions or blogs). This type of finding reinforces that lecturer text-based immediacy can promote affective learning in the virtual classroom.

The results of the current study revealed a significant relationship between students' affective learning and lecturer text-based immediacy practices in the virtual classroom. Students were satisfied with the course content and the lecturer's teaching style when it was based on high practices of text-based immediacy behaviours. Additionally, this positive relationship showed that students reported they were more likely to complete a subsequent subject or course with the same lecturer, due to their positive perceptions of the lecturer's interpersonal behaviours. One interviewee in the treatment group noted they were willing to study with their lecturer in future courses due to the lecturer's positive and supportive communication. This is consistent with the findings of Freitas, Myers, and Avtgis (1998) who found a significant correlation between teacher immediacy practices and students' affective learning which found students were more likely to take the same lecturer for another subject in the future.

The findings of the current study align with those of prior studies that reported positive impacts of lecturer immediacy concepts on students' affective learning in both online and traditional classroom environments. Researchers previously asserted that lecturer immediacy practices can support student satisfaction with class content and character traits of the lecturer, and facilitate positive and meaningful attitudes to their

own learning (Allen, Witt, & Wheeless, 2006; Asiri, 2013; Baker, 2010b; Christensen & Menzel, 1998; Ledgerwood, 2008; McCroskey, Richmond, Plax, & Kearney, 1985).

**Students' Cognitive Learning and Lecturer Text-based Immediacy**

This section discusses the association between lecturer verbal and non-verbal text-based immediacy practices and students' cognitive learning. The differences between students' pre- and post-test scores for cognitive learning linked to their perceptions of lecturer text-based immediacy practices in distance education are considered, for both the male and female control and treatment groups. Previous studies emphasised that effective practices of teacher immediacy positively affect students' cognitive learning (Hughes, 2014; Menzel & Carrell, 1999; Mullane, 2014), suggesting that teacher verbal and non-verbal immediacy practices can be improved upon, and can support positive change in the cognitive learning scores of students who receive high immediacy practices (Asiri, 2013; Hughes, 2014; Menzel & Carrell, 1999; Mottet & Beebe, 2002; Mullane, 2014; Witt, Wheeless, & Allen, 2006).

The current study utilised two analysis techniques to explain the effect of text-based immediacy behaviours on students' perceptions of their cognitive learning. Firstly, an independent sample t-test did not reveal any gender significant differences between the pre-test and post-test scores of treatment and control groups (see Table 5). Secondly, a repeated measure ANOVA revealed significant differences in cognitive learning in groups' pre- and post-test scores for both males and females. These findings are consistent with those of Bodie (2009) who outlined significant differences in students' cognitive learning scores for students who experienced high level verbal and non-verbal teacher immediacy practices in an online classroom. Similarly, Titsworth (2001) reported significant differences between students who experienced high-level teacher verbal and non-verbal immediacy practices when compared with students who received

low-level immediacy practices in a virtual classroom. The earlier findings of Gorham (1988) also support the current results, indicating that effective verbal and non-verbal immediacy practices significantly impact student learning.

The present results in regards to the relationship between students' cognitive learning and lecturer verbal and non-verbal text-based immediacy showed a significant correlation in post-test scores for both male and female students in the treatment groups. This result is consistent with previous results of both Farwell (2011) and Titsworth (2001). Farwell found positive to moderate relationships between verbal and non-verbal practices and cognitive learning in an online learning environment; Titsworth (2001) reported a positive correlation between teacher interpersonal behaviours, such as text communication e-immediacy behaviours, and students' cognitive learning outcomes in web-based learning or mobile formats. Lecturer verbal and non-verbal text-based e-immediacy behaviours can help achieve basic goals of course content, create clear communication and are an effective teaching style in online classrooms.

There are several practices that could be related to lecturer immediacy in communication content and influence students' affective and cognitive learning in the online classroom that were not considered in this current investigation. For instance, the clarity of the lecturer's teaching so as to avoid a misunderstanding of lecture content – such as the lecturer highlighting important information or sentences in an article, or interpreting a lesson (Comadena, Hunt, & Simonds, 2007). Additionally, use of electronic communication tools by a lecturer to deliver lecturer e-immediacy practices within synchronous and asynchronous communication could enhance students' affective and cognitive learning in a virtual classroom. These may include practices such as an audio or video message concerning the final draft of an assignment (Belanger, 1999). Furthermore, the use of individual chat rooms with each student after class could help

encourage students to review or clarify course content from their lecturer (Dickey, 2003). Applying verbal and non-verbal immediacy behaviours in text-based communication between lecturers and students in distance learning environments creates a high possibility of increasing students' satisfaction with their learning. This can be developed by using social networks (WhatsApp, Facebook, Skype) to promote student-lecturer communication, which can then positively impact on teaching and content in the online classroom. Consequently, the separation of time and place, with no physical co-location of students and their lecturer, can be removed to more positively impact on students' learning and experiences by text-based immediacy concept in a distance education environment.

# CHAPTER 7: QUALITATIVE STUDY PHASE

## Introduction

The researcher employed qualitative methods in order to further explore the research questions using an alternative methodological approach. A qualitative method is useful for promoting a more detailed understanding of a problem, as the process of eliciting in-depth responses from select respondents can strengthen questionnaire results (Brannen, 2005) and provides the information required to clarify outcomes of the quantitative methods. According to (Creswell, 2007), this mixed methods approach "is particularly useful when a researcher needs to embed a qualitative component within a quantitative design, as in the case of an experimental or correlation design" (p. 67). Qualitative approaches are also useful for obtaining useful individual responses from participants in regards to perceptions of their experiences. This enables the researcher to closely investigate the social phenomena in question.

A qualitative approach includes data collection practices, such as field notes, interviews, and recordings (Denzin & Lincoln, 2011). This allows the researcher to discover links and other variables such as relationship between the variables (verbal and non-verbal e-immediacy behaviours with students' participation, communication satisfaction, affective and cognitive learning).

Qualitative research can help within an investigation by facilitating exploration of a variety of ideas, understanding different perspectives between groups, and categorisation of participants. The approach can also assist in the determination of factors that affect the opinions and decisions of participants. In this research, semi-structured interviews were used, along with field notes of the participating students in treatment and control educational settings. The researcher chose to conduct interviews

with the students and lecturers in order to obtain new insights from the spontaneous responses of the participants, and cover areas that could not be addressed using quantitative surveys.

## Sampling and Participants

The interview sample consisted of 12 undergraduate participants who had also been participants of the initial quantitative survey. In order to ensure the representativeness of the sample, the researcher selected from each group three male and three female students for both treatment and control groups. All participants (271) in the quantitative component were asked towards the completion of the quantitative component whether or not they are willing to participate in the qualitative component. Out of the total 168 participants, three from each group (male control, male experimental, female control, and female experimental) agreed to participate in the qualitative part. All interviewees requested the interview be conducted in Arabic and gave their consent for the interview to be recorded. While the pre-written list of interview questions guided the conversation, the researcher also took notes to identify themes in the respondent's feedback that may not have been addressed in the original interview questions. After the interviews, the audio records and interview notes were immediately transcribed in Arabic and then translated to English. A thematic analysis was conducted on the transcribed responses, and significant responses were coded according to their themes. Keywords and linking sentences were adopted to investigate the interviews data. The researcher asked the lecturers who were involved in the treatment and control groups to participate in an interview but none were able to because of several reasons related to having a student work overload, which did not give them enough time for other tasks.

Also they may have wished to avoid giving any responses not suitable for the distance education faculty which might have an effect on their job.

The number of respondents sampled for the qualitative part of the research is often only a fraction of the sample used for the quantitative part of the study (Brannen, 2005). These participants are recruited to support the quantitative outcomes of the current study by additional data drawn from interview responses. The sampling for the interviews was conducted among undergraduate students enrolled in the distance education course at KAU who had participated in the quantitative surveys. The students who indicated their consent for interviews in the post-test survey were contacted for the qualitative phase of the research. Subsequently, arrangements were made to interview these students. The sampling, measurement, procedure of data collection and analysis, results, and findings of these interviews are discussed in detail below.

## Measures

The researcher developed the four interview questions to investigate the participants' perceptions of the lecturers' immediacy behaviours and how they might affect their participation, communication satisfaction, affective learning outcomes and cognitive learning outcomes (see Appendix F). The interview questions were carefully formulated and worded to ensure that they were appropriate for the cultural sensitivities and educational context of the students enrolled in the distance education course at the University. The semi-structured questions in the interviews sought to probe the impact of verbal and non-verbal text-based immediacy of lecturer behaviour on students' experiences (participation and communication satisfaction) as well as their affective and cognitive learning outcomes in the online classroom. The interview questions examined teacher immediacy in distance education through three perspectives:

a) The lens of verbal immediacy, examining students' interaction and engagement

b) The lens of non-verbal immediacy, examining communication

c) The interactive net literacy of verbal and non-verbal immediacy lens.

The first question investigated the students' impressions of their lecturer's behavioural practices of verbal immediacy in text-based formats. The second question examined the students' perceptions of the non-verbal text-based behavioural practices applied by their lecturer. The third question examined the students' perceptions on the impact of the lecturer's e-immediacy behaviour, verbal and non-verbal, on their participation and communication satisfaction. The fourth question asked the participants their views regarding the impact of the lecturer's e-immediacy behaviour on their affective and cognitive learning outcomes.

## Procedure

### Data Collection

Semi-structured interviews with the students were conducted with the aim of obtaining new insights from the spontaneous responses of the participants, and covering areas that could not be covered in the format of quantitative surveys. The interviews were conducted one-on-one and typically lasted 30-60 minutes. The researcher conducted the interviews with the students via Skype, mobile phone, and sometimes Viber depending on the availability of the participant. All the interviewees requested that the interview be conducted in Arabic, and gave their consent for the interview to be recorded.

While the pre-written list of interview questions guided the conversation, the researcher also took notes to identify themes in the respondents' feedback that may not have been addressed in the original interview questions. Throughout the interview, the researcher took notes regarding areas that required further clarification. The students

were questioned further on these topics before the conclusion of the interview, and the researcher re-interpreted some interesting comments to pose new questions that could provide further insight into how lecturer e-immediacy behaviours impact on student perceptions in the online classroom. In this way, the interview followed a more semi-structured format, with some pre-written guiding questions interspersed with new questions picked up from respondent feedback. This semi-structured form of interviewing enables the researcher to be more flexible in the interview process in order to accommodate a participant's experiences and feelings, resulting in the acquisition of deeper insight into the research questions. Techniques such as subtle encouragement were used to maintain rapport, and encourage participants to continue talking and expand upon their ideas and views. At the end of each interview, the interviewee was thanked and given an opportunity to ask any questions in regards to the interviews and the research. After the interviews, the audio recordings and interview notes were immediately transcribed into Arabic and then translated back to English. The transcribed notes were then subjected to textual analysis procedures to analyse the data.

Following the strict gender segregation protocols in Saudi Arabia, the (male) researcher did not conduct any interviews with the female participants, which were instead conducted by the researcher's wife. After the researcher received approval from the Victoria University Human Ethics Committee and King Abdulaziz University, the principal of the Distance Education Faculty was sent a letter stating the purpose of the study. In order to initiate the survey and collection of interview data, the participating lecturers asked students who had participated in the quantitative survey to indicate their interest in performing further interviews and the mode in which the interviews could take place (i.e., by email, mobile or Skype). Then, the interviewer communicated with the participants to reconfirm their consent and arrange a suitable interview time. The

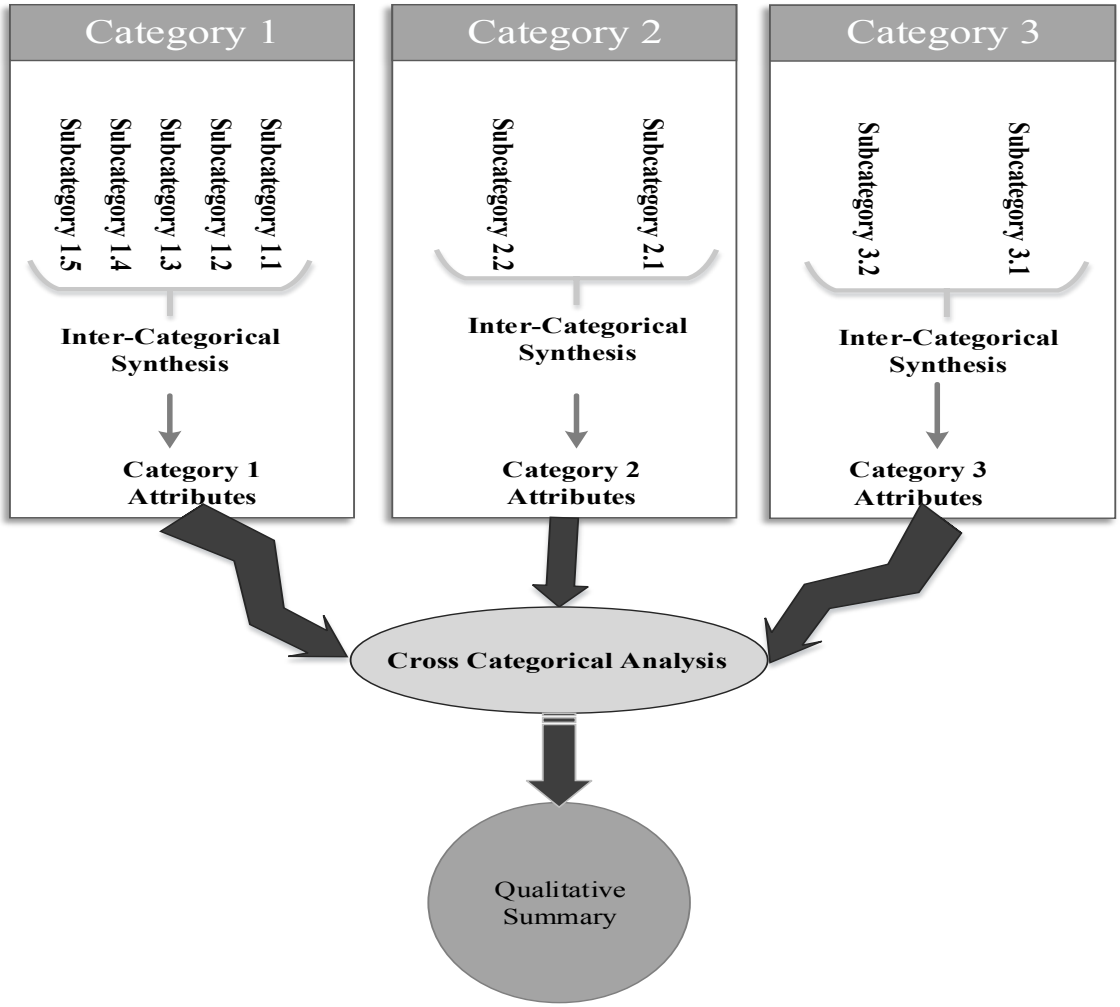
information leaflet and consent forms (see Appendix 3) were provided to all participants by email prior to conducting the interview and their consent was recorded.

**Data Analysis**

Data analysis of the interview content utilised the technique recommended by Cohen, Manion, and Morrison (2011) with inter-categorical analysis and cross-category analysis of the main themes. A thematic analysis was conducted on the transcribed responses, and significant responses were coded according to their themes. Keywords and linking sentences were adopted to facilitate investigation into the data. This process starts with the ordering of data in order to identify important recurring themes. Following this, the data is coded into these themes, and subsequently compared across respondents and groups. This process of analysis involves several steps: firstly, carefully listening to responses, then defining the responses into themes that are related to the research questions, and writing up a summary of responses indicating the participants' affiliation in either the control or treatment groups.

The perceptions of the respondents on the three themes of verbal and non-verbal immediacy are explained below in detail. A section on each component explains the feedback from the control groups, treatment groups and a critical analysis of the overall result. Any significant responses from participants that were particularly interesting or relevant to the discussion are quoted in full.

***Figure 8 – Data analysis procedure***

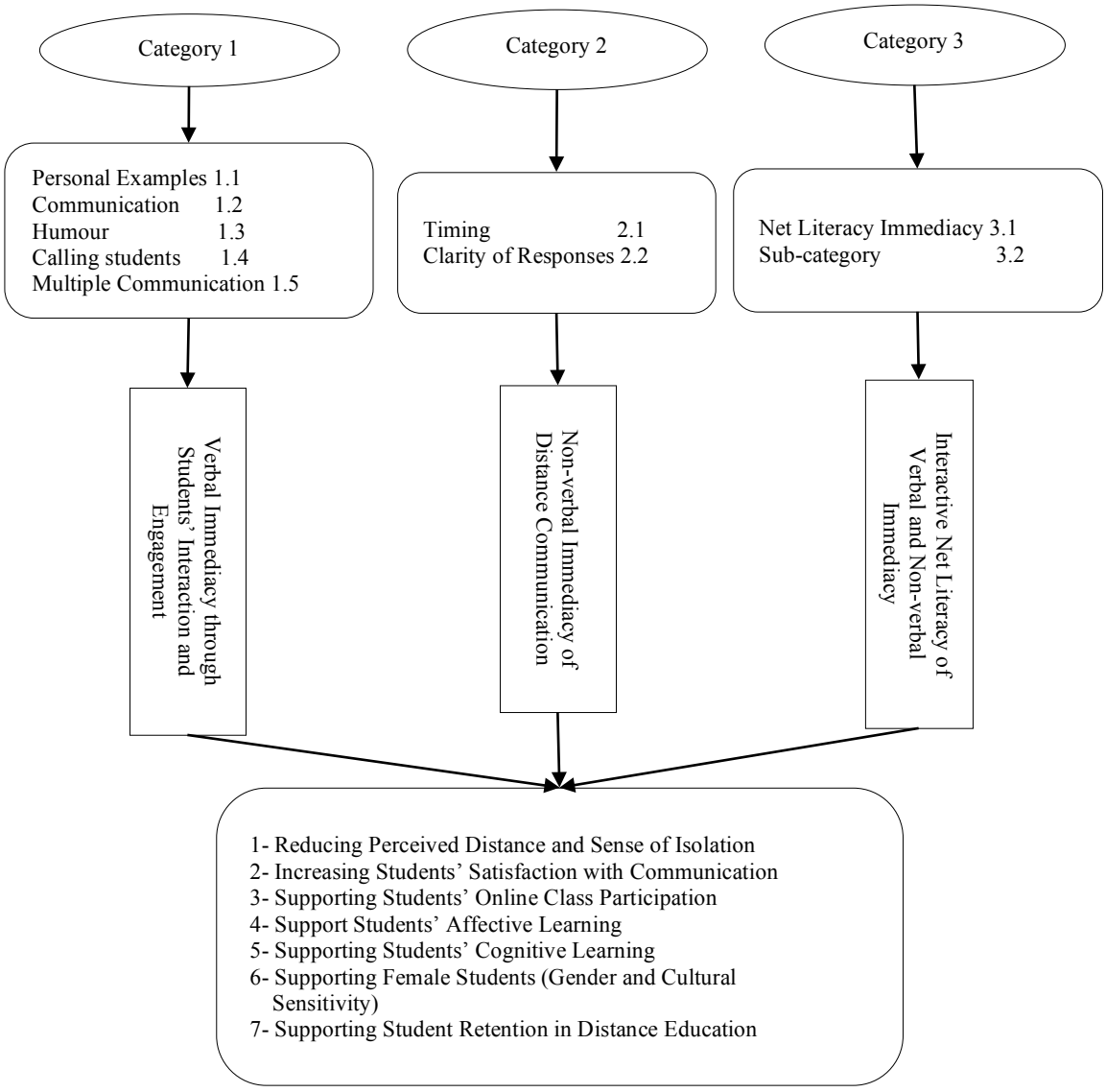



## Results

In this section, the results of the interview analysis were considered within three broad categories that are: verbal immediacy through students' interaction and engagement, non-verbal immediacy of distance communication, and interactive net literacy of verbal and non-verbal immediacy. Subsequently, each category was further refined into several sub-categories that were then re-examined to determine relevant attributes. The final

stage of the analytical commentary was the focused discussion of seven cross-categories analysis as shown in Figure 9.

***Figure 9 – Model of interviews analysis***



## Category: Verbal Immediacy through Students' Interaction and Engagement (VISIE):

### Sub-Category: Share Personal Examples and Experiences

Interviewees in both control and treatment groups were asked if their lecturers share with them, whether directly or indirectly, any of their personal experiences and examples from their everyday life.

#### *Control Groups*

The male and female participants in the control groups emphasised the importance of sharing anecdotal and personal experiences to support the feeling that they know their lecturer in real life, not just as a virtual character. This can be clearly reflected in these excerpts, where one of the male students (MC1) praises his teacher's approach:

> *I like that the teacher sometimes tell us funny stories about his car's condition or some other personal experiences. Hearing these personal stories made me feel more comfortable with the lecturer as I felt that I knew him as a person* (MC1, 2013).

