APPROVAL SHEET

Title of Dissertation: The Impact of Computer Assisted Language Learning Adhering to the National Standards for Foreign Language Learning: A Focus on Modern Standard Arabic at the University Level

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Doctor of Philosophy, 2014

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Education

Ph.D.	Spring 2014	University of Maryland Baltimore County, UMBC Baltimore, Maryland Language Literacy & Culture (LLC)
ESOL Graduate Certificate	Fall 2010	University of Maryland Baltimore County, UMBC Baltimore, Maryland. Education Department
Graduate Certificate In Distance Education	Spring 2008	University of Maryland Baltimore County, UMBC Baltimore, Maryland Instructional System Development "ISD"
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Computer Science and management Information Systems	Spring 1998	Institut Supérieur de Technologie Appliquée, ISTA Rabat, Morocco
Programming Languages and Databases Analysis	Spring 1991	Ecole Centrale d'Informatique et de Gestion des Entreprises, Rabat, Morocco
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Experience in Higher Education

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2004 – Present	University of Maryland Baltimore County, UMBC, Lecturer of Arabic, Modern Languages, Linguistics & Intercultural Communication (MLLI) department. Teach Arabic, curriculum developer/instructional

	designer and coordinator for the Arabic language program
2004 – Present	University of Maryland Baltimore County, UMBC, Academic Advisor, The Office for Academic and Pre-Professional Advising (OAPA), Meet with students to discuss their interests and goals, develop a course schedule, and register online for their classes
2010 – Present	University of Maryland Baltimore County, UMBC, Instructor of Academic Success for Lifelong Learning, Learning Resource Center (LRC), Assist students learn many proven strategies for creating greater academic, professional, and personal success. Utilize guided journal writings to explore these strategies and learn to express themselves more effectively in writing
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Honors Received

2013	Qatar Fellowship & National Capital Language Resource Center (NCLRC)
2012	Qatar Fellowship (Qatar Foundation International & CARLA)
2010	Golden Key International Honour Society
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Research Support and/or Fellowships

May 2013	Symposium on Less Commonly Taught Languages for Academic Cooperative Programs in MD, Center for Language Education, Johns Hopkins University, Baltimore, Maryland. Represented the department of Modern Languages, Linguistics & Intercultural Communication, UMBC Topic presented: Arabic Program at UMBC
April 2013	Heinle Languages Symposium, The Changing Landscape of Language Teaching, UMBC, Baltimore, Maryland. Represented the department of Modern Languages, Linguistics & Intercultural Communication, UMBC
March 2013	National Capital Language Resource Center (NCLRC) & Qatar Foundation International, Developing Leaders for

	Tomorrow's Learners, Baltimore, Maryland.
	Represented the department of Modern Languages, Linguistics & Intercultural Communication, UMBC
September 2012	Language Education And Resource Network LEARN Workshops, Middle Eastern and AFPAK Languages LEARN Workshop, College Park, Maryland
	Topic presented: The Impact of Computer-assisted Language Learning Adhering to the National Standards Foreign Language Learning: Focus on Modern Standard Arabic
Summer 2012	Qatar Fellowship (Qatar Foundation International & CARLA Institute), Developing Assessments for the Second Language Classroom
	The Center for Advanced Research on Language Acquisition (CARLA), Minnesota
Summer 2012	STARTALK Scholarship, Second Language and Immersion Methodologies for STARTALK Arabic Teachers Grades K-16, Concordia Language Villages, Bemidji, Minnesota
Summer 2012	STARTALK Scholarship, Arabic & Chinese Teaching Symposium,
	Integrating Cultures and Communities in Arabic and Chinese Language Programs: McDaniel College, Westminster, Maryland

	Topic presented: Exploring Digital Games and Social Networking.
Summer 2010	STARTALK Scholarship, Integrating Communication and Culture in Arabic and Chinese Language Classrooms: McDaniel College, Westminster, Maryland Topic presented: Integrating Authentic Materials in the Arabic Classrooms (How to prepare Moroccan Mint Tea).
Summer 2009	STARTALK Scholarship, Assessment in the World Language Classroom Workshop: Concordia Language Villages, Bemidji State University, Minnesota
February 2009	L.E.A.R.N. Arabic Conference US Naval Academy, Developing Instructor Proficiency in Oral language Assessment: Topic presented: The Impact of Hybrid Language Course and Content-Based Second Language Instruction on Students' Fluency
Summer 2008	STARTALK Scholarship, Content-Based Instruction Workshop: Concordia Language Villages, Bemidji State University, Minnesota Topic presented: Arabic Calligraphy in Text and Context
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Developed a time management course for the benefit of the managers and supervisors of the JHH

Undergraduate Students

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- Asif Majid, Global Peace Building and Conflict Management, interdisciplinary studies major, Spring 2011-Spring 2013, coordinator.
- Irma Hashmi, Iqbal's Vision Realized: The Youth of the Arab Spring Take Action, http://www.umbc.edu/undergrad_ed/research/urcad/documents/2012/webDocuments2012/urcadAffiliation2012.pdf, October 2012, Editor.