Conversely, another one of the male students (MC2) wished that his lecturer was more personal and anecdotal:

> *Our lecturer rarely has used stories about real life experiences to explain some topics but didn't do so. I feel that this made the class quite boring. I don't like the fact that the lecturer taught in a formal way without trying to make the topic content more interesting* (FC2, 2013).

#### *Treatment Groups*

Participants in the treatment groups proposed a similar stance relating to lecturers sharing examples from personal experiences within the virtual classroom. They felt that their rapport with the lecturer, as well as their overall learning experience, was enhanced by such an approach. Even if the shared stories about personal experiences

were only indirectly related to the course or topic of study, the students didn't think that it was a waste of time. They reported that this type of personal interaction helped build a sense of identification and reduce formality in their virtual classroom. This helped students to form a friendly impression of the lecturer, boosting their confidence to participate in class discussions and raise questions without feeling a sense of hesitation:

> *We have a sense of ease with our lecturer so we don't hesitate about asking him any questions on the assignments or questions at the end of the lecture. This helps students when they want to understand some points that may have been unclear to them during the lecture. Sometimes the conversation becomes friendly and students ask him about his favourite soccer team etc.* (ME1, 2013).

> *Our lecturer usually tells us some real-life stories, such as dealing with a problematic friend etc. We feel that we have a friendly relationship with our lecturer* (ME2 2013).

Quotes from other students also highlighted the importance of allowing a space for students to share their experiences between themselves or with their lecturer, especially in an online classroom, where students may feel isolated or distant from their peers:

> *When the lecturer sometimes leaves the students to talk about personal events, I feel a sense of togetherness with all the students in the online class. This type of bonding with other classmates makes you feel part of a group and it feels great… I'm very comfortable when my lecturer is female, which makes me feel free to talk and discuss any points related with the topic or outside it – better than to be male* (FE2, 2013).

***Sub Category Analysis Summary***

Overall, male and female students in both control and treatment groups overwhelmingly expressed positive reactions to lecturers sharing their personal experiences or encouraging the exchange of experiences between students. These casual discussions, in both synchronous and asynchronous modes of communication, helped reduce the sense

of unfamiliarity or isolation between students and teachers in distance education classes. The sharing of personal experiences created an informal and comfortable environment in the virtual classroom that encouraged students to voice their ideas or ask questions without fear.

**Sub-Category: Lecturer Immediacy of Discussions and Communication Content**

The lecturer e-immediacy behaviours can prompt discussion and facilitate student/lecturer communication through a number of practices such as encouraging students to ask questions, and praising their work or comments

***Control groups***

Participants in the control groups generally felt that the lecturers did not allow students to ask questions during the lecture, but did give some time to post comments on the message board. Overall, this type of interaction immediacy with the lecturer was found to be missing in some online classes. In a particular case, students in the control group had not been able to meet the lecturer on several occasions following the online class, despite repeated attempts to contact him. Mostly, the participants of control groups communicated with their lecturer via emails. Also, the lecturer rarely used encouraging words, such as "good", "excellent" and so on. This is evident from the quotes of both male and female students in the control groups:

> *During this online class, I was unable to initiate the discussion with the teacher, so I hoped to meet the lecturer after the lecture. But I couldn't arrange the meeting by social network or mobile calls, and it is hard for me to meet him in the office* (MC3, 2013).

> *There is rarely any time for us to meet our lecturer when I need her to explain or answer a question. I requested her to meet me online via Skype, Viber or mobile as face to face meeting is difficult because I have work at home. This made me feel the distance between me and her. Finally, I had to go to the University for a*

> *face to face meeting. But when I met her I enjoyed my discussion with her, and the lecturer was very helpful through constructive feedback and encouraging words* (FC1, 2013).
>
> *Sometimes I put down the headphone and turn off the speaker when the lecturer is talking because she does not give me a chance to answer my questions or comments during her lecture, the lecturer rarely encourages us with encouraging comments or questions* (FC3, 2013).

***Treatment Groups***

Both male and female participants reported some difficulties in presenting their voice in the discussion or posting comments during the lecture on the chat forum. However, their overall experience was positive, and they were satisfied that the lecturers gave them time towards the end of the lecture to post their comments or questions. This "towards the end of lecture" element of interaction and communication gave the students a chance to refresh their thinking before revisiting the lecture content and preparing for the following one. Moreover, the students were encouraged to ask or post comments via the live chat forum, which gave them a clearer understanding of the lecture content. This is evident in the following quotes from male participants:

> *The lecturer started a discussion around social issues (such as causes of smoking among teenagers and draft cars and other different topics), sometimes not related with our topic but it was nice for me to refresh my mind before turning to the heavy content of the class* (ME1, 2013).
>
> *Our lecturer lets us leave comments or questions and sometimes I ask him about the last lecture. He assures me that he will immediately send the answer after the class. I was satisfied with his responses because I felt the lecturer took appropriate care as I live far away from the university and this let me do more communication with him* (ME2, 2013).

> *The lecturer was not prompt with his responses sometimes, but I am still satisfied with his response because his feedback was detailed enough to answer my questions or comments, he encouraged me to ask further questions or post comments and this reduced my feelings as far from the university* (ME3, 2013).

The female interviewees also reported a similar positive perception of lecturer responses via Skype, mobile and face to face meetings. But female respondents felt that the lecturer was not as forthcoming with encouragement:

> *My lecturer is good with communication but often she had not responded to all my questions or comments and I am neither dissatisfied as she provided us good knowledge and satisfactory answers and posted nice encouraging words whenever anyone of us post comments or raise good questions and this let us participate more* (FE1, 2013).

> *Sometimes, the lecturer asked us to vote for a meeting place where the students would like to meet her. Her method of communication was also friendly and flexible as she communicates with us by social network, WhatsApp, Skype and so on, from time to time and this made my feelings more about engagement, sociality - more than just lectures* (FE2, 2013).

***Sub Category Analysis Summary***

From the responses of both the treatment and control groups, the researcher found that the participants of both genders in the control groups tended to be more dissatisfied with their engagement with the lecturer. The absence of any substantial meeting or discussion, as well as the lack of opportunities to post their comments seemed to have increased their feelings of distance and isolation in an online course environment.

As for the treatment groups, the lecturer allowed students to discuss, comment, and ask questions towards the end of the lecture. This was appreciated by the majority of students in the treatment groups, although they would have appreciated the opportunity to do so during the lecture as well. The students valued opportunities for using online

tools such as Skype, Viber and WhatsApp for student/lecturer communication, as it could be problematic for them to arrange face to face meetings at the university.

**Sub-Category: Lecturers' Use of Humour**

This sub-category relates to the lecturers' use of humour in their teaching and learning approach during online class such as smiling, gestures, funny sounds or words and so on.

***Control Groups***

Both male and female participants in the control groups reported that their lecturers rarely used any humour. The interviewer enquired as to whether the lecturer used emoticons (graphic icons to communicate a laugh or smile) in comments on the discussion board, or shared jokes to make the lecture more interesting. The participants did not feel that their teacher extensively used any of these tools, and they felt that the serious tone of the lecturer made the class quite boring:

> *I didn't feel any interest in the lecture because the teacher was strict in his discussion and conversation all the time. Lack of humour makes him feel there is distance between us* (MC3, 2013).

> *My teacher is in a serious mode from the start to end of the lecture. I wish the lecturer would give us a break in the middle of the class by using humour* (FC3, 2013).

***Treatment Groups***

Both male and female participants in the treatment groups reported that their lecturers used humour, making them more enthusiastic about attending class. Male participants cited instances where the lecturer used humour by sharing funny stories or jokes during the lecture. The students reported that these interactions with the lecturer refreshed their

minds, and helped them refocus their attention on the topic when the lecturer reverted to the lesson at hand:

> *The lecturer usually used funny stories or asked one of students to share a funny experience or anecdote. After these short breaks, the lecturer returned back to the lesson and my mind would be fresh to understand the content of the lecture and this type of communication made me feel as if we are in one place* (ME2, 2013).

> *Sometimes, I might be stressed and my mind became too burdened to absorb the ideas from the lecture. But after the lecturer used humour or told a funny story, it did not only make me feel more comfortable with the lecturer but also refreshed my mind and feel me distance is close from lecturer* (FE3, 2013).

***Sub Category Analysis Summary***

The importance of humour in online teaching and learning is evident in the disparity between the groups, whereby the control groups were dissatisfied due to the lack of humour in their lecturers, and the treatment groups were satisfied as a result of the humour used in their classes. The students in the control groups felt that their lecturer seemed to be very strict and serious from start to finish, which compounded their feelings of distance in the online classroom setting. This feeling of physical and psychological distance reduced communication with the teacher, and weakened their ability to understand the lecture.

On the contrary, the participants in the treatment groups reported more positive experience with their lecturers due to the use of humour in the classroom. It reduced the sense of distance between the lecturer and students, which not only bridged communication gaps but made the lecture more interesting, thus helping to improve the students' experiences and learning outcomes. Many of the students reported that the use of humour in the lecture refreshed their mind, helping them to refocus their attention with renewed energy on the topic at hand. It also made students feel a greater sense of

camaraderie among themselves and their lecturers, as if they were sitting together in one room.

**Sub-Category: Calling Students by Their First Names**

This sub-category is considered to be a verbal immediacy behaviour that relates to formality in interaction within class. For instance, when students call their lecturers by their formal title (Dr), as well when the lecturers call their students by their first name or last name.

***Control Groups***

Both male and female participants in the control groups reported that the lecturers hardly called the students by their first names, regardless of the medium they used to communicate. This tended to make the communication more formal, as the students were not acknowledged on a personal basis. It showed that the lecturer preferred formality in their interaction with the students, and the students were subsequently more cautious in their participation in the online classroom:

> *I prefer the lecturer to call me by my first name, but instead he always leaves responses on the chat board which only address me as a 'student' (e.g. the student said this, it was right but…) and the lecturer continues to talk in this distant tone without emotion. This gave me the impression that the lecturer is aloof, and I can't call lecturer by his first name or last name but have to address him formally as Dr ... I don't think it can be easy talking with him and this does not encourage me to participate* (MC1, 2013).

> *Our lecturer rarely calls any student by her first or last name. I think she prefers a formal manner when interacting with students, so I am cautious when I post any comments or questions and this keep me quiet and no participation* (FC3, 2013).

***Treatment Groups***

Both male and female participants in the treatment groups were happy with their lecturers on this point, although they noted that their lecturers were not completely casual in their manner of communication with students at all times:

> *My lecturer makes me feel as if he is talking to me on an equal basis as an individual when he calls me by first my name. I think it is better than calling me by last name* (ME1, 2013).

> *Most of the time my lecturer calls me by first name or by some other affectionate term used for girls, which made me feel as if I were her friend and this reduces the physical distance between me and lecturer and supports the relationship between us* (FE2, 2013).

> *I felt very proud when the lecturer called me by first name in the very first class because I felt I must have made a good impression on her to remember my name in the very first class. Sometimes the students call the lecturer by her first name without using the honorific title of Dr. This made me feel that we have a close and friendly relationship and I'm very satisfied with her communication behaviour* (FE3, 2013).

***Sub Category Analysis Summary***

The difference between the feedback received from students in the control groups (who had reported that their lecturers had a formal, less immediate and less approachable manner), versus the feedback received from students in the treatment groups (whose lecturers were reported to be less formal, more approachable, and more immediate) strongly supports the importance of a more personal approach in promoting e-immediacy in online settings.

The feedback of both male and female students in the control groups indicated that they experienced lesser immediacy from their lecturers in this aspect, as their lecturers did not often call the students by name. Although they did not view this negatively, they

interpreted this to be a sign that the lecturer wanted their interaction to be more formal. However, this had an effect on the nature of their communication, as they were cautious about the questions or comments they gave to the lecturer.

On the other hand, this practice was observed in the treatment groups, and participants found that the e-immediacy behaviour of being addressed by name had many positive effects. Some students felt that being called by their name not only induced a sense of familiarity with the lecturer, but being addressed as an individual also improved their self-esteem. Moreover, this e-immediacy item reduced the sense of distance between the lecturers and students in the virtual classroom. This sense of familiarity in turn encouraged them to participate in the discussion board or online chat.

**Sub-Category: Open Communication**

This multiple communication lecturer e-immediacy behaviour involves lecturers giving students a chance to comment and present their opinion about the date of assignment submission, or any points related to topic of the class.

***Control Groups***

Both male and female interviewees voiced different perceptions on the lecturers' use of multiple communication approaches involving synchronous and asynchronous processes. These refer to communication channels used by the lecturer, whether through feedback on their assignment and discussion comments, or giving students a chance to state their opinions during the online lecture. Interviewees found that some of these points were important while others were not. For instance, MC1 commented:

> *The feedback from the lecturer on my task or comments or questions was not as prompt which made me feel the communication gap quite acutely, especially when I have an important matter related to the unit* (MC1, 2013).

On the same question, MC2 reported:

*I submitted many questions and comments on the whiteboard and email but his responses did not cover all the questions or comments. But I felt comfortable when I sometimes got answers for questions and queries that are of great concern to me, for instance, when he advised me of my result in the exam… I find the lecturer's feedback in the lecture itself is as important as getting satisfactory and meaningful answers to questions that you pose on important issues that you face which have not been touched on in the lecture (MC2, 2013)*.

From a female perspective, FC2 and FC3 commented the following:

*From my experience I think a more substantial reply from the lecturer is useful, but not if her reply does not properly address my questions … on the other hand, feedback or a reply for exam scores by the lecturer is very important* (FC2, 2013).

*The lecturer's interest in giving feedback for my comments, or questions on a task, or clarifying a point during a lecture, is important. But the lecturer in this course did not give prompt feedback and sometimes her responses were not adequate which means I feel a far distance and I worry about understanding the lecture well…* (FC3, 2013).

***Treatment Groups***

Both male and female participants from this group gave diverse responses on this issue, but were all satisfied with their lecturers' approach.

*The lecturer actively posted many valuable comments or satisfactory answers for my questions and comments about the unit content as well as matters outside the course. This made me feel as if there was a close and friendly relationship between us as he was so considerate about all this. He also gave us the chance to choose the deadline for a task or exam which also increased our respect for his cooperation which also encouraged me to communicate and participate without hesitation or fear* (ME1, 2013).

*Our lecturer has presented us valuable feedback that helped us to surpass the difficulties of this course. I would like to mention that some comments or points from the lecturer were unrelated to the course content, but they were very useful*

> *and valuable for me which support me to feel free to ask and post comments* (ME2, 2013).
>
> *The lecturer gave us great answers and responses for our comments on the discussion board and email. I emailed her once to find out about a task and her explanation helped me to end my task within the deadline* (FE2, 2013).

***Sub Category Analysis Summary***

In the control groups, male and female students reported that overall they had not received satisfactory responses from their lecturers. They felt that this negatively affected their experiences and outcomes. Also, the students felt psychologically distant from their lecturers as the communication channels were not properly and promptly used to respond to their questions, comments, and queries.

On the other hand, participants in the treatment groups found that their lecturers employed multiple channels of communication in a meaningful way that added interest and value to their learning experiences following the virtual class. They received feedback on questions or comments left via the discussion board, chat and email, helping them to feel close to the lecturer. They also felt satisfied with the content of the communication, which supported them in gathering additional information on important issues such as their tasks, deadlines and exam results. Additionally, they expressed satisfaction with their lecturers' communication as it encouraged their participation in the online classroom. Generally, satisfactory feedback from the lecturer was perceived to be important, particularly in light of the physical isolation of the distance classroom. Exploring lecturer e-immediacy via every possible communication channel ensures that students are well looked after and educationally connected to their lecturer, and that their learning experience is not diminished because they are not attending an actual class on campus.

**Synthesised Categorical Analysis**

The category of verbal immediacy through students' interaction and engagement indicated that verbal, face to face physical interaction can be compensated for by using increased immediacy behaviour, thereby:

- *Facilitating communication and participation via all possible electronic/ virtual avenues*
- *Breaking formalities and barriers through the sharing of anecdotes, employing humour and calling students by their first name. Such increased verbal immediacy behaviours within online settings can support students' cognitive and affective learning, as they will be more satisfied in their communication with a lecturer who is immediate to them as an actual person and not merely a "virtual" e-character.*

## Category: Non-verbal Immediacy of Distance Communication (NIDC)

**Sub-Category: Timing**

This sub-category indicates lecturer immediacy in terms of practices such as the timely replies to students' questions or queries through emails, online posts, and chat boards.

***Control Groups***

Both male and female participants in the control groups were unhappy with the time taken by the lecturers to give their feedback. For instance, MC1 commented:

> *The lecturer often takes a long time to post his feedback or answer questions. Therefore, I had to make special arrangements to meet the lecturer face to face to resolve some issues and I received a feeling of isolation and I'm thinking will not enrol in a subject with the same lecturer in the future* (MC1, 2013).

On the other hand, MC3 did not feel the timing of feedback was an issue:

> *The time taken by the lecturer for my questions or comments is not important, so long as I get a clear answer. In fact, it's better that he takes time to compose a detailed answer than send me a short reply because of his busy time or other tasks entrusted to him* (MC3, 2013).

From a female perspective, FC2 commented:

> *I have sometimes had late responses while other times I have received unusually quick responses from the lecturer. I prefer the quick response as I can carry on with the task straightaway after my doubt has been clarified. This helps me to save time, especially because I have other chores at home and kids to care for… I guess quick response and clear communication are both important as it is difficult for distance education students to arrange face to face meetings* (FC2, 2013).

***Treatment Groups***

Both male and female participants from the treatment groups were mostly satisfied with the quick responses from their lecturer.

> *The lecturer provided me with quick responses which left a great impression on me… I felt that the lecturer took care to quickly follow up on my questions and this decrease my concerns of a far distance between me and the lecturer and I'm willing to study with him in another course because of his positive and supportive communication* (ME1, 2013).

> *I felt quite gratified when I received a phone call from the lecturer shortly after I sent him an email. This prompt response from the lecturer assured me that he was concerned with my performance and interest in the class. It encouraged me to participate more actively in the course* (ME3, 2013).

> *My lecturer was not only quick in his responses but also she tried to communicate with me and students in class when I or we need a quick response with regard to a task or time of exam by our WhatsApp number which let us feel a near distance from her place and gave us confidence to do the best that I or we have in my course* (FE2, 2013).

***Sub Category Analysis Summary***

The majority of male and female participants in the control groups indicated that they were unsatisfied with the timing of feedback from the lecturer, and felt that slow responses for their questions delayed their tasks. Given that many of these distance education students cannot attend regular university courses due to personal and/or work commitments, the timing of lecturer feedback is of utmost importance.

On the other hand, the majority of male and female participants in the treatment groups were satisfied with the quick response provided by the lecturers. This not only saved time but also helped them overcome the sense of physical distance from the lecturer. They also reported that the feedback was not only prompt, but the lecturers were very active in communication with them using modern social networking tools such as WhatsApp, Twitter and so on. This impression of quick feedback helped them better understand course content, goals and task instructions. Overall, the timing of feedback was found to be an important category of non-verbal behaviour to induce a sense of lecturer e-immediacy within an online teaching and learning setting. Quick feedback from the lecturer signified healthy communication between lecturers and students, and supported their learning experiences.

**Sub-Category: Clarity of Responses**

This sub-category is related to the lecturer e-immediacy behaviour of providing clear and detailed responses to students' queries and questions regarding course content and goals.

***Control Groups***

Neither male nor female participants in the control groups were very satisfied with some lecturers' answers or replies to their comments, questions and emails, which needed further clarification and explanation from the lecturers. For instance, MC2 commented:

> *The lecturer often posted his answer or feedback for our questions or my question without clarification or deep explanation. Therefore, I had to make special arrangements to meet the lecturer face to face to resolve or get clear idea about his answer or idea with regard to our task or questions* (MC2, 2013).

On the other hand, a female student, FC3 commented:

> *I have sometimes had an unclear answer from the lecturer while other times I have received incomplete clarification of my comment or question from the lecturer. I would like to get a correct and complete response the first time from her response, as I can carry on with the task straightaway after my doubt has been clarified. This helps me to avoid going to university to meet the lecturer face to face during office hours to clarify her answer or comments which usually is very difficult for me because of the far distance from my house to university and transportation which lets me think frequently of withdrawing from the course* (FC3, 2013).

***Treatment Groups***

Both male and female participants from the treatment groups were mostly satisfied with the clear explanations from the lecturer initiated in the treatment protocol. They also found that the responses clearly communicated course aims, the topic of study, goals and instructions. For instance, MC1 commented:

> *The lecturer provided me with clear responses as answers for my questions and comments on the chat board which left a great feeling on me… I felt that the lecturer took care to answer my questions and emails which made me more reassured of course content…. This lecturer e-immediacy can promote our knowledge and memories of what we did in this course* (ME1, 2013).

From a female perspective, FE2 commented:

> *My lecturer was not only clear in his responses or answering but also clarified the course goals and content properly… there is no point if the lecturer gives a quick but unclear response… in fact, it will have a negative effect as I would have to wait for some more time till I get a correct answer* (FE2, 2013).

***Sub-Category Analysis Summary***

The majority of male and female participants from the control groups indicated that they were unsatisfied with the clarity of feedback from the lecturer. The participants felt that there was a feeling of distance between them and the lecturer due to the difficulty in getting clear, complete answers for their questions or understanding the answers they received. In these cases, the students faced difficulties in finalising their task or understanding the content and goals of the course in a reasonable amount of time.

On the other hand, the majority of male and female participants in the treatment groups were satisfied with the clarity of communication and received comprehensive answers to their questions and comments. They also reported that the feedback they received was not only prompt, but the lecturers were clear in their answer. This clarity in the feedback helped them better understand course content, goals and task instructions.

**Synthesised Categorical Analysis**

Category data of non-verbal immediacy of distance communication identified that practical employment of non-verbal human behaviour using social media can increase students' satisfaction and communication with their lecturer. Also, non-verbal human behaviour has the capability to decrease the sense of distance between the students and lecturers through both quick and detailed responses so that students do not have to travel long distances to meet their lecturers face-to-face during business hours. Hence, this supports students' cognitive and affective learning. This will also support retention rates for distance education students, specifically female students who culturally are required to prioritise housekeeping and looking after their children and often cannot manage time to travel long distances and meet with their lecturers.

## Category: Interactive Net Literacy of Verbal and Non-verbal Immediacy (INLVNVI)

### Sub-Category: Using Collective Pronouns

This sub-category relates to the lecturer's use of pronouns such as "we", "our", "us", or "my" and "I" when communicating with students on-line.

#### *Control Groups*

Both male and female interviewees from the control groups reported that their lecturer sometimes used collective pronouns such as "our" class or what "we" have studied. Such use of collective pronouns in distance education did not matter much in supporting a social sense of belonging or membership for students in the control group. MC2 commented:

> *The teacher usually starts our class without "our" or "we" but that does not have much effect on my satisfaction with communication with my lecturer* (MC2, 2013).

> *I'm not concerned with whether the lecturer says "our class" or "we will talk about this" because it does not make much difference to me but if she uses them I think it might make a little difference in the way students feel* (FC3, 2013).

#### *Treatment Groups*

Both male and female respondents had positive perceptions regarding the use of pronouns by their lecturers in the online classroom. They were also more vocal in their appreciation of this practice than their peers in the control groups. The first male interviewee commented:

> *When the lecturer usually says "our class", "our topic" or "our lecture", I feel that the lecturer and I exist in the one room. He often starts the class by asking: "who can remind us of our topic last week?" This gives us a sense as if we are part of a group who are progressing on a learning journey; also this attitude*

> *prompts me to participate, raise questions without hesitation and increase my satisfaction with his communication and I learned more* (ME1, 2013).

Complementing her peer, FE2 commented:

> *I feel that I am more focused on the lecture when the lecturer speaks about the class in a collective way (for example, "today our lecture is about") this somehow compounds my feeling of closeness with the whole class during the lecture and I feel I can focus better on the lecture content* (FE2, 2013).

However, contrary to both ME1 and FE2, FE3 believed this type of practice to be insignificant for her learning:

> *The use of pronouns in the online classroom is not that important for me and I don't think it has any effect on my learning achievement or experience in the lecture. I am only concerned with whether the lecturer gives good explanations of the class topic* (FE3, 2013).

***Sub-Category Analysis Summary***

The summary of responses on the use of pronouns by the lecturers shows how they were experienced differently in the control and treatment groups. The perceptions of interviewees from the control groups indicated that they were ambivalent about the use of pronouns. The respondents reported that their lecturer did not often use pronouns, which made the lecture feel quite formal, but did not pose a challenge to their learning experience.

On the other hand, participants from the treatment groups reported more frequent use of pronouns by the lecturer in the class, and the majority of these participants expressed their appreciation for this practice as it reduced their sense of distance from the lecturer.

Overall, such practices were reported to create a collective and close learning environment by the majority of participants in both control and treatment groups,

reducing the sense of distance between the lecturer and students, and promoting participation. However, not all students reported that the practice of using collective pronouns (e.g. “our”, “we”, and “us”) showed a direct impact on the learning experience

**Sub-Category: Use of Emoticons and Punctuation**

This sub-category relates to the use of emotions and punctuation as a lecturer e-immediacy behaviour (GOOD, not bad, GREAT, it is OK, ☹, ☺, !!!, ??? and so on).

***Control Groups***

Both male and female participants in the control groups felt that there was an inadequate display of non-verbal immediacy behaviours by their lecturers in terms of using emoticons in their comments, writing their remarks in capital letters to emphasise their points, or using punctuation to stress a meaning. For instance, the first male interviewee participant commented:

> *Our lecturer seldom uses emoticons, such as smiley faces, to communicate his reaction. Using emoticons is now a norm in online conversations, and our chats with the lecturer feel quite restricted. I feel that the lecturer is quite formal, and the use of a more informal manner could have certainly improved participation in the discussion and I felt there is a distance between us* (MC1, 2013).

On the same topic, MC2 said:

> *I know that we often use capital letters to stress certain ideas in online messages or insert emoticons to add some extra flavour to the message written in words. But I feel that our lecturer did not use any of these practices in our discussions, perhaps because he felt that this was not appropriate within the protocol of academic discussions and this reduced my desire for communication and satisfaction* (MC2, 2013).

On the other hand, FC1 commented:

> *Our lecturer does not use wave or high five but sometimes uses smiley face or punctuation (!!!). She could easily respond to my comments with these easy gestures, but she prefers to write long verbal messages. Sometimes, when I don’t*

> *receive a quick response I doubt whether she has understood my point* (FC1, 2013).

FC2 reported that her lecturer hardly used emoticons but she sometimes used punctuation marks in an effective way:

> *The teacher sometimes posts question marks (?) or uses capital letters to stress some points. Such non-verbal cues helped me better understand the teacher's intention behind the message. I think this is particularly useful since we don't have face to face interactions where we can read people's intentions with their facial expressions and body language* (FC2, 2013).

***Treatment Groups***

Both male and female participants in the treatment groups reported a greater incidence of such non-verbal conversational practices than participants in the control groups. This was demonstrated by the following comments:

> *Our lecturer was a lot more expressive with his emotions during the online class. I really liked it, particularly when he posted a smiley face with my name after I wrote a good comment on the discussion board. This encouraged me to participate and communicate more with my peers in the online classroom* (ME1, 2013).

> *The lecturer uses question marks (?), or capital letters (such as GOOD ANSWER), a good or like emoticon (👍). I think this is a good way for the lecturer to communicate their message in an expressive way… sometimes the lecturer uses capital letters in a stern message, you really feel their anger or disappointment with your work. This hurts my feelings, but it still shows that this practice is good as we get a clearer sense of the lecturer's message* (ME3, 2013).

> *I'm satisfied with the communication between me and the lecturer because she usually uses emoticons during online discussion and emails when giving feedback on the task such as (☺,☹ 0 :-),-/). Once, she sent me a flower word to tell me that*

> *she liked my answer which reduces my feeling of isolation and I'm encourage to participate and communicate more with her* (FE1, 2013).
>
> *Saudi norms restrict women from displaying their image online, so we don't use video streaming in online chats with the lecturer. Without this we don't see the facial expressions or body language of the lecturer, which could help us interpret their messages more clearly. In this case the use of emoticons helps us get a greater sense of their mood and intention behind the verbal messages* (FE2, 2013).

***Sub Category Analysis Summary***

Overall, both the control and treatment groups supported the use of emoticons and punctuation, as it imparted a sense of lecturer immediacy and enhanced their experiences and learning outcomes in the online classroom. The respondents in the control groups reported that their lecturer barely used emoticons, but sometimes used punctuation to express or stress ideas or meaning. Students in the control groups argued that employing punctuation in communication helped them get a better idea of the real intentions behind messages from their lecturers. This was particularly important for female participants, as women in Saudi Arabia mostly avoid use online video streaming which reveals the non-verbal behaviours of body language in contrast to male students who can use videoconference tools and digital photos.

Both male and female interviewees in the treatment groups, on the other hand, reported that their lecturers made good use of non-verbal cues. The students felt that these had a positive effect on their understanding of the lecturers' messages, and made the conversation feel more lively. Overall, a lecturers' expressiveness within an online setting promotes immediacy and prompts student participation. It is particularly vital in the case of female Saudi students, who are unable to use digital photos, meaning that

they miss the body language and facial expressions of their lecturer and rely on text-based non-verbal cues.

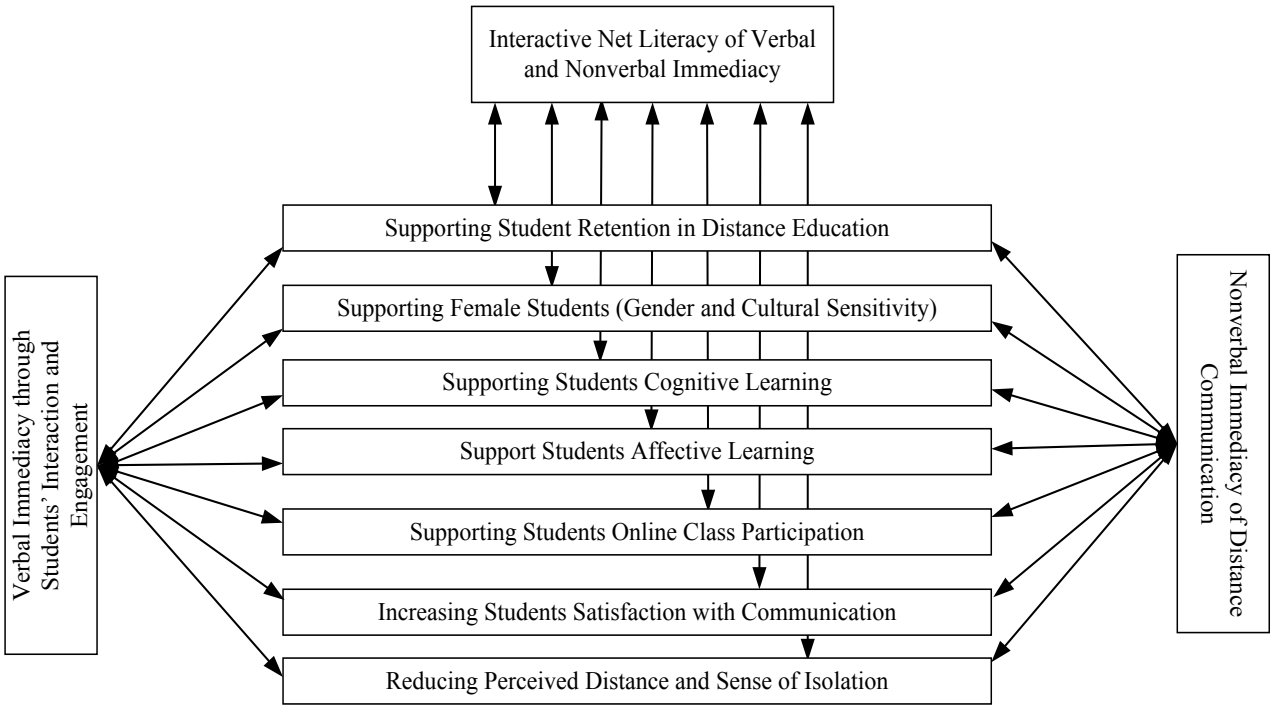
**Synthesised Categorical Analysis**

The category of interactive net literacy of verbal and non-verbal immediacy reveals that some of the practical non-verbal and verbal behaviours in face to face classrooms can be compensated for by the use of collective pronouns, emotions and punctuation in a virtual learning environment. These online behaviours are powerful enough to increase students' satisfaction with communication and participation. Such non-verbal and verbal behaviours have specific positive impact on female students as these students are culturally and educationally deprived from virtually seeing or viewing video recordings of their lecturers and their experiences are limited to audio recordings and to posts, comments, emails and electronic resources. Hence, female students find through such non-verbal and verbal practices an opportunity that connects them to their lecturer and compensates for the missed body language.

## DISCUSSION OF CROSS-CATEGORICAL ANALYSIS

The cross-categorical synthesis analysis was conducted to clarify the themes and sub themes associated with the interpersonal behaviours of lecturers in the distance education classroom. The three themes have meaningful relationships corresponding with lecturer e-immediacy practices in online classrooms, as follows; a) verbal immediacy through students' interaction and engagement (VISIE), b) non-verbal immediacy of distance communication (NIDC), and c) interactive net literacy of verbal and non-verbal immediacy (INLVNVI). These three themes involve nine sub-categories discussed in relation to the main content of the research questions within the seven cross-categories synthesis as presented below.

***Figure 10 – Discussion cross-categories analysis***




## Reducing Perceived Distance and Sense of Isolation

The main disadvantage with the distance education system is that the distance between lecturers and students can create a sense of isolation (Mason, Helton, & Dziegielewski, 2010) . The contextual sense of a message that can be derived from direct face-to-face conversations and body language is not available in this mode of communication (Simpson, 2013). The VISIE and INLVNVI categories highlighted that students' sense of isolation was reduced when the lecturers used more personal verbal and non-verbal forms of e-immediacy. Sharing of personal experiences and anecdotes, humour, and the use of collective pronouns (e.g. "our", "we", and "us") were reported by students to have a very positive influence and impact on the INLVNVI category. The study of Farwell (2011) found that calling a student by their first name in addition to sharing personal experiences reduced the feeling of distance between lecturers and students in online classrooms. The practice made students feel more engaged in the discussion and

created a sense of connection with the lecturer. In addition, the sense of distance and isolation can be decreased through the use of appropriate immediacy behaviours to impart a sense of close interpersonal interaction, which can enhance the students' communication. Thus, lecturer implementation of verbal and non-verbal text-based behaviours within the online classroom is able to make students feel a sense of belonging and connectedness to the virtual learning environment. This is consistent with study results of Kelly (2012) who found that the teacher immediacy behaviours can increase teacher presence with students perceptions, which decreases psychological distance between students and teachers in online classrooms.

## Increasing Students' Satisfaction with Communication

Student responses in the VISIE category indicated that lecturers who employed verbal e-immediacy behaviours had their students report more satisfaction with their lecturer's communication and interaction. The use of verbal and non-verbal cues of e-immediacy behaviour can show students that their answers, comments and opinions are taken into consideration by the lecturer. Utilising e-immediacy behaviours such as communicating with expressive personalised messages featuring emoticons, and using multiple communication platforms such as email and social networking, deepened the level of student/lecturer communication within the INLVNVI category. Students were happy that they received clear communication and quick responses in the NIDC category as the lecturer utilised a range of media from emails to discussion boards. This type of engaged communication was effective in supporting course delivery, by enhancing communication with students and breaking formalities through the sharing of anecdotes and use of humour.

This result is supported by Farwell's (2011) findings regarding the impact of teacher immediacy (verbal and non-verbal) between traditional students and online classroom students at a mid-sized Midwestern university. She found that the use of teacher immediacy in the manners illustrated by the themes in this category had a positive relationship with students' classroom experience and their learning outcomes. This practice of interpersonal behaviour (verbal and non-verbal) increased students' satisfaction with the communication in the classroom and enabled better understanding between students and lecturers. The findings of Cobb (2011) are also consistent with present research demonstrating that social presence can be increased by lecturer immediacy behaviours which positively affect students' perceptions of communication and increase their satisfaction with the online classroom. Additionally, Sidelinger, Nyeste, Madlock, Pollak, and Wilkinson (2015) emphasise the current interviewee responses that there is positive relationship between effective lecturer communication behaviours of verbal and non-verbal and students satisfaction with communication in the virtual classroom.

## Supporting Students' Online Class Participation

The results of the interviews showed that the lecturer practised several immediacy behaviours, such as prompting students to participate in discussions by using emoticons, punctuation and formatting to indicate emotion within the INLVNVI category, calling students by their first names (VISIE), and giving clear responses to students' questions or emails (NIDC). These kinds of immediacy practices seemed to encourage students to post comments, send questions prior and subsequent to their online sessions, and directly communicate with their lecturer.

This result is consistent with Hutchins (2003) who argued that implementing verbal and non-verbal forms of immediacy behaviours in web-based learning can increase students' participation. Previous research has shown a 60% rise in students' participation in classrooms where the lecturer practised interpersonal immediacy, compared to those that did not (Melrose & Bergeron, 2007). Moreover, the interview responses asserted that use of humour by a lecturer is an important element of immediacy behaviour in the online classroom for enhancing student engagement in the learning process, which is consistent with previous research (Ivy, 2013; Pavlis-Korres & Leftheriotou, 2015). This leads to the conclusion that high levels of immediacy in the forms of communication employed by the lecturer can improve the rate of student participation in online classrooms. McKee (2010) reported that the dialogue between students and lecturer during distance education classes can reduce the sense of physical and psychological distance. This is supported by the participants' responses, which indicate that utilising all possible avenues for participation and communication in distance education is essential in making students feel that they are an integral part of the teaching and learning process, supporting their learning and understanding, and reducing the sense of separation between the students and their lecturer.

## Supporting Students' Affective Learning

In respect to questions relating to the students' learning experiences, the male and female interviewees were more enthusiastic about the material that they learnt in their virtual classroom. Students did not have to memorise many of the ideas in the course by rote, as the lecturer communicated these ideas in an engaging manner and via various modes (verbal and non-verbal), which made it easier for them to understand and remember those ideas. This reinforces that the communication skills and immediacy

behaviour used by the lecturer to impart the ideas and lessons of the course supported students' affective learning.

Previous studies have asserted that lecturer text-based immediacy behaviours can induce a sense of close social interaction in distance education environments, which can help promote students' affective learning (Asiri, 2013; C. Baker, 2010; Farwell, 2011). When the teacher is able to communicate their lesson in an engaging manner, this helps clarify the content to the students, who can later recall the lesson and map themes from the lessons to their everyday life experiences more easily.

Several studies identified that there are several barriers for learning in distance education courses, such as not retaining information, or not receiving quick responses or being presented with clear answers and feedback in the online classroom (Bolliger & Wasilik, 2009; Hannum, Irvin, Banks, & Farmer, 2009). Findings from the three categories show that both verbal and non-verbal e-immediacy behaviours and practices are likely to reduce and eliminate such barriers.

## Supporting Students' Cognitive Learning

Within the treatment groups, teaching and learning experiences were supported with verbal e-immediacy practices of the VISIE category, non-variable e-immediacy practices of the NIDC category, and a range of interactive net literacies of the INLVNVI category. As an outcome, students were considerably more confident in their grasp of the course content, and this was complemented by their higher assessment scores when compared to those of the control group students. In distance education models, it can be difficult for lecturers to present in-depth expositions of the subject. The implementation of text-based communication platforms along with visual/audio synchronous and asynchronous communication typically allows lecturers to teach their

lessons in a much more rigorous way. This enables the students to feel supported and connected enough to better understand the subject content and meet the course objectives.

The results of this recent study is consistent with the findings of a study conducted by Goel, Zhang, and Templeton (2012), who found that there was a positive correlation between lecturer immediacy behaviours and students' cognitive learning outcomes. Previous studies have confirmed that the learning outcomes of students in the online classroom are dependent on how the teacher can articulate their ideas in an understandable way, such that these can be successfully comprehended and cognitively processed by students (Asiri, 2013; Hughes, 2014). Overall, clarity of feedback is found to be an important category of non-verbal immediacy behaviour within an online teaching and learning setting. More clear and detailed feedback signified healthy communication between lecturers and students, and supported their learning experiences.

## Supporting Female Students (Gender and Cultural Sensitivity)

Gender difference is a sensitive issue in the Saudi context, especially in educational settings, where there are strict gender segregation rules in classrooms and across education facilities. This theme explored how the e-immediacy practices worked to improve learning outcomes given these sensitivities. The interviews explored gender differences in students' opinions of lecturer immediacy in relation to their participation and satisfaction with communication.

The male participants in both the control and treatment groups found that their gender did not have much effect on their attitude in the online classroom. The female participants in both control and treatment groups found the amended practices to

provide great support, particularly in relation to the non-verbal immediacy practices (NIDC) and the diversified net literacies (INLVNVI). This positive assessment was primarily because their exposure to verbal e-immediacy behaviours are restricted to text-based and audio based communication, and the use of non-visual immediacy behaviours deepened their interaction with the female lecturers. This showed that immediacy behaviours can, to some extent, compensate for a lack of face to face communication and body language. Since female lecturers/students cannot access videoconferencing in the Saudi context, they would benefit from employing rich immediacy-based practices to make text-based and audio communication more engaging and direct.