Creative Achievements: Arabic program & Online Arabic Tutorial

Have analyzed, designed, developed, and implemented the Arabic program for beginning and intermediate level for the Modern Languages, Linguistics & Intercultural Communication (MLLI) department at UMBC.

Have analyzed, designed, developed, and implemented an online Arabic tutorial within the Arabic program. The online Arabic tutorial is now implemented under the Blackboard management system and fully used by students registered for elementary and intermediate Arabic at UMBC http://userpages.umbc.edu/~samir1/620_Project_2/

- **Presentations:**
    - The Arabic Program at UMBC, Symposium on Less Commonly Taught Languages for Academic Cooperative Programs in MD, Center for Language Education, Johns Hopkins University, Baltimore, Maryland. May 2013
    - The Impact of Computer-assisted Language Learning Adhering to the National Standards Foreign Language Learning: Focus on Modern Standard Arabic,
    - Language Education And Resource Network LEARN Workshops, Middle Eastern and AFPAK Languages LEARN Workshop, College Park, Maryland, September 2012
    - Exploring Digital Games and Social Networking, STARTALK Scholarship, Arabic & Chinese Teaching Symposium, Integrating Cultures and Communities in Arabic and Chinese Language Programs: McDaniel College, Westminster, Maryland, July 2012
    - Integrating Authentic Materials in the Arabic Classrooms (How to prepare Moroccan Mint Tea), STARTALK Scholarship, Integrating Communication and Culture in Arabic and Chinese Language Classrooms: McDaniel College, Westminster, Maryland, July 2010
    - The Impact of Hybrid Language Course and Content-Based Second Language Instruction on Students' Fluency, L.E.A.R.N. Arabic Conference US Naval Academy,

- Developing Instructor Proficiency in Oral language Assessment, February 2009
- Arabic Calligraphy in Text and Context, STARTALK Scholarship, Content-Based Instruction Workshop: Concordia Language Villages, Bemidji State University, Minnesota, June 2008

Service to the Department, University, Community, and Profession

Volunteer

- Teach Arabic and Islamic studies to adult illiterate Moroccan citizens in summers, coordinate within The National Ministry of Education, Morocco (1996-2000)
- Teach basic computer skills to elementary school children, Morocco (1998-2000)
- Translate surveys from English to Arabic for the Education department at UMBC to be used in elementary schools in Jordan and Saudi Arabia
- Contributed and volunteered in various charitable organizations in Carroll and Baltimore counties and Baltimore city
- Functioned as liaison in coordinating travel abroad studies between UMBC's study abroad office and foreign Arab countries (Morocco, Egypt, Jordan, UAE).
- Analyzed, designed, developed, and implemented the lower and upper level Arabic at UMBC
- Advisor and coordinator of the Arab Student Union Club and the Muslim Student Association (MSA) at UMBC.

- Participated in Fundraising for public schools, Owing Mills High School and Franklin Middle in Maryland.
- Translated Modules and lesson plans to the Maryland State Department of Education
- Edited / Reviewed undergraduate research at UMBC (URCAD 2012).
- Represented the MLLI departments at UMBC in different campus events.
- Analyzed, designed, developed proposals for upper level Arabic at UMBC, Spring 2013
- Invited a group of American students / youth in my home in Morocco July 2013
- Book review, From Darkness to Triumph, Anastasia Charalabakos, 2013

ABSTRACT

Title of Document: The Impact of Computer Assisted Language Learning Adhering to the National Standards for Foreign Language Learning: A Focus on Modern Standard Arabic at the University Level

Samir El Omari, PhD, 2014

Directed By: Dr. Claudia Galindo
Dr. Ana Oskoz

The development of the new digital world in the 21st Century has exponentially altered the mode through which we communicate, teach, learn, and perform research. The mode of interactions and social relationships that occur through new digital technologies are also shaping and transforming the meaning of instruction. Current online activities support face-to-face, distance education and hybrid or blended courses (combination of face-to-face and exclusively online interactions) (Garnham & Kaleta, 2002). Yet, despite the more frequent use of technology in the Arabic classroom, there is still little research conducted in the Arabic instructors' use, understanding, and knowledge of technological tools.

As a result, this study examined the use of technological tools Arabic instructors are implementing in their curriculum. This study also explored Arabic instructors' awareness of the National Standards for Foreign Language Learning (NSFLL) and how they integrate technology to promote NSFLL in the teaching and learning of Arabic. The study also investigated the instructors' roles as online facilitators and their beliefs about the

importance of the integration of technology to enhance Arabic learners' foreign language (FL) skills at university level in the United States.