In general, research on gender differences in the distance education environment shows that men's attitudes in using distance education are different from those of women. Such studies demonstrate that while men are more concerned with the type of interaction being more machine-based than human, women are interested in the fact that this form of education gives them more control over their time (Brunner, 1991; Burge, 1998; Sanders, 2005). This perception among female students was compounded in the Saudi context, given the restrictions around women's transportation outside their residence. The current female students in their interviews reinforced this, stating that distance education was critical for them to continue their academic journey and that any kind of intervention, whether in the form of immediacy behaviour practices as presented in this study or otherwise, can be valuable in supporting their learning and minimise any communication gaps that could hinder such learning.

## Supporting Student Retention in Distance Education

Previous studies have indicated that there are several limitations to student retention in the distance education environment. For instance, technical issues, students feeling behind in the course, a lack of student/teacher face-to-face interaction, isolation, and issues with affective and cognitive learning are amongst the main reasons that contribute to students dropping out (Nichols, 2010; Simpson, 2013; Woodley, 2004). According to Shin (2002), a sense of social presence between lecturers and students or between peers can have a positive influence on students' intentions on continuing in distance education courses. The theory of transactional distance is concerned with this notion of social presence. This theory is defined by (Shin, 2003) as "the degree to which a distance student perceives the availability of, and connectedness with teachers, peer students, and institutions" (p. 132). The interview responses across all categorical themes supported higher affirmation of the hypothesis that the lecturer's immediacy has positive effects on students' participation, communication and learning outcomes in the online classroom. These students also registered a higher level of interest in remaining enrolled in the course. This positive result in participants' responses shows that student retention can be increased through the use of e-immediacy behaviours and practices that improve learning outcomes and e-classroom experiences.

## Summary

The qualitative findings revealed the positive alignment between the use of immediacy behaviours and students' learning experiences in distance education. Selected forms of verbal e-immediacy behaviours, non-verbal e-immediacy behaviours, and net literacies (verbal and non-verbal) practices contributed to a perceived social presence of the lecturer and a sense of connectedness between the lecturer and students, and amongst

the students themselves. Such presence and connectedness reduced the students' perceived distance and sense of isolation, whilst increasing their satisfaction with communication and supporting their participation, affective, and cognitive learning. The adopted e-immediacy practices were especially important to Saudi female distance education students, as such behaviours and practices respected their cultural protocols whilst offering these students a social presence and connectedness within a virtual setting. It was evident from the categorical analysis, inter-categorical synthesis, and cross-categorical analysis that the employed immediacy behaviours and practices would also support student retention in distance education. These e-immediacy practices can be seriously considered as part of a broader focus within the e-pedagogical approach, which relates to the content and utilises technological advancements and various ICT tools to connect to students and respond to their needs.

# CHAPTER 8: GENERAL DISCUSSION

The purpose of the current study was to evaluate the impact of text-based practices of verbal and non-verbal immediacy used by lecturers on students' perceptions of their classroom experiences and learning outcomes. Previous studies have noted that the implementation of practices based on lecturer immediacy can enhance students' experiences in a distance education environment in terms of class participation (Asiri, 2013; Ho, 2002), communication satisfaction (Goodboy et al., 2009; Gorham, 1988), affective learning (Baker, 2010b; Farwell, 2011; Witt & Wheeless, 2001) and cognitive learning (Baker, 2004; Richmond, 1987; Witt & Wheeless, 2001). This study utilised a quasi-experimental research design to assess the impact of verbal and non-verbal text-based immediacy on the student experience variables of participation, communication satisfaction, and affective and cognitive learning outcomes. Although many researchers have explored these different aspects of lecturer text-based immediacy impacts, they have not examined this in a unified framework involving all these variables. Additionally, no comprehensive study has been conducted on this matter in the Gulf countries, specifically, Saudi Arabia.

This chapter discusses the results of this study on the relationship between lecturer text-based immediacy practices with students' experiences and learning outcomes. The results are considered in relation to each variable in turn, with the findings for each discussed regarding differences in pre- and post-test scores for control and treatment groups, and gender differences.

# Lecturer Verbal and Non-Verbal Text-Based Immediacy Practices in Distance Education Courses

This section addresses the relationship between verbal and non-verbal textual communication for lecturer immediacy behaviours in a virtual classroom. It includes discussion of the differences in students' perceptions of these text-based immediacy variables between those who experienced a high-level of lecturer text-based immediacy and those who received standard practices in online communication. The results showed that there was a significant impact of effective textual lecturer communication on students' perceptions of their experiences and learning outcomes. These results are consistent with previous studies that found text-based communication has the capability to convey lecturer immediacy behaviour within computer-mediated communication (Farwell, 2011; Wei & Wang, 2010).

In this recent study, quantitative data on students' perceptions of lecturer verbal and non-verbal text-based immediacy practices reveal significant differences between control and treatment groups. At pre-test, neither the control nor treatment groups scored highly; however, at post-test, the treatment group scored significantly higher than their pre-test scores, and significantly higher than pre- or post-test control group scores. This was evidence that high-level practices of lecturer verbal and non-verbal text-based immediacy influence students' experiences in online classrooms. These results are consistent with previous studies that showed different levels of lecturer verbal and non-verbal immediacy behaviours influence students' perceptions in online learning environments (Asiri, 2013; Bodie, 2009; Limperos et al., 2015; Witt & Wheeless, 2001).

Qualitative findings of this current study revealed that lecturer e-immediacy behaviours have significant effects on online classes in terms of textual, computer-mediated communication. The treatment participants' perceptions were positive towards their lecturer's text-based immediacy practices, which had a positive influence on their engagement and ease of communicating in their online classroom. For instance, one interviewee of the treatment group reported that the lecturer offered fun and personal stories for students, which made them feel more comfortable communicating with their lecturer, and said:

> *I like that the teacher sometimes tell us funny stories about his car's condition or some other personal experiences. Hearing these personal stories made me feel more comfortable with the lecturer as I felt that I knew him as a person.*

However, participants from the control group reported that when lecturer text-based immediacy behaviours were not overly strong, they felt bored and unwilling to communicate with the lecturer. One of the control group participants said:

> *Our lecturer could have used stories about real life experiences to explain some topics but didn't do so. I feel that this made the class quite boring. I don't like the fact that the lecturer taught in a formal way without trying to make the topic content more interesting.*

The findings of previous studies support these perceptions that a low level of lecturer immediacy practices can impact negatively on the student-teacher relationship; and that this can, in turn, have a detrimental effect on students' experiences in online learning environments. In contrast, high level practices of lecturer text-based immediacy can create significant effects in students' experiences and learning achievements in virtual classrooms (Andersen, 1978; Lemak et al., 2005; Limperos et al., 2015; Wheeless et al., 1997).

There were important and positive effects of lecturer text-based immediacy (both verbal and non-verbal) on students' attitudes towards the relationship they had with their lecturer in a virtual classroom. For instance, a lecturer can provide more verbal practices (e.g., calling students by their first names and encouraging them to ask questions) or non-verbal practices (e.g., using acronyms such as 'LOL' for 'laughing out loud' or responding to questions from students within 24 hours). As evident from this current study's results, these e-immediacy lecturer behaviours using text-based communication can compensate for a lack of face-to-face communication and enhance learning in the online classroom (Walther, 2012; Wuther & Anderson, 1994). Further, the concept of lecturer text-based immediacy practices may include teaching strategies and personalised interaction with students, which can improve the interpersonal teacher-student relationship. For instance, when a student calls a lecturer by his or her nickname – a common cultural and preferable practice with Saudi people – or when a lecturer uses encouraging words in online communication (discussion board and emails). In addition, lecturer text-based immediacy behaviours can reduce the psychological and physical distance for students when they receive encouragement, and gives them a chance to ask questions or post comments to the lecturer (Baker, 2004; Haythornthwaite, 2011; Moore, 2013).

More recent study results have shown that the concept of social presence is supported by applying lecturer e-immediacy practices within both synchronous and asynchronous e-communication in online environments. This can be related to lecturer interpersonal relationships, which can create a positive sense of human interaction in distance education classes (Harry et al., 2013; Moller et al., 2012). Moreover, the lecturer has an ability to make his or her online classes more motivating and interesting for students when text-based immediacy is applied in an effective manner via e-

communication channels available in virtual classrooms (Akayoğlu, 2009; Bodie, 2014; Burnett, 2003). Effectively applying lecturer e-immediacy behaviours within textual communications can enhance a sense of community with students and increase the level of student engagement in virtual classrooms (Conrad, 2005; Pollard, 2014). Therefore, a positive perception of verbal and non-verbal lecturer text-based immediacy practices can promote the relationship between lecturers and students, based on a transactional distance concept to reduce feelings of isolation in distance education (Moore, 2013). Thus, Deans of distance education faculties and schools should promote this concept of lecturer immediacy in virtual classrooms and provide more training in lecturer text-based immediacy practices for their staff.

## Gender with Lecturer Text-Based Immediacy Behaviours

The quantitative analysis (treatment and control group) revealed significant gender differences in participants' perceptions of the following variables: verbal text-based immediacy, non-verbal text-based immediacy, students' participation and their satisfactory communication. However, gender group differences were not significant for the affective and cognitive learning variables: The first gender-related factor focuses on the practice of assigning male and female lecturers to instruct male and female students, respectively. The quantitative data analysis indicated that the female students provided a higher rating of the verbal and non-verbal text-based immediacy practices of lecturers than did their male counterparts. For instance, in treatment groups, analysis of the female students' scores of lecturer text-based communication verbal immediacy revealed their high positive impression of behaviours such as: uses personal examples or talks about experiences she has had, asks questions, engages in discussions, and calls students by their first names. Similar positive evaluations of text-based communication

practices were identified with the same cohort of female students when it came to lecturer non-verbal immediacy, such as using social verbs, using words typed in all capital letters or italics (e.g., “GOOD” or “not”) and using acronyms (e.g., “LOL” for “laughing out loud”). However, male students who received the treatment protocol of verbal and non-verbal text-based immediacy demonstrated lower impression scores compared to participants’ perception scores for females who received the same treatment protocol.

Qualitative data analysis results provided support for a possible explanation for the higher perception scores of female students (text-based verbal and non-verbal immediacy behaviours). Through the semi-structured interviews, it became clear that within Saudi Arabia, in general, and the targeted university, specifically, the male students are capable of chatting via video-conference or Skype directly with their male lecturer with the camera enabled and are capable of viewing/streaming online videos of the lecturer whilst he is delivering the lesson, explaining an idea, or responding to their questions. Male students are also able to utilise ICT to view their lecturer’s facial expressions and body language and vice versa. Female students are deprived of these visual communication online features. Due to cultural norms, female students are restricted from viewing any online visual communications with their female lecturer. They are not allowed to view or stream education resource videos relating to their female lecturer. Female students can only listen to audios and communicate with their female lecturer through text-based ICT (e.g., posts, comments, emails and electronic resources). In addition, a female student is more likely to use text-based communication with other females or males in the online environment than males, who prefer to face-to-face communication (Thelwall, Wilkinson, & Uppal, 2010). This preferred practice by female students serves to explain why they hold higher expectations and higher

impressions of lecturer behaviours than their male counterparts when it comes to text-based verbal and non-verbal immediacy behaviours.

In terms of the transactional distance concept (i.e., sense of time and separation of place), efficient text-based communication with e-immediacy behaviours can reduce the perception of physical separation students feel, to bridge the limitation of electronic physicality apparent in distance education courses (Moore, 2007). In a restricted audio-visual virtual learning environment with a female lecturer, female students find the lecturer's textual communication e-immediacy behaviours as the only avenue making their distance education experience more real and practical. The interview data revealed that female students consider these text-based behaviours their main avenue towards immediacy because it is difficult to communicate with female lecturers via face-to-face communication or videoconferencing. Otherwise the only remaining choice is to travel to meet their lecturer in person which is not an option for many of these students due to the large geographic distances between locations and due to cultural rules such as getting permission from their husband or parents to go any place and/or finding safe transport.

Female students found that these verbal and non-verbal text-based immediacy behaviours not only compensated for the physical and geographical separation between them and their lecturer but also were the only avenue to compensate for the restricted access to audio-visual ICT communication and tools. Findings from the qualitative analysis highlighted that female students consider that non-verbal and verbal text-based practices are the main opportunity to establish a connection with their lecturer and compensate for the non-existent body language. Hence, female students in the Saudi context are much more influenced and reliant on text-based immediacy behaviours

(verbal and non-verbal) to support their learning and active participation in their online inquiry journey.

This research has identified that one of the main gender differences related to immediacy is not because of ontological reasons as outlined by the literature (Arbaugh, 2000; Jung & Hong, 2014; Lal, 2002; Von Prümmer, 2004) or psychological reasons (Martin & Marsh, 2005; Sullivan, 2001), but due to epistemological reasons. The female students are epistemologically restricted from visual communication and restricted from access to audio-visual education recordings of their lecturer, which limits their immediacy behaviours in the online classroom. Their online education transactions rely mainly on audio recordings, verbal and non-verbal immediacy behaviours, and access to electronic resources by text-based communication behaviours (education databases, search engines, etc.). This type of limitation to the epistemological experience shapes female students' ontological perspective whereby participating females held stronger postive expectations and feelings when it came to text-based immediacy behaviours.

Despite making it more challenging for female students in a distance education setting, the Saudi culture can also serve a positive role. The role specifically relates to students' opinions regarding their experiences and learning outcomes in distance education environments (Violette, 2002). The cultural background of a lecturer tends to influence his/her behaviours, and consequently, students' perceptions of his/her immediacy practices (Andersen, 1985; McCroskey, Sallinen, Fayer, Richmond, & Barraclough, 1996). If a lecturer is of the same gender as his/her students, then perceptions of lecturer behaviours with respect to communication immediacy enhance the ease with which students communicate in a virtual classroom (Littlejohn, 2012; Menzel & Carrell, 1999). This pattern was also observed among the students and

lecturers in the current research despite the cultural differences between these students and their counterparts in countries such as America, Australia, Japan and Britain (Witt et al., 2006). The culture of a societal environment has a critical influence on students' perceptions of lecturer immediacy behaviours. A female interviewee from the treatment group shared the following opinion: "I am very comfortable when my lecturer is a female as I can openly speak and discuss any points that are related or unrelated to the content." Consequently, the female and male students have greater opportunity to improve their online dialog skills with the lecturer or peers, which can support their participation and satisfaction with their communication in distance learning environment.

In conclusion, text-based verbal and non-verbal immediacy behaviours are important for female distance education students in Saudi Arabia according to the SP theory. Through such a virtual avenue (i.e., text-based immediacy behaviours), female students have the opportunity to perceive the presence of their lecturers' immediacy behaviours (Kuyath, 2008). According to Aragon (2003), such text-based immediacy practices allow female students to feel the presence of another person through interaction with of their lecturer in this context. Female lecturers can convey their physical communication behaviours by textual communication content rather than visual online interactions with their students. Hence, text-based verbal and non-verbal immediacy behaviours become the only opportunity for many students to create interpersonal relationships with their lecturer (Huang, Chiu, Sung, & Farn, 2011; Rice, 1993; Walther, 1992).

## Student Online Class Participation and Lecturer Text-Based Immediacy Behaviours

Students' perceptions of the proficiency and trustworthiness of their lecturer within the online learning environment can be improved by lecturer immediacy practices (Rocca, 2010; Thweatt, 1999). Adopting these practices within traditional classrooms has been shown to encourage student participation (Asiri, 2013). Lecturers' verbal and non-verbal immediacy practices can also help to develop interpersonal relationships between students and lecturers in distance education classes (Rocca & McCroskey, 1999; Walther, Van Der Heide, Ramirez Jr, Burgoon, & Peña, 2015). Students will be more interactive in class when lecturers engage in online behaviours that demonstrate they care about their students' participation.

The quantitative results of the current study are consistent with previous studies that have shown a significant association between high levels of verbal and non-verbal immediacy and increased student participation (Blignaut & Trollip, 2003; Du, Havard, & Li, 2005; Kear, 2010; Sargeant et al., 2006). A comparison between the pre- and post-test student participation scores in this study revealed that treatment participants rated their participation higher than those in control groups (see Table 5). Conversely, control students who received standard practices of text-based immediacy from the lecturer showed no significant difference from pre- to post-test. For instance, the comments, contributions, and tendency to answer questions of control students were unchanged during the semester examined based on standard e-immediacy behaviours of the lecturer. As the results for the treatment group indicate, lecturers' interpersonal behaviours had the tendency to increase student participation in online discussions and promote their willingness to volunteer answers or post comments and share personal experiences in online classrooms. The current study results are compatible with those of

previous studies (Blignaut & Trollip, 2003; Du et al., 2005; Kear, 2010; Sargeant et al., 2006), which reveals that students have a greater chance of engaging in online discussions with their lecturers when lecturers present affective practices of text-based communication in online classrooms. The results of Roberts and Friedman's (2013b) study demonstrate that a high level of immediacy practices creates a warm feeling toward the lecturer and can strengthen the relationship and increase student participation.

Analysis of the qualitative data in this study clarified the higher scores in students' perceptions of their lecturer e-immediacy behaviours in treatment groups in comparison with control group students with regards to high and normal practices of lecturer behaviours. Through semi-structured interviews, it became clear to the researcher that students' participation was influenced by lecturer behaviours in distance learning courses. This supported the quantitative analysis findings in term of the positive effects of lecturer textual communication behaviours for the treatment group, despite the absence of being in the same physical space (i.e., not communicating face-to-face). One treatment student group said, "Most of the time my lecturer calls me by first name or by some other affectionate term used for girls, which makes me feel as if I am her friend".

When comparing student participation scores, positive perceptions were expressed by participants in treatment groups but not those in control groups. Control students were dissatisfied with their lecturers' immediacy practices, which were too formal and did not create sufficient interest to engage with the lecturer. One control student said:

> *our lecturer rarely calls any student by her first or last name. I think she prefers a formal manner when interacting with students, so I am cautious when I post any comments or questions, and this keeps me quiet and not participating.*

These findings support the proposition lecturer immediacy practices can help make a positive impression with students, which can improve students' experiences in online classrooms.

Additionally, several factors can decrease the positive perceptions students have of lecturer behaviour, which can then reduce student participation in online lectures. For instance, when a lecturer does not present a high level of text-based communication within their non-verbal immediacy practices it can create distance in the relationship between students and lecturer. Textual lecturer communication behaviours are analogous with non-verbal body language, mimicking genuine face-to-face communication in a conventional classroom. A study by Sherblom, Withers, and Leonard (2013) reported that text-based communication can transfer non-verbal lecturer cues in online communication, which can promote students' experiences as well as their involvement in discussions with their lecturer or peers. One of the participants in the treatment group made the following suggestion:

> *The lecturer usually uses emoticons during online discussion and in emails when giving feedback on the task, such as ☺, ☹, 0, :-), -/). Once, she sent me a flower word to tell me that she liked my answer, which reduced my feeling of isolation and encouraged me to participate and communicate more with her.*

Conversely, a lack of verbal and non-verbal text-based immediacy practices can also influence students' perceptions of their experiences in the online classroom. For instance, lessening students exchanging ideas with peers or lecturers, or presenting their answer or comments timidly when the lecturer is online in a virtual classroom. Other factors can also diminish students' participation in online lectures, such as official communication in lecturer behaviours' content (i.e., rarely post smile, happy or sad face emotions) which could affect students' participation level due to feeling communication with the lecturer is formal. One interviewee in the control group commented that:

> *Our lecturer seldom uses emoticons, such as smiley faces, to communicate his reaction . . . I feel that the lecturer is quite formal, and the use of a more informal manner could have certainly improved participation in the discussion.*

Together, the qualitative and quantitative results align with previous literature showing that lecturer behaviours of verbal and non-verbal cues via textual communication influence students' online learning participation skills (e.g., level of engagement in discussions with the lecturer or peers, or volunteering responses to lecturer questions or comments). Furthermore, the ontological concept with online learning students can be reduced by positive interpersonal lecturer behaviours within effective text-based communication of verbal and non-verbal practices with students. Consequently, this can be beneficial for physical and psychological isolation and separation between students and lecturers in distance education courses. In addition, the students in this study reported that they felt more willing to participate when they received a high-level of text-based lecturer immediacy practices, such as encouraging words ("GOOD ANSWER"), or when lecturers provided students with the opportunity to ask questions or post comments alongside effective text-based, non-verbal communications, such as emotional cues and quick response times. These positive student perceptions can have further effects on students' participation in the online classroom. For instance, students have meaningful learning when their participation in online classrooms increases (Davis, 2009; Frymier & Houser, 1998), which can promote social presence and interpersonal relationships with their lecturers, and increase interaction and communication in the online classroom (Kelly & Claus, 2015). Consequently, this enhances the students' ability to develop their understanding of course content, which increases their confidence to positively affect learning achievements in the online classroom.

In summary, I suggest that when lecturers in online classrooms apply text-based verbal and non-verbal immediacy practices effectively, students feel a greater sense of community, and this can diminish their feelings of being distanced from their lecturer. This provides students more opportunities to engage in discussion with the lecturer and greater participation via emails and on the discussion board. Text-based immediacy practices help to create friendly communication that develops students' participation with their lecturers in distance education courses, particularly female students who may be shy or too intimidated to interact due to cultural rules, as in the Saudi case. Additionally, such practices help students overcome their hesitancy to participate with their lecturers or peers, which can reduce the potential feeling of distance in the virtual classroom.

The current standard of teaching at the Distance Education Faculty in King Abdulaziz University is similar to the control group setting in this study. Currently in this faculty, students receive the course material and instructions, but they only receive minimal text-based immediacy practices, such as encouragement or non-verbal text-based immediacy cues from their lecturer during online lectures. The treatment group participants in this study – who received high level practices of verbal and non-verbal text-based immediacy from their lecturers – were more willing to participate, for example, posting comments if they knew the answer to a question. Consequently, lecturers in distance education classes should engage in high-level practices that involve non-verbal text-based immediacy to support student participation and provide more opportunities for their engagement in discussion, to present their opinion in discussion board or emails, and to share personal stories and ideas within synchronous and asynchronous online discussion.

## Students' Communication Satisfaction and Lecturer Text-Based Immediacy Behaviours

This section discusses whether there is a relationship between lecturer verbal and non-verbal text-based immediacy and student communication satisfaction. As noted previously, verbal and non-verbal text-based immediacy can be used by lecturers to reduce the sense of distance between themselves and their students. Previous studies have supported the view that a lecturer's immediacy behaviours can impact positively on students' satisfaction with lecturer communication in the virtual classroom (Arbaugh, 2010; Baker, 2010b; Goodboy et al., 2010; Ladyshewsky, 2013).

According to the current quantitative study results, there was no pre – post difference in control group students' satisfaction with communication. The students were not encouraging to immediately talk with their lecturer in online discussion, which was contrary to students' perceptions in the treatment group. Furthermore, the control group satisfaction scores were lower compared with treatment group students, who were more positive towards high levels of lecturer text-based immediacy behaviours (e.g., lecturers calling students by their first name, using humour, quick response times to students' questions, answers and comments, and use of emoticons to reflect emotions and body language ☺). In addition, the treatment group students rated higher satisfaction scores of their lecturers' textual communication. The students' perceptions of their satisfaction was demonstrated by an increased willingness to converse with the lecturer, and feelings that conversations were worthwhile and rewarding, and helped them accomplish their work. These results are compatible with those of Ladyshewsky (2013), who found that an increased instructor presence within his or her immediacy behaviours in online courses positively affects students' satisfaction of their

communication with a lecturer. Lecturer verbal and non-verbal behaviour is important, as it indicates the presence of the lecturer in the online classroom, which in turn increases students' satisfaction (Cobb, 2011).

Analysis of the qualitative findings in this study helped clarify the higher student satisfaction scores of synchronous and asynchronous lecturer communication behaviours. The interpersonal behaviours presented by text-based communication had a positive and significant impact on students' satisfaction with their lecturer's communication in virtual classrooms. This textual communication entailed both verbal immediacy (e.g., calling a student by their first name, referring to the class as "our" or "we") and non-verbal immediacy (e.g., using acronyms such as 'LOL'). These e-immediacy practices can enhance students' participation skills, for example, their engagement in discussion (Crombie, Pyke, Silverthorn, Jones, & Piccinin, 2003). This can, in turn, enhance their satisfaction around the communication they have with their lecturer (Bray, Aoki, & Dlugosh, 2008). This was seen in the results from this current study; for example, one student was quoted as saying, "I was satisfied with his responses because I felt the lecturer took appropriate care as I live far away from the university and this let me do more communication with him".

Previous studies also show that once the sense of distance and isolation has been reduced, students are more satisfied with the communication they have with their lecturers, and lecturers' immediacy practices can be an equivalent alternative to face-to-face communication (Hackman & Walker, 1990; Teven, 2007). In this current study, a treatment participant said:

> *The lecturer was not prompt with his responses sometimes, but I am still satisfied with his response because his feedback was detailed enough to answer my*

> *questions; he encouraged me to ask further questions or post comments and this reduced my feelings [about being] far from the university.*

Additionally, a lecturer's text-based immediacy creates a sense of informal communication, which encourages students to talk freely and ask or engage in online discussion (Jonassen, Davidson, Collins, Campbell, & Haag, 1995; Salaberry, 2013). In sum, students' perceptions of lecturer 'presence' can be increased via high-level practices of lecturer e-immediacy, which increase students' learning achievement in virtual classrooms (Ladyshewsky, 2013).

In contrast, the control group students were not satisfied with the communication they had with their lecturer, who used standard practices of text-based immediacy. This was apparent in that students felt that their classes were not interesting enough to communicate with their lecturers, which increased their feeling of distance. These students were not encouraged to pose questions to their lecturers, and this affected their learning experiences, reflected in low scores compared with the treatment group. One control group student said:

> *I know that we often use capital letters to stress certain ideas in online messages or insert emoticons to add some extra flavour to the message written in words, but I feel that our lecturer did not use any of these practices in our discussions, perhaps because he felt that this was not appropriate within the protocol of academic discussions. This reduced my desire for communication and my satisfaction.*

Thus, e-immediacy behaviours are related to students' attitudes towards lecturer communication style such as formal or social communication, which has a likely influence on whether students' satisfaction is increased or not in terms of lecturer communication.

Taken together, the quantitative and qualitative results both emphasise that students' positive perceptions of lecturers' technological immediacy behaviour (i.e., text-based immediacy) is strongly related to social presence. The lecturer e-immediacy aspect promotes increased social interaction within effective practices of lecturer interpersonal behaviours, such as text-based communication of verbal immediacy behaviours (e.g., using students' first name and humour, or sharing personal experiences) and non-verbal immediacy behaviours (socio-emotional, emoticons, replying in a timely fashion, providing valuable and clear information). Previous studies support the current findings that lecturer immediacy of text-based communication can increase the social presence of an interpersonal relationship, leading to increased student communication and satisfaction of online courses (Bulu, 2012; Gunawardena & Zittle, 1997; Swan, 2002). Furthermore, the findings of the current study show the importance of social presence in the distance education environment, which can be increased by textual communication of lecturer immediacy behaviours in virtual classrooms. The text-based immediacy of verbal and non-verbal cues provides the capacity to reduce the transactional distance between lecturers and students and improve social presence in online learning (Gorham, 1988; Moore, 1993; Sung & Mayer, 2012; Tu, 2000). This current study reveals that e-immediacy behaviours can increase students' sense of lecturer presence in online classrooms, which promotes their participation.

In summary, these results confirm that lecturer use of social presence with students – e.g., within Twitter, Facebook or WhatsApp – can promote effective communication of e-immediacy behaviours in virtual classrooms (McArthur & Bostedo-Conway, 2012; Russo & Koesten, 2005). Hence, a lecturer should make efforts to build positive relationships with students using effective textual communication immediacy

behaviours, to enhance student communication in the virtual classroom and improve quality of learning and experiences in distance education courses.

Distance education departments of universities in Saudi Arabia should offer more training in text-based immediacy practices for lecturers, and highlight its importance in creating useful social content when delivering effective textual verbal and non-verbal communication. A positive conception of lecturer text-based immediacy behaviours can promote a sense of closeness between students and lecturers participating in distance education courses, at Saudi universities, as well as improve students' classroom engagement. Moreover, lecturers should effectively exhibit text-based immediacy behaviours to their students in online discussion or emails. In doing this, lecturers can increase the likelihood that students have additional positive learning outcomes and experiences in virtual classrooms.

## Students' Affective Learning and Lecturer Text-Based Immediacy Behaviours

This section presents the framework for understanding the impact of lecturer immediacy behaviours on students' affective learning. The students' perceptions of their affective learning is discussed based on verbal and non-verbal practices of lecturer text-based communication. Affective learning is represented within the students' attitudes towards their course content and lecturer (Bloom, 1976). It entails a partnership between cognition and emotion, as well as the role of a person's views and values in his or her understanding and effective use of knowledge and skills (Kamardeen, 2013).

The comparison of pre- and post-test scores of the current study revealed that participants in control groups who received standard lecturer text-based immediacy behaviours indicated no significant effects in their affective learning. The scores for

treatment participants, however, revealed that a high level of lecturer text-based immediacy has a positive influence, with significant differences in students' affective learning from pre- to post-test. Moreover, in the same group, the post-test relationship between lecturer text-based immediacy practices and students' affective learning was more positive and moderate than in the pre-test phase. When comparing pre- and post-test results of the control group, however, there was no significant difference in the relationship between lecturer text-based immediacy behaviours and students' affective learning based on normal practices of lecturer immediacy. This result is consistent with study findings of Baker (2010), who showed that teacher immediacy positively impacts students' affective learning in online classrooms. In addition, Sung and Mayer (2012) also showed teacher immediacy behaviours can positively contribute to students' learning outcomes in online classrooms.

In the treatment groups, affective learning was defined as a high score for students who positively focused on lecturer immediacy behaviours of text-based communication, such as if students indicated a willingness to take the same course with the same lecturer in the future. Similarly, a high score was given when students had positive perceptions of their feelings about the course content (e.g. when lecturers made a link between students' concern and their course content, enhanced teaching to ease delivery of course objectives and activities, and connected their assignments with course content). In control groups, the lack of text-based immediacy practices did clearly influence the students' perceptions of their satisfaction with the course content or lecturer behaviour.

Again, qualitative data supported the quantitative results in this study. A high-level of lecturer immediacy behaviours within textual communication clearly impacted students' affective learning. When lecturers encouraged students to post comments or ask questions on discussion boards and in emails, they received clearly-worded and

prompt student responses. One student in a treatment group reported that "the lecturer provided me with quick responses which left a great impression on me… and I, [and my] willingness to study with him in another course because of his positive and supportive communication". In the control group, participants who received normal lecturer text-based immediacy behaviours reported less affective learning, which had an impact on their attitudes towards their lecturer in the online classroom. For example, one student reported that:

> *the lecturer often takes a long time to post his feedback or answer questions. Therefore, I had to make special arrangements to meet the lecturer face-to-face to resolve some issues and this let me feel that there was isolation feeling and I'm thinking I will not enrol [in] a subject with [the] same lecturer in the future.*

This reinforced that lecturer text-based immediacy of verbal and non-verbal practices positively impact students' communication and participation, which influence their learning achievements in the online classroom. These results align with previous studies that revealed a positive association between lecturer text-based immediacy practices and students' affective learning (Cleveland-Innes & Ally, 2013; Farwell, 2011; Frymier & Houser, 2000; Hooker, 2015).

Comparing the quantitative and qualitative results from this study with the literature highlights that high verbal and non-verbal text-based practices of lecturer immediacy behaviours can positively influence students to increase their participation and learning in online courses. Text-based immediacy encourages students to engage in discussion, ask questions and make comments. Moreover, this can positively affect students' communication, which can increase their satisfaction with their course content and lecturers' practices in the virtual classroom. Increasing students' participation helps them to understand the objectives of the courses they are studying (Cleveland-Innes &

Ally, 2013). As a consequence, students' retention rates may increase when communication and participation elements improve. This may positively contribute to students' motivation and interpersonal behaviour with the lecturer (Serwatka, 2005), and further develop their learning outcomes in virtual classrooms. Finally, social presence is also supported by applying the textual lecturer communication immediacy behaviours to reduce feelings of distance or isolation.

In a classroom, student learning may be active or passive. The common learning style in Saudi Arabian classrooms is that students should be passive receivers of knowledge conveyed by the a lecturer (Talbani, 1996). This background could affect students' attitudes towards the course content and lecturer. In the Saudi Arabian education system, instruction is usually lecturer-centred and lecture-oriented; students learn by memorisation and repetition. Students are seen as being passive and have few opportunities to improve their learning and communication skills. The results of this study, particularly the experiences of the control students, indicate that lecturers in the distance education classes at King Abdulaziz University do not demonstrate high-level text-based immediacy practices. Social presence theory should be employed in the distance education setting within lecturer text-based verbal and non-verbal immediacy practices. This technique should be presented to the lecturers within training courses in distance education at universities such as King Abdulaziz University. This aspect of social presence within lecturer e-immediacy behaviours could improve teaching styles of lecturers to improve learning outcomes of students (including students from Saudi Arabia), and to enhance their experiences such as the participation element in online classrooms.

## Students' Cognitive Learning and Lecturer Text-based Immediacy Behaviours

This section considers the relationship between students' cognitive learning and their lecturer verbal and non-verbal immediacy practices, and to what extent this affects cognitive learning in online classrooms. The current study results revealed a positive and moderate association between lecturer text-based immediacy behaviours and students' cognitive learning, which is supported by previous studies (Gorham, 1988; Hooker, 2015; Hughes, 2014; Menzel & Carrell, 1999; Mullane, 2014). This indicates that a new awareness of verbal and non-verbal text-based immediacy lecturer practices positively impacts students' learning in virtual classrooms.

The quantitative findings showed that students in the treatment group had significant and more positive perceptions of their cognitive learning than control group students. The control group participants who received standard e-immediacy behaviours had no significant differences in their pre – post cognitive learning scores, while treatment group participants – who experienced higher levels of lecturer e-immediacy practices – showed positive impacts on their learning, with higher post-test scores than pre-test. For instance, the treatment group rated that they learnt more from their course and obtained a good understanding of the basic concepts of the course material due to high-level practices of lecturer e-immediacy. In contrast, the control participants provided low scores for items such as their ability to improve how they can communicate clearly during the course, referencing the lack of lecturer e-immediacy behaviours. This finding – that e-immediacy practise positively affects students' learning outcomes in online learning – corresponds with previous studies that showed lecturer immediacy behaviours can enhance cognitive learning with students in online classrooms (Baker, 2008; Carrell & Menzel, 2001; Hooker, 2015).

The qualitative findings of the present study again supported the quantitative findings. Treatment group interviewees reported that they had more chance to engage in discussion and communication with the lecturer, which provided a better understanding of the course content. Furthermore, students stated their learning was meaningful, due to clear and timely responses from the lecturer via online discussion boards or emails. This positively influenced students' perceptions about realising knowledge and seeing the information as organized and more comprehensible, indicating their interest in course content can be increased through interpersonal behaviours in a virtual classroom. As one treatment group interviewee commented:

> *the lecturer provided me with clear responses such as answering my questions and comments on the chat board which left a great feeling on me… I felt that the lecturer took care to answer my questions and emails which made me more reassured of course content.*

This positive outcome is consistent with the results of the study by Wei and Wang (2010), who found that a high level of text-based lecturer e-immediacy communication has a positive influence on students' learning motivation in an online classroom.

Again in contrast, the control group participants felt that normal practices of lecturer text-based immediacy did not provide an effective learning environment, which reduced their willingness to learn or understand the course content. One control group participant reported that:

> *the lecturer often takes a long time to post his feedback or answer questions…. and I felt a feeling of distance … I guess quick responses and clear communication are both essential as it is difficult for distance education students to arrange face-to-face meetings and improve well their understanding of the course content.*

Additionally, they reported that a lack of closeness between lecturers and students in online classrooms decreased the possibility of gaining a quality learning experience and therefore decreased their chance of achieving the goals of the course.

The interview findings highlighted that the students who perceived effective text-based immediacy had more ability to engage in online discussion, which positively affected their attitude towards learning achievements in online classrooms. This corresponds with Perry and Edwards (2014), in that text-based immediacy enables lecturers to create a useful social and teaching presence, which enhances students' learning, and reduces concerns around online learning environments. When lecturers present friendly communications and establish positive interpersonal relationships, students report reassuring perceptions of their virtual classroom. As a consequence, the students believe that the lecturer cares more about their course and learning accomplishments, which increases their enthusiasm to participate in distance education (Comadena et al., 2007). This is borne out in this current study results, where high practices of lecturer text-based immediacy improved treatment group participants' learning and gaining benefits from the course. Likewise, this accords with the study results of Bodie (2009), who revealed that students who experienced low levels of lecturer immediacy showed lack of learning and understanding of course content when learning in a virtual classroom. These results and discussion support previous studies that lecturer immediacy has a positive and significant impact on students' cognitive learning in online classrooms (Arbaugh, 2001; Baker, 2010b; Bodie, 2009; Hooker, 2015; Vossler & Sheidlower, 2011). Moreover, the current findings indicate that students' learning has the capacity to be facilitated in the virtual classroom, with the greater use of lecturer verbal and non-verbal text-based immediacy practices. These practices of lecturer immediacy can improve student engagement and understanding of

course content. To encourage students to be active in the online classroom, lecturer e-immediacy behaviour should be presented as high level practices. One of the treatment groups stated that "the lecturer provided me with clear responses as answers for my questions and comments on the chat board which left a great feeling on me... Which made me more reassured of course content". Additionally, the high e-immediacy behaviours of the lecturer can reduce the physical and psychological distance between students and lecturers in online classrooms (Hooker, 2015), allowing students to participate and communicate more, which in turn benefits their affective and cognitive learning outcomes (Chen & Chiou, 2014). As one treatment group interviewee mentioned:

> *when the lecturer usually says "our class", "our topic" or "our lecture", I feel that the lecturer and I exist in the one room…. This gives us a sense as if we are part of a group who are progressing on a learning journey, also this attitude prompts me to participate.*

Finally, the current study findings also showed that higher lecturer text-based immediacy behaviours are highly likely to enhanced course satisfaction and improved student retention.

In conclusion, the interview and quantitative data of students' perceptions of their cognitive learning show that lecturers currently do not have high levels of immediacy behaviours within text-based communication, providing more compelling evidence that distance education departments should provide workshops on the importance of social presence theory and its relationship to lecturers' e-immediacy behaviours in virtual classrooms. This would improve interpersonal behaviours between students and their lecturer, to further support students to achieve meaningful online learning. In addition, there is an opportunity to reduce the feeling of isolation for students and to develop a

close relationship between them and the lecturer in online classrooms via high-level practices of lecturer text-based immediacy.

## Summary

This chapter reviewed the qualitative and quantitative data from this study and contrasted the findings with similar previous research that evaluated relevant factors linked to the concept of teacher immediacy. The influence of these practices is to reduce potential feelings of physical and/or psychological separation between students and lecturers in online classrooms. This study was designed in two phases. Firstly, a pilot study was implemented, which showed reliability of measures. A quantitative and qualitative study was subsequently undertaken to clarify the impacts of verbal and non-verbal teacher e-immediacy communication on students' participation, communication satisfaction, affective and cognitive learning outcomes. Secondly, this phase involved the interpretation of interviewee opinions, perceptions and suggestions of teacher immediacy, which impacted on student learning outcomes, participation and communication satisfaction in virtual classrooms.

The results showed that lecturers should practise an open-door policy, encouraging students to communicate with their lecturers, both synchronously and asynchronously. Lecturers should include text-based immediacy practices of verbal behaviours (e.g., calling students by their first name, using humour, and exchanging personal stories) and non-verbal behaviours (e.g., emoticons of facial expressions, such as ☹ or ☺, using capital letters, such as GOOD, and responding quickly to student questions or comments). Additionally, lecturers should use social network tools (e.g., Twitter, Facebook, WhatsApp) to reduce a feeling of distance with students and also use these tools to respond quickly (Holcomb & Krüger-Ross, 2013).

From an ontological perspective, integrating these lecturer behaviours had a positive effect on students' impressions of lecturer presence in distance education courses. This form of teacher communication encourages opportunities for students in a virtual learning environment, such as: active participation in critical thinking; presenting their opinion without hesitation; and reducing the sense of distance between the student and the teacher. Therefore, intensive practices of verbal and non-verbal communication can increase student participation, communication satisfaction and learning outcomes, particularly in cases where face-to-face communication is entirely absent, as in distance education. From a social presence theory perspective, lecturer e-immediacy behaviours promote epistemological aspects, which is related to physical and social presence with students leading to improvement of their knowledge and learning outcomes. Textual communication can help develop interpersonal relationships between lecturers and students, which also positively influence teaching and learning styles in the virtual classroom.

Comparing and contrasting the data from this study – a mixture of interviews and surveys – with previous research clearly highlights the positive effects of lecturer e-immediacy practices. The results also reinforce the importance of behaviour communication elements in education environments, particularly in distance education courses. The outcomes stemming from the research questions, data collection and results reinforce that distance education faculties should promote verbal and non-verbal text-based immediacy applications with lecturers and provide professional development on its importance and how lecturers can implement it to improve learning outcomes for their students. Consequently, this could facilitate positive modifications in distance education faculties in the content of their academic communication styles and skills in teaching and learning processing at King Abdulaziz University. This could then

increase students' participation, communication, and affective and cognitive learning in distance education courses.