This study used a mixed-method approach to collect data from a sample of Higher Education Arabic instruction using two types of instruments. First was the online non-experimental survey, which was computer-mediated and self-administered survey. Second were in-depth semi-structured interviews conducted with a small sample of instructors to obtain an in-depth understanding of Arabic teachers' attitudes toward the use of technology and their beliefs concerning the NSFLL. The interviews investigated suggestions and recommendations of Arabic instruction to the National Standards for Foreign Language Learning in the virtual learning environment. The significance of the study was to provide contribution and support to the progress of the teaching and learning of Arabic as a FL in the United States in the 21st Century.

THE IMPACT OF COMPUTER ASSISTED LANGUAGE LEARNING ADHERING TO THE NATIONAL STANDARDS FOR FOREIGN LANGUAGE LEARNING: A FOCUS ON MODERN STANDARD ARABIC AT THE UNIVERSITY LEVEL

By

Samir El Omari

Dissertation submitted to the Faculty of the Graduate School of the
University of Maryland, Baltimore County, in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
2014

Dedication

To my mother, Rabha Amchi, and all mothers who were deprived of education.

Acknowledgements

I hold endless appreciation, above all, to Allah (God) for empowering me with both the physical and mental strength to accomplish this dissertation. Without him, achieving my endeavors would not have been possible.

I extend my deepest appreciation to my family and the friends who have been supportive of me during my long educational journey. They gave me the hope and strength to persevere when the road seemed arduous and never-ending.

My full gratitude and appreciation also go to my advisors, Dr. Galindo and Dr. Oskoz, for their unwavering support and supervision throughout my research. I am most thankful for their feedback, guidance, and patience. Their guidance, patience, and encouragement paved the way for me to conduct this study. I also wish to express additional Thanks to Dr. Crandall, Dr. Nelson, and Dr. Ayari for their reading and comments and constructive feedback to improve this research.

Finally, I would like to express my thanks to my colleagues at the MLLI department and my LLC professors for their encouragement and support, as well as to the Arabic instructors who volunteered to participate in my study and provided me with insightful data for this project.

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Chapter 1: Introduction

"I want to make sure that English-speaking children get foreign languages because this world is becoming more interdependent and part of the process of America's continued leadership in the world is going to be our capacity to communicate across boundaries, across borders, and that's something frankly where we've fallen behind."

—Barack Obama, February 21 2008

1.1 The Teaching of Arabic in the United States

In recent years, Arabic has become a language priority for the United States government (Al-Batal, 2006; Al-Batal & Belnap, 2006). Unlike any previous decade in the United States, between 1990 and 200, the Arabic speaking population increased by 73 percent between 1990 and 2000, with an additional 25 percent increase between 2000 and 2007. This surge in numbers placed Arabic as the tenth most commonly spoken non-English language in the United States (Shiri, 2010). Due to such growth of the Arabic population, the United States has experienced a significant rise of Arabic foreign language (AFL) learners and Arab heritage speakers who are interested in maintaining their languages. Thus, the need to address and develop both suitable and rigorous pedagogy programs to better teach Arabic in institutions of higher learning and to disseminate its cultural knowledge in the United States has become an important wake-up call. It is also vital to point out that because of the status of Arabic around the world, it has been identified as a "critical language," one for which there is a great need of proficient speakers.

During the last half of the twentieth century, the teaching of Arabic was updated and adapted, depending on the needs and courses provided by government agencies

through the Defense Language Institute Foreign Language Center and other institutions of higher learning (Abboud, 1968; Al-Batal, 2006). To develop the instructional materials and pedagogical approaches needed for the learning and maintenance of Arabic in the United States, numerous scholars, linguists, and language institutes have collaborated in unprecedented ways to share knowledge and encourage debate on the matter (Alosh et al., 2006; Al-Batal & Belnap, 2006). Nevertheless, Al-Batal and Belnap (2006) still identify a great need in developing associations between applied linguistics and language pedagogy specialists in Arabic to reinforce the teaching of Arabic and promote its interdisciplinary examination in areas such as political science, Middle Eastern studies, history, anthropology, culture, literature, religion.

The complexities of the phonological, inflectional, and syntactic systems due to the non-indo European origin attributes of Modern Standard Arabic (MSA) and the issues concerning diglossia, dialect diversity, and cultural complexities have caused the Foreign Service Institute-US Department of State to place Arabic at level five, the highest on the difficulty rating scale. On average, it takes three to four years for an English speaker to learn the language reasonably well. With that in mind, Arab linguists and researchers agree that methodological guidance and insights for Arabic language instruction are essential (Abboud, 1968, Al-Batal, 2006, Alosh et al., 2006). In 2006, a governmental task force developed National Standards for learning Arabic as a FL in grades K-16 in the United States. The ultimate goal of these standards is to guide instructors to develop students' levels of proficiency in their Arabic language skills. The following three postulates are the pillars of the standards (Alosh et al., 2006):

- All students can develop competency in the Arabic language and appreciation of Arabic cultures
- All students can learn
- Instruction must be interactive, learner-centered, and reflect the most current and best learning and teaching practices

The task force encourages the use of technology to reinforce the standards in order to stay in line with the rapidly advancing technologies in the 21st Century (Alosh et al., 2006). Although there is no doubt that the integration of technological tools in the Arabic curriculum has remarkably expanded since the beginning of this new millennium (Babler, 2006; Madhany, 2006; Stevens, 2006), additional research is needed to increase the effectiveness of the use of technological tools to promote communicative-based and student-centered approaches, as well as, to foster cultural competency and augment students' exposure to the Arabic language in the classroom and in the online environment.

While many FL education researchers such as Kern, Ware, & Warschauer, (2004) and Ma & Liberman (1999), have discussed the positive impact of the incorporation of innovative technological tools to enhance learners' language skills in languages like French, German, Korean, Japanese, or Spanish (Liu, et al., 2002), the use of these tools has not been investigated sufficiently and explicitly in the teaching and learning of Modern Standard Arabic.

1.2 Statement of Purpose

The goal of this exploratory study is to examine the implementation of the National Standards for Foreign Language Learning (NSFLL) (National Standards, 2006)

and the incorporation of Computer-assisted Language Learning (CALL) in the teaching and learning of Arabic in the United States. The aim of this study is also to share with Arabic instructors and online facilitators modern day approaches that foster the teaching and learning of AFL while adhering to the National Standards for learning Arabic in higher education. This research takes into account the complexity of the Arabic language and discusses selected remedies in order to address issues concerning the teaching of Arabic in the United States. As a result, the needs and changes that are required for the successful maintenance of the Arabic language in the United States in the 21st Century are illustrated.

The study also discusses tools and technologies instructors use to support students' learning of Arabic. This is because it is essential to reveal the role of the virtual learning environment along with the characteristics of online facilitators for learning FL, particularly Arabic.

1.3 Research Questions

This work examines the beliefs of Arabic instructors in relation to the use of Computer Assisted Language Learning as well as the National Standards for Foreign Language Learning. For the purpose of this study, the following research questions are explored:

Descriptive Questions (quantitative)

Question 1: To what extent do Arabic instructors in United States universities implement the National Standards for Foreign Language Learning (NSFLL) in their teaching of Arabic?

Sub-question 1.1: To what extent do Arabic instructors know the NSFLL?

Sub-question 1.2: What attitudes do Arabic instructors have towards the NSFLL?

Question 2: How do Arabic instructors incorporate CALL in their teaching of Arabic?

Sub-question 2.1: On average, what is the proportion of Arabic instructors who incorporate CALL in the teaching of Arabic?

Sub-question 2.2: What is the perceived usefulness of CALL in the teaching and learning of Arabic?

Sub-question 2.3: What type of online resources do Arabic instructors use in their teaching of Arabic?

Sub-question 2.4: What is the role of the Arabic instructor in the virtual learning environment?

Sub-question 2.5: To what extent do Arabic instructors incorporate CALL to address the content of each of the standards (*Communication, Culture, Connection, Comparisons, and Community (5C's)?*

This sub-question will focus on each of the standards separately.

Inferential Question

Question 3: To what extent is there an association between instructors' perceptions of the usefulness of CALL and their attitudes toward using CALL in the teaching and learning of Arabic at the university level?

To answer the quantitative research question associated to the inferential question, I utilized the following modeling strategy: Model 1 includes the Arabic instructors' attitudes as dependent variable and the control variables only (Arab, Female, Age, Years of experience, Educational level). Model 2 consists of the Arabic instructors' attitudes as dependent variable and the overall usefulness of CALL in the addition to the control variables. Models 3 to 9 include the participants' use of CALL for each of the following specific skill (learning, vocabulary, speaking, writing, listening, reading, and cultures) in addition to their attitudes toward CALL. Model 10 includes all language skills together and Model 11 comprises the Arabic instructors' attitudes as dependent variable and the composite score.

Descriptive Question (qualitative)

Question 4: What are the attitudes Arabic instructors have towards the use of CALL in their teaching?

Sub-question 4.1: What are the benefits that Arabic instructors attribute to the use of CALL in their teaching?

Sub-question 4.2: What are the challenges that Arabic instructors perceive in the use of CALL in their teaching?

Sub-question 4.3: To what extent do Arabic instructors think that CALL enhances the learning of each of the Standards (5C's)?