# CHAPTER 9: RECOMMENDATIONS, IMPLICATIONS AND CONCLUSION

Interpersonal behaviours represent one approach to improving communication between students and lecturers. In this context, lecturer immediacy refers "to communication behaviours that enhance closeness to and non-verbal interaction with another" (Birdwhistell, 1968, p. 203), employing both verbal and non-verbal communication. In a digital information age, distance education mainly uses ICT and e-learning tools to facilitate educational and logistic transactions. In such a 'virtual learning environment', lecturer immediacy is no longer seen as an approach to decrease psychological distance between the learner and the teacher inside the classroom, but also as an approach that perceives physical distance in an online learning environment.

This study investigated the impact of verbal and non-verbal text-based immediacy practices on undergraduate students in Saudi universities. The purpose of this study was to generate evidence to support improvement in practices that will assist students' experiences and learning outcomes in the distance education environment. Moreover, it was also to inform Saudi policy makers in distance education and e-learning centres. As a conclusion to the thesis, this chapter provides recommendations, implications for theory and practice, limitations, areas for future research, and a brief summary of the key findings of the current study.

## Recommendations

In this section, I provide general recommendations for practical consideration in Saudi distance education to promote lecturer immediacy content in online classrooms.

1. *Given the somewhat authoritarian form of online teaching practised in Saudi universities, the text-based immediacy practices in this study shed light on the need for lecturers to adopt more informal and friendly text-based*

*communication with students to foster a more sociable learning environment in online classroom settings. When the lecturers use language to encourage class discussion, students are more likely to develop better communication and interaction skills. Lecturer training in this area needs to incorporate subtle interpersonal skills for lecturers so that they can encourage students to ask questions and give them a chance to voice any issues without fear or embarrassment.*

2. *The range of text-based immediacy practices applied and identified in the literature and in this study need to be incorporated into lecturer training courses developed by the Department of Distance Education at KAU and across Saudi universities. The types of text-based communication immediacy practices outlined in the current study should be implemented by distance education lecturers to promote a high social presence in online communication, both synchronous and asynchronous approaches.*
3. *The e-learning environment department at KAU and at other Saudi universities need to be actively engaged in faculty induction and professional development programs, where they can run training, provide guidance and create awareness on the importance of immediacy behaviours in online settings and on the techniques and practices that support e-immediacy behaviours. The training should not only focus on technological knowledge and capabilities but also on careful integration of pedagogical practices and behaviours to support teaching and learning in distance education courses. A strong emphasis should be in supporting female instructors running distance education courses with female students to facilitate enhanced and innovative e-immediacy practices required to compensate for restricted access of female students to audio visual interactions*

*with their lecturer, and their traditional reliance on audio and text-based modes of communication and interaction.*

4. *Lecturers in distance education programs should orient their students towards intended learning outcomes in their course, associated e-resources, avenues of communication interaction, and participation to achieve the best outcomes and maximise the students' learning experiences. These e-interaction avenues include virtual spaces (LMS, discussion boards, blogs, wiki spaces, etc.) that will likely make remote students aware of, and encourage them to actively participate with, their lecturers by the support of the e-learning department in their institute. In addition, lecturers should align students' participation in such e-learning spaces to assessments, where students' comments and active participation in, for example discussion boards, constitute mandatory requirements for student success. The lecturers themselves are required to lead their students by example in regards to the importance of participation and communication in an online environment, by fostering a safe student-centred teaching and learning space where students are referred to by their first name, acknowledged for their achievements, supported in any misconceptions, and assured that their lecturer is approachable, in a manner equivalent to face-to-face learning environments. This is achieved by prompt and timely responses, encouraging words and emoticons, and a range of immediacy behaviours.*
5. *The lecturer should continue to deliver immediacy behaviours not only in synchronous learning spaces but also asynchronously, with the aid of popular social media applications, such as email, chat, chat video, file sharing and whiteboard.*

6. *Universities should embed student evaluation and satisfaction surveys in distance education courses and focus on immediacy practices of lecturers as one of the concern areas. Such evaluation will provide important feedback and lecturer reflection practice to continually support e-immediacy behaviours by integrating new behaviours based on students' feedback and suggestions, strengthening successful practices and rectifying inefficient or poor practices.*

## Implications

### Implications for Theory

Lecturer verbal and non-verbal text-based immediacy practices elaborated in this study can create a positive attitude toward the online classroom environment. This section lists some theoretical implications of the study for promoting students' experiences and learning outcomes. The concept of teacher immediacy was employed within the broad edifice of transactional distance theory, whereby the focus is upon the physical separation between lecturer and learner in distance education classes relative to psychological distance. This frame of transactional distance and teacher immediacy was strengthened by social presence and social information processing theories to enhance the social context in meaningful delivery of virtual course content.

This study has shown the importance of text-based immediacy practices to improve the social context dimension within online learning (Skovholt et al., 2014; Walther, 1992), which is related to a sense of community among students (Tu & McIsaac, 2002).Weakness of social cohesion in an online classroom makes it difficult for engaged discussions between lecturer and student (Branon, 2001; Johnson, 2006). Thus, in the absence of face-to-face communication between students and lecturers, the lecturer has to make more effort in interpersonal behaviours centred around verbal and

non-verbal e-immediacy to enhance a social teaching and learning context in their online classes through using textual communication content. In addition, the e-immediacy behaviours of lecturers can support a social immediacy aspect, which can increase students' engagement and communication in online classrooms.

Results from this study reinforce that text-based verbal and non-verbal immediacy practices of lecturers can have positive effects on developing interpersonal experiences and behaviours between students and lecturers, which in turn promote a productive educational and social student–lecturer relationship (Frymier & Houser, 2000). These results also demonstrate that the social perspective within lecturer text-based immediacy practices in a virtual classroom that focus on improved lecturer–student relationships can promote students' engagement and learning achievement (Hughes & Chen, 2011). According to Liberante (2012) the lecturer-student relationship is "one of the most powerful elements within the learning environment" (p. 2).

Lecturer verbal and non-verbal immediacy practices need to be aligned with communication styles content in the classroom environment. In this current study, the verbal and non-verbal text-based immediacy practice results revealed that the students preferred an informal style of communication in the online classroom, such as when the lecturer addressed students by their first name or narrated personal experiences to better illustrate a topic. Also, the results indicated that text-based immediacy practices can improve interpersonal communication related to how the lecturer delivers the non-verbal messages through variation in textual format within both synchronous and asynchronous approaches. Moreover, non-verbal immediacy practices, such as the use of emoticons ( ☺ ☹ ) can also simulate certain types of body language communication, which may reduce feelings of physical distance for students. While virtual communication is hindered by a sense of distance, capabilities in contemporary online

media can be utilised to reduce a feeling of isolation, increasing students' communication and participation in online classrooms. Using videoconferencing, audio, or photographic imagery are all methods to simulate a real interaction in an online classroom. Previous research has emphasised the influence of cultural context on education practices employed in online classrooms (Khoo, 2010; Neuliep, 1997). This was clearly reflected in the case of female Saudi students in this study, who had stronger expectations and positive experiences of lecturer text-based immediacy practices, because those practices not only compensated for physical and psychological separation but also for the restricted access to video-conferencing, recorded videos of their lecturer, or to audio-visual lecturer communication.

**Implications for Practice**

The implications of e-immediacy practices are addressed here to provide insights for distance education departments to improve academic e-immediacy behaviours in online lectures or courses. The current study results built on the relevant literature, identifying several practices to improve lecturer e-immediacy behaviours in online classrooms:

1. *Faculty can encourage lecturers to increase student communication, both in and outside the online classroom by using social media (Facebook, WhatsApp, Snapchat, etc.), which may in turn enhance students' engagement in online classrooms.*
2. *Lecturers should increase their awareness of students' online needs to promote students' affective and cognitive learning outcomes. For example, provide new and multiple sources of information and present lecture content using varied formats, such as slides, video, Google Scholar, textbook, YouTube, Google images and photos.*

3. *From time to time, lecturers should present both quantitative and qualitative data on student participation and communication in the online course. This can highlight and reinforce student engagement levels with their lecturer and his or her peers.*
4. *In addition, lecturers can increase students' participation by using encouraging words (e.g., GOOD participation, GREAT comment) or by giving a star emoticon (*  *) for an active student. This implication can increase the dialogue element for remote students with their peers and with the lecturer in the online classroom. In relation to students' feelings of psychological and physical distance, the lecturer has to maintain verbal and non-verbal e-immediacy behaviours via discussion boards or emails, as much as possible within the distance education teaching protocols.*
5. *The distance education faculty should update non-verbal emoticon software from still emotions to animated emotions, such as* ***Facebook or*** *Skype* ***Secret Emoticons*** *Software. This can give lecturers more options of expressing emotions by the absence of body language and gestures- which are normally available in face-to-face interaction- to reduce feelings of remoteness for online students*
6. *Lecturers have several opportunities to increase students' interaction by utilising online applications and tools to complement implementation of his or her e-immediacy behaviours in the online environment. These tools include video/screen casting and screen sharing, which can enhance communication and interaction with remote students (Hutchins, 2003; Stephens & Hennefer, 2013). The using of these tools can enhance delivery quality of lecturer*

*immediacy behaviours and promote a positive impression with remote students in online learning environments.*

7. *Lecturers should evaluate their practice via online surveys to remote students to explore students' impressions of lecturer verbal and non-verbal text-based immediacy behaviours during online courses. This can help lecturers improve communication behaviours, which in turn can have positive effects on students' satisfaction with their lecturer's communication.*
8. *Through the use of online tools, the lecturers in the online classroom can increase students' motivation and satisfaction with online courses by immediately applying feedback with relevant information for their questions or task outlines. For instance, a lecturer can use WhatsApp or iMessage rather than email, or discussion boards to quickly deliver feedback. These programs can reduce students' concerns around course content and develop lecturer immediacy behaviours in online courses.*
9. *Based on previous studies, remote students feel isolation in online courses because of a sense of distance (Moore, 2013; Nichols, 2010). Thus, lecturers can provide more flexibility of extended deadlines or ask for students' opinions around a suitable deadline. This practice of lecturers is considered one of several valued behaviours of e-immediacy in creating a positive effect on students' perceptions of lecturer immediacy behaviours (e.g., students feel the lecturer is close and respects them), which should support students' engagement participation.*
10. *Lecturers have to be encouraged to apply textual communication as an active process during chat or emails in synchronous and asynchronous learning. This practice can enhance students' interaction and reduce shyness or hesitation*

*when students communicate with their lecturer. In particular, this benefits the students who do not like to, or cannot, present their face live on camera or talk by microphone – such as some female Saudi students in this study who had limited communication opportunities due to cultural rules.*

11. *Lecturers can write kind or warm words on discussion boards or emails (e.g., "you wrote a nice sentence", "you have a great idea", "you posted an interesting photo", or "you cooperated well"). These types of words can create informal communication within verbal and non-verbal text-based immediacy behaviours, which can support social presence theory that increases interpersonal behaviours with remote students and lecturers in online classrooms (Baker, 2010; Kear et al., 2014).*
12. *Several other lecturer practices promote the concept of lecturer immediacy, such as establishing frequent contact, offering opportunities to participate, and giving prompt and appropriate feedback. These practices in turn, therefore, create positive perceptions of their online learning achievements (Fahara & Castro, 2015).*
13. *Lecturers should apply a mixture of e-immediacy behaviours (e.g., frequently using emoticons ☺, providing an opportunity to show their face and/or voice within a videoconference and calling students by their preferred moniker). For instance, lecturers can call students within text-based or microphone communication by their first, last or nickname. This implication of e-immediacy behaviours can support transactional distance theory to reduce psychological distance feelings and promote interactions between students and lecturer in virtual classrooms (Farwell, 2011; Goel et al., 2012; Rourke, Anderson, Garrison, & Archer, 2001).*

14. *According to Fahara and Castro (2015), the immediacy behaviours of lecturers can be improved by communication such as:*

    *"trying to be empathic, addressing [students] with the casual 'you' and asking them about appropriate personal details such as their health, welcoming them, engaging students with lower than expected program participation, trying to treat the online interaction as if it happened in a real classroom and giving their questions the importance they deserve" (p. 373).*

    *These forms of lecturer communication can close the feeling of distance between students and their lecturer and promote social presence within the virtual classroom.*

15. *Lecturers have to encourage learners to discuss their experiences within online discussion boards, for example, "ask learners to post at least two responses to peers: hence support contribution which ensures peer learning and contributes to social learning" (Chakraborty & Nafukho, 2015, p. 18). Moreover, asking learners to relate discussion posts with text, videos, lecture, slides and other resources offered encourages learners to utilise the course resources. These practices of lecturer communication can increase students' positive perceptions of lecturer immediacy behaviours in online classrooms (Chakraborty & Nafukho, 2015).*

## Limitations of the Study

While this study has achieved a focussed examination of immediacy practices at KAU, there are some limitations. The data were based solely on self-reported perceptions of students enrolled in online courses. The objectivity of this type of data may be questionable if, for example, students disliked the course, subject or a particular

lecturer, inducing some bias in their opinion. The data focused on student opinions related to course content and lecturer as related to immediacy behaviours, not actual curriculum, content or design of a course or a lecturer's particular pedagogical style. The current study also focused on students' perceptions of text-based immediacy practices rather than lecturers' perceptions.

While the lecturers were interviewed, they reflected on student survey feedback, not their views on immediacy practices, and no quantitative instrument was designed to measure how they perceived the efficacy of lecturer text-based immediacy practices. The female lecturers in treatment groups were limited in their communication behaviours due to cultural restrictions around displaying facial expressions in videoconferencing or photos, whereas these practices were possible for male lecturers in the same courses.

Another limitation of this study pertained to the scales used in the questionnaire. The items in the questionnaire are targeted to text-based practices of immediacy (see Appendix A) but there are a range of other means of communication in online classrooms: videoconferencing, audio or photos. These non-textual forms of communication were not considered in the study. Finally, the sample for this current study comprised undergraduates within a foundation studies subject, whereas postgraduate students were not targeted.

## Future Research

There are several possible directions for future research to extend the findings of this study and address limitations. For example, to overcome potential student self-reporting bias, future studies could employ concrete measures of student performance to objectively measure the difference made by immediacy practices – from text-based to

video or photo. This would help us to understand effects of other types of technologies and communication tools in relation to lecturer immediacy behaviours in virtual classrooms. Different measures could be employed to examine improvements in student learning outcomes and classroom experiences before and after implementation of immediacy practices based on textual communication. For instance, by comparing students' attendance levels and their exams scores based on their perceptions of who received high or low level of lecturer e-immediacy behaviours in online classroom.

As noted above, this study did not measure lecturers' opinions or feedback to evaluate the efficacy of immediacy practices in online classrooms. Arguably, lecturers can provide a robust view of this by drawing directly on their experience in teaching practice. An online survey could also be deployed within a large, longitudinal study through different distance education faculties to examine if lecturers experience significant benefits from using immediacy practices in their online classroom and what effects their teaching and learning styles have on students' perceptions.

This research identified lecturer immediacy as a significant predictor of online classroom learning in terms of student participation, communication satisfaction, and affective and cognitive learning outcomes. Further research could examine other variables related to lecturer text-based immediacy, such as lecturer clarity, teaching quality, course implementation and face-to-face communication.

A future study could also investigate how specific technological capabilities facilitate different forms of communication in distance education classes. For instance, video and audio conferencing enable more non-verbal forms of immediacy to be represented through body language or voice indications, whereas discussion boards or emails are more conducive to verbal forms. As an aligned research framework, it is important to identify how technological failures, such as slow Internet speeds or

outdated hardware/software, can hinder communication in online classrooms. For example, some discussion boards do not provide live chat rooms for direct synchronous or asynchronous communication approaches.

Lastly, this study was conducted on undergraduate students in foundation (undergraduate) level Arabic courses. A future study could examine if the efficacy of lecturer immediacy changes with course subject matter, such as mathematics, sciences, or at different levels of advancement, or with student groups at the postgraduate level. Moreover, there could be a more comprehensive study comparing Saudi lecturers/students with other nationalities to help cement the validity of lecturer immediacy as a universally applicable pedagogical concept.

## Overview and Conclusion

Chapter 1 of this thesis introduced the background, context and problem statement for this study, outlining the purpose and contribution. In Chapter 2, the background information on Saudi Arabia, its distance education system, and the history of the King Abdulaziz University was provided. An overview of the cultural context behind high female enrolment in distance education courses in Saudi Arabia was also presented. In Chapter 3, the literature review examined the theories used in this study and previous studies on lecturer immediacy, along with an evaluation of research considering online distance education and communication styles in online classroom environments. In addition, the conceptual framework of this study was developed in this chapter on the basis of three theories – transactional distance within lecturer immediacy, along with social presence, and social information processing – that examine the sense of psychological distance in distance education environments. The chapter also listed the research questions testing the impact of lecturer verbal and non-verbal text-based

immediacy practices on student participation, communication satisfaction, affective and cognitive learning outcomes.

The fourth chapter detailed the process of developing the survey instrument and pilot study. The pilot study was intended to confirm the psychometric qualities of the Arabic translation of the instrument and determine the time needed to complete the questionnaire. The survey contained six main subscales representing the six dependent variables that were: lecturer immediacy verbal and non-verbal, plus four elements of student participation, satisfaction with communication, affective learning and cognitive learning. Chapter 5 reviewed the methodology used, research design, challenges of mixed methods and research questions. Chapter 6 presented the quantitative phase of treatment research design, and the study sample, which comprised 271 participants (male and female first year undergraduate students enrolled in an Arabic language course). Moreover, this chapter offered study instruments, procedure of data collection within groups which were divided first by gender, then into control and experimental groups, and techniques used for data analysis and descriptive analysis. In Chapter 7, the qualitative phase presented interview sampling, measures, procedure, and discussion of results.

In Chapter 8, the discussion of findings of the study generally related to the research questions showed that there was a moderate-to-weak positive relationships within both the male and female experimental groups between lecturer immediacy and SOCP, SCS, SAL and SCL variables, and no significant differences in the pre- and post-test scores for both male and female control groups. This highlighted students' appreciation of lecturer immediacy behaviours, manifested in their positive impressions in post-test scores on the verbal and non-verbal lecturer practices measures. Furthermore, there were high scores in the post-test students' responses to OCP, SCS, AL and CL in the

experimental groups (both male and female), showing that the students in the treatment group who undertook a class with high immediacy practices experienced a significant improvement in their attitudes regarding online classrooms. Finally, in terms of gender, there were significant differences in SOCP and SCS, but not in SAL and SCL, between pre- and post-test scores of both the experimental and control groups. The female students in treatment groups mentioned that lecturer gender positively impacted their perceptions of lecturer text-based immediacy on the participation and communication elements operating within the online classrooms. The female students' feedback indicated that they were more satisfied when they communicated with a female lecturer.

A significant finding in terms of gender was identified from the higher expectation and more positive attitude of females when it related to lecturer immediacy as epistemological knowledge within a human interaction element. For instance, female students in Saudi Arabia cannot see or interact with a female lecturer via a visual facility due to Saudi culture. Such restricted audio and text-based epistemological means of interaction and knowledge transfer prompted a strong ontological stance for female participants in this study, who had higher expectations and more positive experiences with lecturer immediacy practices as this not only compensated for the psychological and physical distance but also for the previously restricted visual access and interaction with their lecturer.

In conclusion, the findings supported the main hypothesis of the study that text-based immediacy practices can promote student participation and communication satisfaction to better deliver course content and improve teaching styles in online classrooms. These text-based practices of lecturer immediacy also contribute to the improvement of the affective and cognitive learning outcomes of students.

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# APPENDICES

## Appendix 1

# CONSENT FORM FOR PARTICIPANTS INVOLVED IN RESEARCH (PILOT STUDY)

**INFORMATION FOR PARTICIPANTS:**

We would like to invite you to participate in a project entitled " **The Effects of Teacher Immediacy on Students Experiences and Learning Outcomes at Distance Education in Saudi Universities** (**Pilot study**). This project is being conducted by a student researcher from School of Education at Victoria University. The pilot study will focus on investigating the teacher immediacy questionnaire (Student form) and involve female and male undergraduate students in King Abdul Al Aziz University in Jeddah city.

I understand that participation in the pilot study is voluntary and participants are free to withdraw from the study at any time without detriment. I understand that all information provided about these questionnaires will be confidential, and I give my permission to:

1. complete the questionnaire for this project (approx 10 -15 minutes).

**CERTIFICATION BY SUBJECT**

Student signature

I.....

..... .....