In order to address sub-question 4.3, a sequence of probes concerning the NSFLL is required: (*Communication, Culture, Connection, Comparisons, and Community).*

1.4 Theoretical Framework

This study is based on an understanding of how constructivism[1] and social constructivism[2] can inform research or FL education. Constructivism and social constructivism approaches may be considered as the foundation for the application of technologies in FL education with the collaboration of the NSFLL. The merge of web-based interactive, cooperative language-learning settings and individual learner transformations is in support of environments, constructivist and socio-constructivist (Stevens, 2006).

The study also works upon the National Standards for Foreign Language learning (explained in chapter 2), which consist of the *5C's,* which are five goals for FL learning. These goals are to:

1. Promote *communication* in a language other than English.

[1] A theory of learning (Dewey, 1938; Piaget, 1973; Vygotsky, 1978), which stresses that knowledge construction is a function of learners' capability to decipher this knowledge in the context of their own experience (Duffy and Jonassen, 1992).

[2] A perspective that takes into account the interaction that occurs among or between individuals who acquire information where "learning is a social negotiation of meaning" (Vygotsky, 1978).

2. Support gaining knowledge and understanding of other *culture.*
3. Sustain the *connection* to other disciplines and acquire information.
4. Endorse *comparisons* in order to develop insight into the nature of language and culture.
5. Establish and build a sense of *community* and encourage contribution in multilingual communities at home and around the world (National Standards, 2006).

Current research in CALL suggests that the 5C's might be met via integration of computer-mediated communication that create online social networks, media, and a learning management system, (Liu, Moore, Graham, & Lee, 2002; Walz, 1998). These tools may contribute to fostering Arabic learners' interaction with the social and physical environment. They may also allow the Arabic students to grow into lifelong learners and expand their learning experiences, moving them from the classroom to a wider community via online learning platforms and self-managed learning (Alosh et al. 2006). Thus, the technology integration can be considered as a vehicle for collaborative learning in an online learning platform with facilitators and peers or as self-directed learning.

1.5 Research Design

This study used a mixed-methods approach to investigate Arabic instructors' perceptions toward the utilization of CALL and NSFLL. The mixed-methods approach aimed to integrate both qualitative and quantitative data on the topic of integrating standard-based technologies in the Arabic curriculum (Creswell & Clark, 2006). This study was conducted within 100 selected universities, colleges, and institutions in the United States. Participants included native and/or non-native Arabic instructors from

higher education institutions. A survey questionnaire was submitted to 300 Arabic instructors using the SurveyMonkey system, which provides a form of closed or short open-ended questions. This survey was developed to elicit responses from Arabic instructors to answer the research questions. The Arabic participating instructors in this study reached 106 (35.33% respondents). In-depth semi-structured interviews with 11 Arabic instructors who were invited to participate after taking the survey were also conducted. These interviews were guided by clear goals to obtain an in-depth understanding of the Arabic instructors' perceptions toward the use of CALL and their beliefs regarding NSFLL. Each question asked was defined, planned in advance, and well structured.

All quantitative questions, statistical analysis, and the inferential question from the survey were analyzed using SPSS software. This tool aided in measuring central tendency and dispersion to examine the main variable of the study. Normally distributed continuous variables were analyzed using the mean and standard deviation.

Qualitative data were gathered using semi-structured interview questions, which were transcribed and analyzed using an "open coding" approach in order to identify concepts and categories based on the content of the interviews. These codes were gathered into themes and responses were categorized using patterns of frequencies in order to reveal perceptions, attitudes, and ideas of Arabic instructors.

1.6 Significance of the Study

This study has important practical implications for the progression of the teaching and learning of AFL in the United States. By better understanding the beliefs and perceptions of Arabic educators and how those relate to national standards of language

instruction and the use of technology in their teaching, I hope to identify strategies to facilitate the teaching of Arabic. Participants shared their views and interpretations of methodologies and innovative tools utilized in Arabic programs and of ways to enhance the learning of Arabic through the incorporation of the NSFLL.

Presently, the combination of the NSFLL in higher education in the United States with the use of technologies has not been extensively studied. By investigating how technology is used and how the standards are currently integrated into the teaching of Arabic, the results of this study can provide guidance to a range of educational professionals for upgrading their pedagogical approaches and teaching tools suitable for their contexts.

While FL teaching has witnessed a paradigm shift based on learner-centered approaches to developing collaboration through a virtual learning environment, the role of the Arabic instructor as an e-moderator has not been examined adequately in the field of FL education in the United States. The role of the Arabic instructor as an online facilitator is important to this study because by examining this role, new ways of teaching and learning Arabic are revealed. Understanding the role of the online Arabic instructor provides a clear vision of the future of Arabic online teaching and learning, and helps to foster human interaction and communication. Additionally, discovering the role of the online Arabic instructor demonstrates how technological tools are used for collaboration and facilitating new practices.

Beyond applying and selecting the relevant language instruction, approaches, and pedagogies, this study also contributes to promoting awareness of current global issues, building cross-cultural competency, and understanding Arab culture. These outcomes

could be realized by analyzing and adapting methodologies and tools to enhance the teaching and learning of Arabic and to promote the integration of the NSFLL.

1.7 Definition of Key Terms

5C's: The National Standards for Foreign Language Learning were developed in 2006 by Alosh et al. as a task force to promote Arabic standards. The task force identifies five goal areas in language learning, known as the 5C's: Communication, Cultures, Connections, Comparisons, and Communities (National Standards, 2006).

AATA: The American Association of Teachers of Arabic is an association that aims to facilitate communication and cooperation between teachers of Arabic and to promote study, criticism, research and instruction in the field of Arabic language pedagogy, Arabic linguistics and Arabic literature.

ACTFL: The American Council on the Teaching of Foreign Languages is an organization that promotes the improvement and expansion of the teaching and learning of all languages at all levels of instruction.

AFL: Arabic as a Foreign Language refers to the teaching and learning of the Arabic language as a second language.

CA: Classical Arabic, is the language of the Quran and of Medieval literary and religious texts (Mahmoud, 1986).

CALL: Computer Assisted Language Learning refers to the use of computers as part of a language-learning course (Offra, 2013).

CARLA: Center for Advanced Research on Language Acquisition is one of the U.S. Department of Education's Title VI National Language Resource Centers,

whose role is to improve the nation's capacity to teach and learn foreign languages.

Constructivism: Constructivism is a theory of learning (Dewey, 1938; Piaget, 1973; Vygotsky, 1978), which stresses that knowledge construction is a function of learners' capability to build this knowledge in the context of their own experience (Duffy and Jonassen, 1992).

LCTLs: Less Commonly Taught Languages is all world languages except English, French, German, and Spanish. Other frequently used names for this group of languages, which share some characteristics across specific languages but are quite distinct in other areas, are critical languages, uncommon languages, less commonly spoken languages (the National Language Resource Center).

MSA: Modern Standard Arabic is the modern form of literary Arabic (Ryding, 2005). It is widely used in all forms of modern writing and serves as the medium of instruction (Mahmoud, 1986).

NECTFL: Northeast Conference on the Teaching of Foreign Languages is the largest and second oldest (1954) multi-language association of pre-kindergarten through university teachers in the country.

NMELRC: National Middle East Language Resource Center was created by the U.S. Department of Education to focus on the language of the Middle East and increase the opportunities for learning the language of the Middle East.

NSFLL: National Standards for Foreign Language Learning were developed by a collaboration of many language organizations, associations, and institutions.

NSLI: National Security Language Initiative is a program introduced by the United States President George W. Bush to develop the foreign language skills of American students.

Social-constructivism: Social constructivism is a perspective that takes into account the interaction that occurs among or between individuals who acquire information where "learning is a social negotiation of meaning" (Vygotsky, 1978).

VLE: A Virtual Learning Environment involves a range of systems that comprise features like a designed information space, a social space being a "place," participants that are active and present actors (Dillenbourg, et al., 2002).

1.8 Summary of Dissertation Chapters

This dissertation is organized as follows: Chapter 2 discusses the major issues with reference to the teaching and learning of AFL in the United States. The chapter describes Arabic script and writing, pronunciation, fluency, dialect diversity, and historical perspectives. Chapter 2 also compares the status of Arabic in the United States before and after September 11th, 2001.

Chapter 3 examines the views of constructivist and social constructivist approaches and highlights the use of technology in FL education. Furthermore, this chapter analyzes Arabic instructors' prospects of the incorporation of technologies in their teaching. It also discusses the effects of using technology in the instruction of Arabic, including the framework for the National Standards for Foreign Languages and Computer Assisted Language Learning.

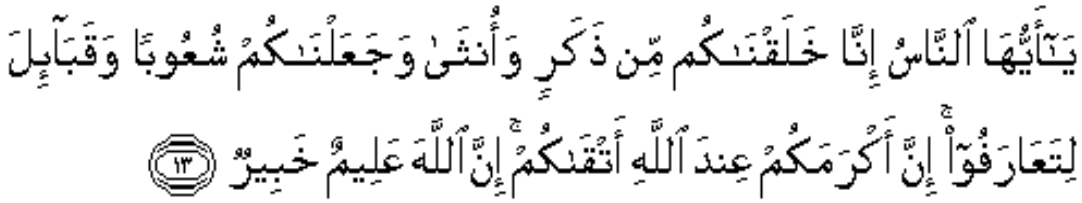
Chapter 4 concentrates on the methodology of this study, focusing on the

organization of the research, data collection, and instruments implemented. The chapter also describes the analytic methodology.

Chapter 5 reports results drawn from participants' responses to the surveys and interviews.