I certify that I give permission to participate in the research project" The Effects of Teacher Immediacy on Students Experiences and Learning Outcomes at Distance Education in Saudi Universities. This will be conducted by the student researcher (Abdullah Al Ghamdi)

Signed: Date:

Mr. Abdullah Mohammed Al Ghamdi, a doctoral student researcher at the School of Education, Victoria University, Abdullah.alghamdi@live.vu.edu.au; Mobile: +61 401232177. This research is supervised by Dr. Anthony Watt, as principal researcher supervisor (3)99194119, (3)99197579 e-mail: anthony.watt@vu.edu.au and Dr. Greg Neal, associate supervisor: 99194119 email: greg.neal@vu.edu.au.

# Appendix 2

# CONSENT FORM FOR PARTICIPANTS INVOLVED IN RESEARCH (MAIN STUDY)

**INFORMATION FOR PARTICIPANTS:**

We would like to invite you to participate in a project entitled" **The Effects of Teacher Immediacy on Students Experiences and Learning Outcomes at Distance Education in Saudi Universities**. This project is being conducted by a student researcher from School of Education at Victoria University. This study will focus on investigating the teacher immediacy questionnaire and involve female and male undergraduate students in King Abdul Al Aziz University in Jeddah city.

I understand that participation in this study is voluntary and participants are free to withdraw from the study at any time without detriment. I understand that all information provided about these questionnaires will be confidential, and I give my permission to (please tick boxes to indicate approval):

1. Complete the questionnaires for this project (approx 10 - 15 minutes). ☐
2. Provide my email address so that the student researcher can contact me regarding completion of the questionnaires a second time after my unit of study is completed ☐
3. Agree to be contacted (provide email) regarding participating involvement in an interview (approx 30-45 mins) ☐

**CERTIFICATION BY SUBJECT**

Student signature

I, .....of.....

(email……)

I certify that I give permission to participate in the research project" The Effects of Teacher Immediacy on Students Experiences and Learning Outcomes at Distance Education in Saudi Universities. This will be conducted by the student researcher (Abdullah Al Ghamdi)

Signed: Date:

Mr. Abdullah Mohammed Al Ghamdi, a doctoral student researcher at the School of Education, Victoria University, Abdullah.alghamdi@live.vu.edu.au; Mobile: +61 401232177. This research is supervised by Dr. Anthony Watt, as principal researcher supervisor (3)99194119, (3)99197579 e-mail: anthony.watt@vu.edu.au and Dr. Greg Neal, associate supervisor: 99194119 email: greg.neal@vu.edu.au.

# Appendix 3

# CONSENT FORM FOR PARTICIPANTS INVOLVED IN RESEARCH (MAIN STUDY)

## Interviews

**INFORMATION FOR PARTICIPANTS:**

We would like to invite you to participate in a project entitled" **The Effects of Teacher Immediacy on Students Experiences and Learning Outcomes at Distance Education in Saudi Universities**. This project is being conducted by a student researcher from School of Education at Victoria University. This study will focus on investigating the teacher immediacy questionnaire and involve female and male undergraduate students in King Abdul Al Aziz University in Jeddah city.

I understand that participation in this study is voluntary and participants are free to withdraw from the study at any time without detriment. I understand that all information provided about these interviews questions will be confidential, and I give my permission to:

1. complete the interviews for this project (approx 30 - 45 minutes).

**CERTIFICATION BY SUBJECT**

Student signature

I, .....of.....

I certify that I give permission to participate in the research project" The Effects of Teacher Immediacy on Students Experiences and Learning Outcomes at Distance Education in Saudi Universities. This will be conducted by the student researcher (Abdullah Al Ghamdi)

Signed: Date:

Mr. Abdullah Mohammed Al Ghamdi, a doctoral student researcher at the School of Education, Victoria University, Abdullah.alghamdi@live.vu.edu.au; Mobile: +61 401232177. This research is supervised by Dr. Anthony Watt, as principal researcher supervisor (3)99194119, (3)99197579 e-mail: anthony.watt@vu.edu.au and Dr. Greg Neal, associate supervisor: 99194119 email: greg.neal@vu.edu.au.

# Appendix 4

# INFORMATION TO PARTICIPANTS INVOLVED IN RESEARCH (Teachers)

**You are invited to participate**

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You are invited to participate in a research program titled "The Effects of Teacher Immediacy on Students Experiences and Learning Outcomes at Distance Education in Saudi Universities." A doctoral student researcher Abdullah Mohammed Al Ghamdi from Faculty of Arts, Education and Human Development at Victoria University under the supervision of Dr. Anthony Watt, principal supervisor and Dr. Greg Neal, associate supervisor, is conducting this project.

**Project explanation**

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Students' learning outcomes and experiences are challenged by the physical and psychological separation experienced in distance education. Students might feel a sense of isolation and separation from the teacher and the classmates, a problem that is not experienced in in-classroom education. Teacher immediacy (both variable and non-variable) as a pedagogical approach can probably ease the sense of separation/isolation and provide a sense of closeness. This study aims to investigate the potential role of teacher immediacy behaviours (verbal and non-verbal) in distance education course to reducing the sense of physical and psychological isolation and improving students' communication and learning outcomes

**What will I be asked to do?**

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As a part of your involvement in this research program you will be asked:

Teacher female and male in the immediacy focus groups:

1. To apply verbal and non-verbal immediacy with students in your online classroom by following 24 items (the immediacy focus groups' teacher). See Appendix 1 and 2.

2. To provide your students for the completion e-questionnaires when the researcher student ask that (in standard delivery and the immediacy focus groups teacher).
3. To encourage students by giving marks when they completed their e-questionnaires (in standard delivery and the immediacy focus groups teacher).

Teacher female and male in standard delivery groups:

1. Teach as normally without any intervention or specific structure from the researcher student.

In end of semester, the teacher who will be involved in project will be asked to participate in interviews to ask them about feedback about (verbal and non-verbal immediacy effects on students' experiences and learning outcomes in distance education course.

**What will I gain from participating?**

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There is direct benefit to you from participation. Moreover, your involvement will improve your scale in communication and participation with your students' online class through use verbal and non-verbal immediacy.

**How will the information I give be used?**

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Teacher male and female in the immediacy focus groups will get 24 items of verbal and non-verbal immediacy to implement them in their teaching in online classroom. The teacher male and female in standard delivery groups will not getting any plan or items to apply them they will teach as usually they do.

**What are the potential risks of participating in this project?**

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The nature of the research project imposes low probability risk, if any. These low probability risks might mainly occur as a result of participants' anxiety and feel of uneasiness for giving on opinion, which criticizes the teacher of his course in his/her immediacy, or others related with

his/her teaching. All participation is completely voluntary and you may contact the Office of Post Graduate Research, or the supervisors with any queries. All data will be kept confidential, and no individual will be identified in publications resulting from the data.

**How will this project be conducted?**

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The project will collect data in the following manner:

1. Teachers will send the e-questionnaires links via email to his/her students when the researcher student asks that.
2. Teacher send e-questionnaires to students University emails twice one will be after pre-test and second will be after post-test both standard delivery and the immediacy focus groups.
3. Teacher he/she will encourage students to complete e-questionnaires during a class.

All data collected will be collated and analysed for general themes and particular issues and appropriate recommendations compiled.

**Who is conducting the study?**

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Dr Anthony Watt is a Principal Investigator and can be contacted at 9919 4119, Anthony.Watt@vu.edu.au

Dr Greg Neal is a associate supervisor and can be contacted at 99194458, Greg.Neal@vu.edu.au

Mr. Abdullah Mohammed Al Ghamdi, a doctoral student researcher at the School of Education, Victoria University, Abdullah.alghamdi@live.vu.edu.au Mobile: +61 401232177.

Any queries about your participation in this project may be directed to the Principal Researcher listed above.

If you have any queries or complaints about the way you have been treated, you may contact the Ethics and Biosafety Coordinator, Victoria University Human Research Ethics Committee, Victoria University, PO Box 14428, Melbourne, VIC, 8001 phone (03) 9919 4148. AEHDEthics@vu.edu.au

## Appendix 5

# CONSENT FORM FOR PARTICIPANTS INVOLVED IN RESEARCH (Teachers)

You are invited to participate in a research program titled “The Effects of Teacher Immediacy on Students Experiences and Learning Outcomes at Distance Education in Saudi Universities” A doctoral student researcher Abdullah Mohammed Al Ghamdi from Faculty of Arts, Education and Human Development at Victoria University under the supervision of Dr. Anthony Watt, principal supervisor and Dr. Greg Neal, associate supervisor, is conducting this project.

This research project is designed to investigate the effects of teacher immediacy on students’ experiences and learning outcomes in distance education at Saudi Universities with years (20-28). This study is highly significant by generating deeper understandings on how to improve teaching and learning in an online setting via immediacy. The study will be significant to:

Saudi Universities that are striving to develop the quality and pedagogy of their online courses. The researcher will be happy to send you a brief about the result of the study.

**CERTIFICATION BY TEACHER**

I, _____

(Name)

of _____

(School)

certify that I am voluntarily giving my consent to participate in a study titled “The Effects of Teacher Immediacy on Students Experiences and Learning Outcomes at Distance Education in Saudi Universities”.

I freely consent to my own participation in the following:

- To help the researcher by sending e-questionnaire link to student's university emails.
- To assist in arrangements for students interview.
- To follow all the instructions provided by the researcher during the online classes.
- To participate in interviews with researcher student.

I certify that the objectives of the study, together with any risks and safeguards associated with the procedures listed here under to be carried out in the research, have been fully explained to me by the 'Information for Schools' sheet or by the Program Manager, or by a member of the research team.

I certify that I have had the opportunity to have any questions answered and that I understand that I can withdraw from this study at any time and that this withdrawal will not jeopardise me in any way. I have been informed that the information I provide will be kept confidential.

Signed: Date:

Any queries about your participation in this project may be directed to Dr. Anthony Watt (9919 4119), principal supervisor , and Dr. Greg Neal (99194458), associate supervisor. If you have any queries or complaints about the way you have been treated, you may contact the Ethics and Biosafety Coordinator, Victoria University Human Research Ethics Committee, Victoria University, PO Box 14428, Melbourne, VIC, 8001 phone (03) 9919 4148. AEHDEthics@vu.edu.au

# Appendix A: Verbal Immediacy (VI) Questionnaire

**Survey Questionnaires**

Verbal Immediacy Scale:

The verbal immediacy will be examined by 14 items Likert Scale which is needed to be completed by each participant. These Verbal Immediacy Behaviors (VIB) Scales were applied by Gorham's (1988). The items are 17 Scales but I deleted three items (engaging in conversation/meeting before and after class and calling on students to answer questions even when they have not indicated they want to talk) that due to the inapplicability to employ them in online context. The modified scale will use online courses. Sample items included asking questions, using humor, addressing students by name, and praising students' work.

**Immediacy Behaviour Verbal Scale – Distance Education Environment**

Below are descriptions of things instructors may do when teaching. Please respond to each of the statements in terms of the way you perceive your class's instructor. For each item, indicate how often your teacher responds this way when teaching.

Scale: 1 = never, 2 = rarely, 3 = occasionally, 4 = often, and 5 = very often.

1. Uses personal examples or talks about experiences she/he has had.
2. Asks questions or encourages students to comment.
3. Gets into discussions based on something a student brings up even when this doesn't seem to be part of his/her course plan.
4. Uses humor.
5. Addresses students by name.
6. Addresses me by name.
7. Refers to the class as "our" class or what "we" are doing.
8. Provides feedback on my individual work through comments on papers, discussions, etc.
9. Asks students how students feel about an assignment, due date, or discussion topic.
10. Invites students to call or meet with him/her if they have questions or want to discuss something.
11. Asks questions that solicit viewpoints or opinions.
12. Praises students' work or comments.
13. Will have discussions about things unrelated to class with individual students or the class as a whole.
14. Is addressed by his or her first name by the students.

# Appendix B: Non-verbal Immediacy (NVI) Questionnaire

**Non-verbal Immediacy Scale**

In this study, I will examine 14 items Likert Scales of non-verbal immediacy. (NIB) items Scales were created for students to be able to physically watch their teacher (Andersen, 1979; Richmond, Gorham, & McCroskey, 1987). All these items scale NIB will be employed by instructors during online discussion boards, forums, email or whiteboard.

**Immediacy Behaviour Non-verbal Scale – Distance Education Environment**

Please indicate the degree to which you believe each statement applies to your instructor during your distance education class :

Scale: 1 = never, 2 = rarely, 3 = occasionally, 4 = often, 5 = very often

1. My instructor uses social verbs (e.g., "::wave::" or "::high five::") to translate a physical action when communicating.
2. My instructor uses words typed in all capital letters or italics (e.g., "GOOD" or "not") to indicate emotion when communicating.
3. My instructor uses acronyms (e.g., "LOL" for "laughing out loud") when communicating.
4. My instructor uses punctuation (e.g., "!!!") to indicate expressiveness when communicating.
5. My instructor uses interjections (e.g., "Wow!") to express emotion when communicating.
6. My instructor uses emoticons (e.g., :-) or :-p) when communicating.
7. My instructor gives prompt feedback on questions, often answering questions within 24 hours.
8. My instructor gives prompt feedback on assignments, allowing students ample time to use feedback on future assignments.
9. My instructor clearly communicates important course topics.
10. My instructor clearly communicates important course goals.
11. My instructor provides clear instructions on how to participate in course learning activities.
12. On class discussion boards, my instructor responds to most every comment contributed by students.
13. My instructor takes the time to provide me with thoughtful responses to my posted comments/questions.

14. My instructor takes the time to provide me with thoughtful responses on my assignments.

# Appendix C: Online Participation and Satisfaction Communication Questionnaire

**Online Classroom Participation Scale:**

0= Never; 1= Rarely; 2= Occasionally; 3= Often; 4= Very Often

1. I would contribute comments or questions in online classroom.
2. I would volunteer comments or questions in online classroom.
3. I would volunteer comments when I know the answer.
4. I would contribute without hesitation.
5. I would express personal opinions.

The Class Participation Scale is 6 items and asks participants to report on how often they participate during online classroom, all these items refer to traditional classroom (Fassinger, 2000).

**The Student Communication Satisfaction Scale:**

1 = strongly disagree; 2 = moderately disagree; 3 = slightly disagree; 4 = neutral; 5 = slightly agree; 6= moderately agree; 7 = strongly agree

1. My communication with my teacher feels satisfying in online classroom.
2. I dislike talking with my teacher in online classroom.
3. I am not satisfied after talking to my teacher in online classroom.
4. Talking with my teacher leaves me feeling like I accomplished something.
5. My teacher fulfills my expectations when I talk to him in online classroom.
6. My conversations with my teacher are worthwhile.
7. When I talk to my teacher, the conversations are rewarding.
8. My teacher makes an effort to satisfy the concerns I have.

The Student Communication Satisfaction Scale is 8 items and is a global assessment of student satisfaction resulting from communication encounters with an instructor. Alpha reliability for this scale was .96 (Goodboy, Martin, & Bolkan, 2009).

# Appendix D: Affective Learning Questionnaire

**Affective Learning Scale:**

McCroskey's (1994) 16-item affective learning scale will complete by each participant. Students' attitudes toward course content and course instructor will be measuring using semantic-differential scales than traditional classroom. Sample items included content of the course/instructor is valuable/worthless, positive/negative, and fair/unfair.

**Affective Learning Scale:**

Please mark the answer which best represents your feelings. The closer your response is to the word/adjective, the more you feel this way.

| Very Strong Feeling | Strong Feeling | Fairly Weak Feeling | Undecided/ Don't Know | Fairly Weak Feeling | Strong Feeling | Very Strong Feeling |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

• My feelings about the content of this course are:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Bad | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Good |
| Valuable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Worthless |
| Unfair | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Fair |
| Positive | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Negative |

• My likelihood of taking future courses in this content area is:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Unlikely | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Likely |
| Possible | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Impossible |
| Improbable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Probable |
| Would | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Would not |

• Overall, the instructor I have in this class is:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Bad | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Good |
| Valuable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Worthless |
| Unfair | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Fair |
| Positive | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Negative |

• Were I to have the opportunity, my likelihood of taking future courses with this specific teacher would be:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Unlikely | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Likely |
| Possible | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Impossible |
| Improbable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Probable |
| Would | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Would not |

McCroskey, J. C. (1994). Assessment of affects toward communication and affect toward instruction in communication. In S. Morreale& M. Brooks (Eds.), 1994 SCA summer conference proceedings and prepared remarks: Assessing college student competence in speech communication. Annadale, VA.

# Appendix E: Cognitive Learning Questionnaire

**Cognitive Learning Scale:**

A perception of cognitive learning scale will complete them by each participant. This six-item scale featured a subset of a 28-item scale Hiltz (1988) used to measure students' perceived learning and classroom evaluation in an online course. This subset will choose due to the items focusing on skills/theories learned and synthesis of information, as conceptualised as cognitive learning in this study. Sample items will including gaining a good understanding of basic concepts of the material and also the ability to communicate clearly about the subject.

**Cognitive Learning Scale:**

Please indicate the degree to which you believe each statement applies to you in regards to this class.

Scale: 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree

1. I learned to interrelate the important issues in the course material.

2. I learned a great deal of factual material in this course.

3. I gained a good understanding of the basic concepts of the material.

4. I learned to identify the central issues of the course.

5. I developed the ability to communicate clearly about the subject.

6. I improved my ability to integrate facts and develop generalizations from the course material.

Hiltz, S. R. (1988). Learning in a virtual classroom (RR 25). Retrieved from New Jersey's Science and Technology University, Robert W. Van Houten Library website: http://archives.njit.edu/vol01/cccc-materials/njit-cccc-rr-025/njit-cccc-rr-025.pdf

# Appendix F: Students Interviews Questions

Students Interview Questions:

**For verbal immediacy** (calling by name; using "we" or "ours", etc.)

- Is lecturer verbal immediacy such as calling you by your first name enough to motivate in your distance education experience?

**For non-verbal immediacy:**

- Is lecturer non-verbal immediacy such emoticons, capitalized letters, and so on have similar impact on your attitude towards learning?

**For Students Participation:**

- Is lecturer immediacy enhances your participation in online learning?

**For Students cognitive and affective learning:**

- Is the absence of instructor immediacy affects your learning?
- Is lecturer immediacy improved your learning? In what way?

**For motivation:**

- Is there any difference in learning between lecturer perceived presence and physical presence?
- Are you more eager to learn when your instructor is close and directly talking to you?

# Appendix G: Arabic Language Questionnaire

# أسئلة الإستبانة

**قياس التواصل اللفظى للمعلم فى التعليم عن بعد:**

رجاء أختر الدرجة التي تعتقد مناسبتها لوصف معلمك

١ = ابدا لايستخدمها ؛ ٢ = نادرا ؛ ٣ = أحيانا ؛ ٤ = كثيرا ؛ 5 = جدا كثيرا

معلمي:

**يستخدم اللغه الاجتماعية لترجمة الحركات الجسديه عندما يتواصل معي على سبيل المثال** (ياسلام ,عالي العال)

**يستخدم تكبير الأحرف وتصغيرها عندما يتواصل معي ليشير إلى تفاعله معي على سبيل المثال** (ممتاز)

**يستخدم الإختصارات التي تعبر عن التواصل على سبيل المثال عندما يشير إلى الضحك بدون صوت** (لووووول)

**يستخدم أدوات الترقيم أو الإستفهام أو التعجب لتعبير عن التواصل معي على سبيل المثال** (؟؟ ,!!)

**يستخدم علامات التعجب وإلانبهار عندما يتواصل معي على سبيل المثال** (واو)

**يستخدم علامات لتعبيرعن الإبتسامه أوالحزن عندما يتواصل معي على سبيل المثال " :( :) "**

**ردوده وإيجاباته عن أسئلتي وإستفساري تكون خلال ٢٤ ساعه**

**يعطيني ردوده على الواجب او المهمه التي اعطاني اياها بشكل فوري مما يتيح لي وقتا كافيا لرد على الواجب او المهام المستقبليه.**

**يتواصل بشكل واضح مع النقاط المهمه للماده**

**يتواصل بشكل واضح مع الاهداف المهمه للماده**

**يوفر تعليمات واضحه على كيفية المشاركة في انشطة التعلم**

**على صفحة المناقشه اون لاين, يستجيب لمعظم تعلقيات الطلاب**

**يأخذ وقتا لكي يجيب على تعليقي أو سؤالي بإجابه وافيه وكافيه**

**معلمي يأخذ وقتا لكي يجيبني بإجابه كافيه ووافيه على واجبي**

**مقياس التواصل غير الفظي للمعلم في التعليم عن بعد**

رجاء أختر الدرجة التي تعتقد مناسبتها لوصف معلمك

١= ابدا لايستخدمها ؛ ٢ = نادرا ؛ ٣ = أحيانا ؛ ٤ = كثيرا: 5 = جدا كثيرا

| | | |
|---|---|---|
| ▪ يستخدم اللغه الاجتماعية لترجمة الحركات الجسديه عندما يتواصل معي على سبيل المثال | هات يدك | High-five |
| ▪ يستخدم تكبير الأحرف وتصغيرها عندما يتواصل معي ليشير إلى تفاعله معي على سبيل المثال | ممتاز | Good |
| ▪ يستخدم الإختصارات التي تعبر عن التواصل على سبيل المثال عندما يشير إلى الضحك بدون صوت | لووووول | LOL |
| ▪ يستخدم أدوات الترقيم أو الإستفهام أو التعجب لتعبير عن التواصل معي على سبيل المثال | ؟؟ ,!! | !!, ?? |
| ▪ يستخدم علامات التعجب وإلانبهار عندما يتواصل معي على سبيل المثال | واو | Wow |
| ▪ يستخدم علامات لتعبيرعن الإبتسامه أوالحزن عندما يتواصل معي على سبيل المثال | (-: | :-) |
| ▪ ردوده وإيجاباته عن أسئلتي وإستفساري تكون خلال ٢٤ ساعه | | |
| ▪ يعطيني ردوده على الواجب او المهمه التي اعطاني اياها بشكل فوري مما يتيح لي وقتا كافيا لرد على الواجب او المهام المستقبليه. | | |
| ▪ يتواصل بشكل واضح مع النقاط المهمه للماده | | |
| ▪ يتواصل بشكل واضح مع الاهداف المهمه للماده | | |
| ▪ يوفر تعليمات واضحه على كيفية المشاركة في انشطة التعلم | | |
| ▪ على صفحة المناقشه اون لاين, يستجيب لمعظم تعلقيات الطلاب | | |
| ▪ يأخذ وقتا لكي يجيب على تعليقي أو سؤالي بإجابه وافيه وكافيه | | |
| ▪ يأخذ وقتا لكي يجيبني بإجابه كافيه ووافيه على واجبي | | |

**مقياس مشاركة الطالب أثناء الدرس**

رجاء أختر الدرجة المناسبة التي تصف بها مشاركتك أثناء الدرس

٠= أبدا لايستخدمها ، ١ = نادرا ، ٢ = أحيانا ، ٣ = غالبا ، ٤ = كثيرا

- أشارك في التعليقات أو الأسئلة داخل الصف
- أتطوع بتقديم تعليقات أوأسئلة أثناء الدرس
- أشارك بتقديم تعلقات عندما أعلم الإجابة
- أشارك بدون تحرج
- أقدم آرائي الشخصية

**مقياس مدى رضا الطالب عن تواصل المعلم معه**

رجاء أختر الدرجه المناسبة لوصف مدى رضاك عن تواصل المعلم معك

١ = غير موافق بشدة ، ٢ = غير موافق ، ٣ = غيرموافق إلى حد ما ، ٤ = متوسط ، ٥ =

موافق إلى حد ما ، ٦ = موافق ، ٧ = موافق بشدة

- أشعر بالرضا حول تواصلي مع المعلم
- لا أحبذ الحديث مع المعلم
- لا أشعر بالرضا بعد تحدثي مع المعلم
- بعد حديثي مع المعلم أشعر كأني قدمت انجازا
- أستاذي يفي بتوقعاتي عندما أتحدث إليه
- محادثتي مع أستاذي جديرة بالاهتمام
- عندما أتحدث مع أستاذي تكون المحادثه مجزية
- أستاذي يعمل على تهدئة المخاوف لدي كي أتحدث

**مقياس التعلم الوجداني المكتسب**

| شعور قوي جدا | شعور قوي | شعور متوسط | لا أعلم | شعور متوسط | شعور قوي | شعور قوي جدا |
|---|---|---|---|---|---|---|
| ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ |

أشعر أن المحتوى الدراسي لآخر حصة دراسية كان

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **سيئ** | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | **ممتاز** |
| **قيم** | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | **غير قيم** |
| **غير مناسب** | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | **مناسب** |
| **ايجابي** | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | **سلبي** |

رغبتي في الحديث مستقبلا في نفس موضوع الحصة السابقة سيكون

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **من غير المرجح** | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | **مرجح** |
| **ممكن** | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | **مستحيل** |
| **غير متوقع** | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | **متوقع** |
| **مرغوب فيه** | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | **غير مرغوب** |

عموما المعلم في آخر حصة دراسية كان

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **سيئ** | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | **ممتاز** |
| **قيم** | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | **غير قيم** |
| **غير مناسب** | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | **مناسب** |
| **إيجابي** | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | **سلبي** |

إذا أتحيت لي الفرصة لأخذ مقرر آخر مع نفس المعلم سأكون

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **من غير المرجح** | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | **مرجح** |
| **ممكن** | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | **مستحيل** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| غير متوقع | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | متوقع |
| مرغوب فيه | ١ | ٢ | ٣ | ٤ | ٥ | ٦ | ٧ | غير مرغوب |

**مقياس التعلم المعرفي**

**رجاء اختر الدرجة المناسبة حسب ماتعلمت خلال الفصل الدراسي**

**٥ = موافق بشده ، ٤ = موافق ، ٣ = لا أعلم ، ٢ = غير موافق ، ١ = غير موافق بشدة**

- **تعلمت أشياء كثيرة في هذه المادة**
- **تعلمت أشياء من فصول أخرى أكثر مما تعلمته في هذه المادة منذ البداية**
- **زادت معلوماتي في موضوعات هذه المادة منذ البداية**
- **يمكنني بوضوح تذكر معلومات هذه المادة**
- **سأكون غير قادر للاستفادة من محتوى هذه المادة**
- **لم أتعلم شيء من هذه المادة**
- **أستطيع أن الاحظ مدى فهمي لهذه المادة**
- **لا أستطيع استرجاع المعلومات التي تعلمتها في هذه المادة**
- **لقد تعلمت مواضيع يمكنني تطبيقها**
- **لا أعلم ماذا استفدت من هذه المادة**

*أسئلة المقابلة الشخصية:*

- **هل التواصل اللفظي للمعلم على سبيل المثال ( مناداتك باسمك الأول ) كفاية بالنسبة لك ليحمسك في خبراتك في التعليم عن بعد مثل التواصل مع المعلم والمشاركة وغيرها؟**
- **هل تواصل المعلم الغير اللفظي على سبيل المثال (ارسال الإيحاءات مثل وجه مبتسم أو كتابة الكلمات التشجيعية يؤثر على موقفك من التعليم عن بعد؟**
- **هل تواصل المعلم اللفظي وغير اللفظي يساعدك أو يحفزك على المشاركة في التعليم عن بعد؟**
- **هل غياب تواصل المعلم اللفظي وغير اللفظي يؤثر على تحصيلك العلمي؟**
- **هل غياب تواصل المعلم اللفظي وغير اللفظي يؤثر على تحصيلك المعرفي؟**
- **هل تواصل المعلم اللفظي وغير اللفظي يطور من تحصيلك العلمي أو المعرفي؟**
- **من خلال خبراتك الدراسية , هل هناك فوارق بين الوجود وجها لوجه للمعلم وغيابه مثل التعليم عن بعد؟**
- **هل انت حريص للتتعلم أكثر عندما ينتهي المعلم من المحاضرة وتقوم بالتواصل مباشرة معه من خلال قنوات**
  **التواصل المباشرة وغير المباشرة في التعليم عن بعد؟**

# Appendix H: Letter Outlining Research

**Victoria University** **Dr Anthony Watt**

PO Box 14428 Senior Lecturer - Physical Education

MELBOURNE CITY Researcher - Sport Psychology

MC VIC 8001 Co-ordinator – Graduate Diploma in

Australia Secondary Education


18/07/2012

To Whom it My Concern:

Dear Sir or Madam:

I wish to confirm that Abdullah Mohammed Al Ghamdi is a student in the Doctoral program at the School of Education within the Faculty of Arts, Education and Human Development, Victoria University. His student Identification number is: s3789576.

The title of his doctoral dissertation proposal is: The Impact of Teacher Immediacy on Students Experiences and Learning Outcomes at Distance Education in Saudi Universities.

The candidate intends returning to Saudi Arabia to involve 160 individuals in an experimental study, conduct 16 interviews, and implement a pilot study with 200 students. This research will involve both male and female students and male and female academic staff. We are seeking approval to conduct this research from 10/Sep/2012 to 31/Dec/2012. If you require any further information please feel free to contact me.

Regards,

Yours truly

[redacted]

(A. P. Watt (Phd))

# Appendix I

إلى سعادة وكيل عمادة الدراسات العليا والبحث العلمي حفظك الله

السلام عليكم ورحمة الله وبركاته أمابعـــــد

أنا الطالب عبدالله محمد الغامدي , مبتعث من وزارة التعليم العالي لمرحلة دكتوراة في تخصص تقنيات التعليم , بجامعة فكتوريا بملبورن استراليا, وأرغب في إجراء بحثي التجريبي لمرحلة الدكتوراه في التعليم عن بعـد , وسوف يكون بحثي على الجنسين الذكر والأنثى, وعدد المشاركين 160. وعنوان بحثي هو: تأثير تواصل المعلم اللفظي وغير اللفظي على مشاركة الطلاب وتحصيلهم العلمي في التعليم عن بعد بجامعة الملك عبدالعزيز بالمملكه العربية السعودية. وسوف يكون هناك باذن الله إجراء استطلاعي للإستبانة لمعرفة مدى سلامتها اللغوية وأستيعابها من قبل الطلاب والطالبات وسوف يكون عدد المشاركين 200 بإذن الله.

أختياري لجامعتكم الموقرة لما تتمتع به من خبرة واسعه في مجال التعلم الإكتروني والتعلم عن بعد, ونظرا للمواصفات العاليه التي يتمتع بها من تقديم أفضل الأساليب التقنية لطالب والمعلم, ونظرا لما حازة عليه من جوائز عالمية عدة , لذلك أرغب في حصولي على موافقة من قبل سعادتكم بأنه لامانع لديكم من إجراء بحثي بقسم التعليم عن بعـد بعمادة التعليم الإكتروني والتعليم عن بعـد وذلك بخطاب باللغة الإنجليزية لجامعتي بإستراليا لإستكمال إجراءات الرحلة العلمية وغيرها من الأمور المتعلقة بالملحقية الثقافية باستراليا والتعليم العالي.

أرجو سعادتكم مساعدتي في إرسال خطابكم الموقر باللغه الانجليزيه الى جامعة فكتوريا باستراليا في اقرب وقت ممكن لأن ذلك سيساعدني في انهاء امر الرحلة العلمية من وزارة التعلم العالي وايضا لظروف السفر العائليه وغيرها ولرغبتي بالسفر قبل عيد رمضان المبارك هذا الشهر.

لكم مني جزيل الشكر والتقدير وسدد الله خطاكم

وكل عام وانتم بخير

الطالب/ عبدالله محمد عبدالغني الغامدي

ايميل/ Abdullah.alghamdi@live.vu.edu.au
رقم جوال استراليا/ 966401232177+

# Appendix J: Translation for Appendix I

To the associate Dean of Graduate Studies and Scientific Research

I am a student Abdullah Mohammed Al-Ghamdi, I have scholarship from the Ministry of Higher Education for the PhD degree in Educational Technology, University of Victoria in Melbourne Australia.

I would like to conduct an experimental study for PhD in distance education. The study will be research on the gender of male and female, and the number of participants will be 160.

The title of my research is the following: the impact of the teacher immediacy (verbal and non-verbal) on university students' experiences and learning outcomes in distance education at King Abdul Al Aziz University, Saudi Arabia. Moreover, the researcher student will conduct a pilot study for the questionnaires to determine the integrity of language and absorbed by the students and the number of participants will be 200.

So I need to approval from you to Victoria University that is no problem to conduct research, in Department of Distance Learning

Kindly Regards

Student / Abdullah Al Ghamdi

Abdullah.alghamdi @ live.vu.edu.au email /

My mobile number in Australia / +61401232177

ALSAATY
Certified Translation
License No. 174
J.C.C. No. 124764

S.T

مكتب الساعاتي
للترجمة المعتمدة
لصاحبه د/ محمد أمين سيف الدين ساعاتي
ترخيص رقم ١٧٤
رقم العضوية ١٢٤٧٦٤

Date: / /20

التاريخ: / / ١٤هـ

13 AUG 2012

## CERTIFICATION

*ALSAATY For Translation*, Jeddah Saudi Arabia, licensed as an authorized translation office; by virtue of Permit No. (174), hereby certifies that, translation of the document(s) annexed hereto, which are Sealed for identification purposes only, is a complete and true translation without any liability upon its contents thereof.

## إشـــــهـاد

يشهد مكتب **الساعاتي للترجمة** بجدة – المملكة العربية السعودية، المرخص له بمزاولة مهنة الترجمة المعتمدة بموجب الترخيص رقم (١٧٤) أن ترجمة الوثيقة / الوثائق المرفقة والمختومة لأغراض تعريفها فقط هي ترجمة صحيحة وكاملة دون أدنى مسؤولية عن محتوياتها.

مدير المكتب

[redacted]

د. محمد أمين ساعاتي

مكتب ساعاتي للترجمة المعتمدة ترخيص رقم ١٧٤ لصاحبه الدكتور/ محمد أمين ساعاتي License No. 174 SAATI CERTIFIED TRANSLATION

جدة – حي الجامعة – امام كلية الهندسة – خلف مطعم شيش كباب– هاتف ٦٣٣٥٧٥٣ – جوال ٠٥٠٦٣٥٣٨٢٧
Kingdom of Saudi Arabia – Jeddah – AlJameaa Dist. - Tel 6335753 – Mobile 0506353827

Kingdom of Saudi Arabia
Ministry of Higher Education
**King Abdul-Aziz University**
P. O Box: 80200, Jeddah 21589
Tel: (+ 966 2) 695 2015
Fax: (+ 966 2) 695 2441
E-mail: research@kau.edu.sa

Office of the Vice President for Graduate Studies and Research

**Embassy of Saudi Cultural Attaché in Australia**

Sincere greetings to you from the Vice Presidency for Graduate Studies and Research, and in reference to your affidavit No.: 599694 Date :04/09/1433H - 23/07/2012G, regarding the adjudication in the student of scholarshipapplication /ABDULLAH MOHAMMAD ABDULGHNI ALGHAMDI Civil Register No.: (1026140325) a scholarship student for study in Australia from Ministry of Higher Education for obtaining the Doctorate Degree in the Specialty: Technology of Education in Victoria University, Since thescholarship student /ABDULLAH MOHAMMAD ABDULGHNI ALGHAMDI applied forapproval to present his dissertation in King Abdul-Aziz University entitled " :

**"The Impact of Teacher Immediacy on Students Experiences and Learning Outcomes at Distance Education in King Abdul-Aziz University in Kingdom of Saudi Arabia".**

Andfacilitating the collectionof data byteaching staffand students.
In this respect we inform your Highness that the university does not mind for the application of the presented research of the student and the application ofquestionnaire in King Abdul-Aziz University.

**Accept our sincere greetings and appreciation,,,,**

**Vice President**
**For Graduate Studies and Research**

**Signature**

**PH.D Adnan Hamza Mohammad Zahed**

Copy to Dean of Higher Education
Copy for informing
20/09/1433H - 08/08/2012G


Encl : Date : Ref : KH /33/30358

ROYAL EMBASSY OF SAUDI ARABIA

CULTURAL ATTACHÉ OFFICE

CANBERRA

سفارة المملكة العربية السعودية
مكتب الملحق الثقافي
كانبرا

a-1..4.1.©

خطاب تسهيل مهمة للقيام برحلة

@012/07/23 a1433/09/04

Ref No.5.9.q.6...q.q...., Date2S/7/.e 12Attachments:. .

**إلى من يهمه الأمر**

يفيد مكتب الملحق الثقافي في سفارة المملكة العربية السعودية في أستراليا بأن المبتعث/ عبدالله محمد عبدالغني الغامدي، (رقم الهوية الوطنية 1026140325) مبتعث من وزارة التعليم العالي لدراسة دكتوراه في تخصص تكنولوجيا التعليم بجامعة فيكتوريا في استراليا، وقد بدأ الصرف على المبتعث من تاريخ 1428/09/17هـ الموافق 2007/09/29م، وستنتهي بعثته في تاريخ 1435/02/27هـ الموافق 2013/12/30م.

ونظرًا لحاجة المبتعث للقيام برحلة علمية لجمع معلومات متعلقة برسالة الدكتوراة من المملكة ولتوصية المشرف الأكاديمي للمبتعث في الجامعة بذلك؛ نأمل من الجهات ذات العلاقة التكرم بمساعدة المبتعث المشار إليه أعلاه و تسهيل مهمته في جمع المعلومات المطلوبة لأغراض البحث العلمي.

هذه المعلومات صحيحة حسب بيانات نظام الشؤون الدراسية في التاريخ المحدد أعلاه، وبناءً على طلب المبتعث تم منحه هذه الإفادة.

**والله الموفق.**

**الملحق الثقافي في أستراليا**

[redacted]

**د. علي بن محمد البشري**

سفارة المملكة العربية السعودية مكتب الملحق الثقافي Canberra كانبرا Cultural Attache Office Royal Embassy of Saudi Arabia

الرقم: ٥٩٩٦٩٤ التاريخ: ٢٠/٧/١٤٣٣هـ، المرفقات

Tel: +61 2 62693170 Fax: +61 2 62325978 P.o. BOX 1206,

DICKSON , ACT, 2602, Australia

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المملكة العربية السعودية
وزارة التعليم العالي
جامعة الملك عبد العزيز
✉ : ٨٠٢٠٠ جدة : ٢١٥٨٩
☎ : ٦٩٥٢٠١٥ (٢ ٩٦٦+)
فاكس : ٦٩٥٢٤٤١ (٢ ٩٦٦+)
E-Mail: research@kau.edu.sa

مكتب وكيل الجامعة للدراسات العليا والبحث العلمي
Office of the Vice President for Graduate Studies and Research

**سعادة الملحق الثقافي السعودي بأستراليا** **حفظه الله**

السلام عليكم ورحمة الله وبركاته،،،

تحية طيبة تهديها لسعادتكم وكالة الجامعة للدراسات العليا والبحث العلمي ،وإشارة إلى إفادة سعادتكم رقم ٥٩٩٦٩٤ وتاريخ ١٤٣٣/٩/٤هـ ، بخصوص النظر في طلب المبتعث / عبد الله بن محمد عبدالغني الغامدي سجل مدني (١٠٢٦١٤٠٣٢٥) طالب مبتعث للدراسة بأستراليا من وزارة التعليم العالي للحصول على درجة دكتوراه في تخصص تكنولوجيا التعليم بجامعة فيكتوريا ، حيث ان المبتعث / عبد الله بن محمد عبدالغني الغامدي قدم طلب موافقة على تقديم اطروحته في جامعة الملك عبد العزيز " بعنوان" :

**"تأثير تواصل المعلم اللفظي وغير اللفظي على مشاركة الطلاب وتحصيلهم العلمي في التعليم عن بعد بجامعة الملك عبدالعزيز بالمملكة العربية السعودية"**

وتسهيل جمع البيانات من قبل أعضاء هيئة التدريس والطلاب .

علية... نفيد سعادتكم بأنه لا مانع لدى الجامعة بتطبيق البحث المقدم من المبتعث وتطبيق الاستبانة بجامعة الملك عبد العزيز .

**وتقبلوا خالص تحياتي وتقديري ،،،**

**وكيل الجامعة**
**للدراسات العليا والبحث العلمي**

[redacted]

**أ.د.عدنان بن حمزة محمد زاهد**

ص/ عميد الدراسات العليا
ص/ المعلم
ط ١٤٣٣/٩/٢٠

Encl. : ..... المشفوعات : Date : ..... التاريخ : Ref.# : الرقم : ٤/٢٢/٢٠٢٥٨

# Appendix K: Pilot Study Chapter

The feedback from the 12 participants before the main pilot study yielded the following main points:

1- *Overall, the time required for completing the questionnaire was satisfactory as it was of a reasonable length. One of participants approved of this saying, "I did not take long time to finish the survey. I don't think any respondent would find it too long."*

2- *The meaning of the original sentences and words in the Arabic translation of the questionnaires were. Except for one sentence where participants were confused about the "wave" emoticon and asked for further clarification. After that, the emoticon "wave" was replaced with the sentence "you are fantastic or good" as it would be better understood by participants.*

3- *The Arabic questionnaire was redesigned in the format generally used in Arabic script format which runs from right to left. This was done in light of suggestions from some participants who asked for the questionnaire to be shifted towards the right rather than centre of the page.*

4- *As these questionnaires were adapted for distance education context, the word online learning was used repeatedly in the questionnaires. Responses from the participants confirmed that this made the context clear. As one of the participants said, "Please keep the term online learning in each sentence of the questionnaire as respondents may often forget that the question is related to distance learning and not general classroom learning".*