Finally, chapter 6 discusses the results of the surveys and interviews, and the implications for Arabic language teaching. It also presents the methodological limitations and concludes the study by providing suggestions for further research.

Chapter 2: The Major Issues in Teaching and Learning Arabic in the United States



O mankind! We created you from a single male and female, and made you into nations and tribes, that ye may know each other. Verily the most honored of you in the sight of Allah is the most virtuous of you. And Allah has full knowledge and is well acquainted. Quran 49:13 (al-Hujrat, verse 13)

2.1 Introduction

This chapter examines the changes occurring in the teaching and learning of the Arabic language in the United States during the past fifty years. It also presents and discusses the National Standards for Foreign Language Learning (NSFLL) in the 21st Century, elaborated by Alosh and colleagues in 2006, as they apply to Arabic K-16 with a focus on teaching and learning effectively and efficiently. The standards for teaching the Arabic language are based on the same framework as the standards used for teaching other Less Commonly Taught Languages (LCTLs) in the 21st Century. The standards are vital to this research as they emphasize the outcomes of second language acquisition (Chamot et al. 2004). Equally important, these standards can represent structured guidelines for improving the teaching and learning of Arabic.

This chapter begins with a brief overview of the presence of the Arabic language in the world and in the United States. It provides a description of the Arabic language, Arabic script, characters of the Arabic alphabet, and issues of pronunciation and fluency. The chapter then continues by discussing the major challenges in teaching and learning

Arabic in higher education in the United States. These challenges include issues of heritage language speakers and cultural awareness, diglossia (where two varieties of the same language occur) and dialect diversity between written and spoken forms of the language in the Arab world (i.e., Lebanese, Iraqi, Syrian, Moroccan, Saudi Arabian, and Egyptian Arabic). Finally, this chapter analyzes the impact of 9/11 (The September 11, 2001 terrorist attacks on the World Trade Center and Pentagon) on the Arabic programs, highlighting the rhetorical paradigm shift of Arabic instruction and of Arabic educators in the United States. These changes happening in the Arabic curriculum and programs in the educational arena due to the events of 9/11 could have an impact on the teaching and learning of Arabic in the United States.

Thus, the overall goal of this chapter is to describe the landscapes and the structures of the Arabic language as they apply to the teaching and learning of Arabic and also to the promotion of tolerance towards politics, religion, arts, literature, and the new social movements in the Arab world.

2.2 An Overview of Arabic Language

Arabic is one of the most commonly spoken languages in the world and has been considered the sixth official language of the United Nations since 1973. The Arabic language is classified as a Semitic language together with Hebrew, Aramaic, Syriac, and Amharic, among others (Abboud, 1968; AATA, 2011). Its alphabet, with some alteration, is used for the script of non-Semitic languages such Persian, Urdu, Kurdish, old Turkish, and Swahili (Awde & Samano, 1986). Arabic's rich literary and cultural heritage has existed since the Pre-Islamic era and throughout the rise and growth of the Islamic empire from the seventh to the twelfth centuries AD and continues to today (Ryding, 2005). Over

one billion Muslims in the world use Arabic as a liturgical language, the classical form of Arabic in which the holy book of Islam (The Qur'an) was revealed. More than 200 million native Arabic speakers live in the Arab world in twenty-two countries including the Gulf (Arabian Peninsula), the Maghreb (North Africa), Egypt, Sudan, and the Middle East. This population uses Arabic in its various dialects in their daily lives (UN, 2006).

2.2.1 Arabic Variations

Ryding and other linguists such as Al-Batal, Aloch, and Badawin acknowledge that the Arabic language embodies three variants of Arabic: Classical Arabic (CA), Modern Standard Arabic (MSA), also known as Literary Arabic (LA), and colloquial/dialectal Arabic (Ryding, 2005). Another linguistic phenomenon however, is diglossia, which is the use of two language varieties in one environment. It is very common where Arabic is spoken and it is described here because it shapes the sociolinguistic communicative context.

Classical Arabic (CA):

CA is also known as the language of the Quran, The Holy Book of Islam, which was put in writing in the sixth century (Ryding, 2005). CA is related not only to the language of religious ceremonies, rituals, and spiritual milieus, but it is also considered a major grammatical and linguistic source to today's modern literary Arabic. Ryding (2005) describes CA as "a vigorous flourishing of the Arabic literary (or poetic) Language, especially in public recitation and oral composition of poetry, a refined and highly developed formal oral art practiced by all Arab tribal groups and held in the highest esteem" (Ryding, 2005, p. 2). Abboud (1968) further explains that CA is also the language of professionals in literature, medieval history, and paleography. He also posits

that CA could be a coherent transition to higher language proficiency for non-native Arabic speakers who have acquired several years of study and achieved remarkable competence in Modern Standard Arabic (Abboud, 1968).

Modern Standard Arabic (MSA)

MSA is identified as the standard Arabic language, most commonly used in the modern period dating back to the end of the eighteenth century. Despite the fact that MSA is derived from CA, and based on its linguistic structure, the two variants are different in their style and vocabulary. Most Arab linguists agree that MSA is simplified in regards to grammar and syntax and does not have the inflectional endings (assorted morphological affixes attached to the end of a word) that CA has (Al-Batal, 2006; Alosh et al., 2006). MSA is used in novels, textbooks, academia, the media, and in formal speech and conversation. A useful distinguishing characteristic between fusha al-'asr (of the modern era, MSA) and fusha al-turath (of heritage, CA), is the interconnection of CA with the cultural and religious environment (Badawin, 1985). This means that chiefly, CA is used in religious settings and in classical poetry. Yet, despite the distinctions between MSA and CA, Ryding (2005) explains that both variants are referred to as al-lugha al-fusHa or simply al-fusHa, which means "The Most Eloquent (language)."

Arabic Colloquial/dialects

Spoken Arabic is generally realized as colloquial Arabic dialects or vernaculars (Palmer, 2007). Colloquial Arabic represents the spoken form of Arabic commonly used in daily conversation in informal contexts among Arabs. There are several variations of colloquial Arabic that depend on the geo-linguistic regionalization of the Arab countries. Variations of colloquial Arabic are found in the Arabian Peninsula, the Middle East, and

northern Africa. These variations (or dialects) do not have a shared formal written structure because the Arabic script is unable to represent the pronunciation of all dialects. Stevens (1996) and Palmer (2007), however, acknowledge that dialects are being codified and use a form of transliteration in Latin letters to facilitate a pertinent pronunciation.

2.2.2 Diglossia

Diglossia refers to the situation in which two languages or dialects are used by a single community for different purposes (Ferguson, 1959). In many settings, diglossia harmonizes two forms of the same language, using a higher linguistic form in formal situations and a lower linguistic form in informal occasions (Al-Falay, 1996). In the case of the Arabic speaking world, diglossia denotes the co-existence of MSA and the colloquial/dialect Arabic. Yet, Maamouri (1998), referring to most diglossia cases, agrees that there is "a strong correlation between the consciousness of a low cultural level and expectation of a higher level for written language among illiterate adults when they want a literacy mediator to help them with the writing of their message" (Maamouri, 1998, p. 38).

Taking the Arab sociocultural practices into further consideration, Al-Falay (1996) explains that the diglossia phenomenon occurs whenever transitions from the colloquial form to a sophisticated level of Arabic are necessary (e.g. writing as literary mediator or a discussion among cultivated adults). Moreover, Al-Falay (1996) points out that in the case of the countries of the Maghreb (northwest Africa), where multiple dialects are used in addition to Berber language (native name "Tamazight", a local indigenous language), triglossia, quadriglossia, and even multiglossia situations occur. Hence, because of the multiple varieties of the language, the diglossic use of these

varieties, and the difficulty of the language, Arabic is ranked at level five, the highest on the difficulty rating scale for learning languages as identified by the U.S. Foreign Service Institute.

The issue of diglossia in Arabic is a challenge that remains to the present day. Due to its inherent difficulties and the fact that no one specific standard form of Arabic is spoken across the board, it is debated among Arabic language instructors which form of the language is to be classified as the target language to be taught (Bale, 2010). Some Arabic teachers recommend the use of MSA only; some recommend dialects only; and still others recommend the blending of both to be taught in the United States (Al-Mamari, 2011; Hashem-Aramouni, 2011; Maamouri, 1998;). Nonetheless, a wide number of Arab linguists agree that students' needs must be considered in order to determine whether MSA or one of the Arabic dialects should be taught. Yet, there is no agreement among Arabic teachers that MSA is the key asset to a comprehensive understanding of the Arabic language as a whole (Abboud, 1968).

2.2.3. Dialect Diversity

The Arabic speaking world stretches from the Arabian Sea (east of the Arabian Peninsula), south past the Indian Ocean, and west through the Mediterranean Sea and the Atlantic Ocean (west of Morocco). Throughout the centuries, the entire region has witnessed a wide variation of dialects that have led to a considerable number of unambiguous and divergent sub-categories of spoken dialects across the Arabic speaking world. Hanna (1969) points out the variations of dialects and classifies Lebanese, Iraqi, Syrian, Algerian, Moroccan, Libyan, Sudanese, Saudi Arabian, Palestinian, and Egyptian as major dialects in the Arab world. Other linguists categorize the dialects of the Arabic

speaking world into four major groups (Abboud, 1968; Alosh et al., 2006' Al-Batal, 2006):

1. The Middle Eastern Dialect, which is representative of the dialects from Palestine, Jordan, Lebanon, Iraq, and Syria, referred to as the Levantine (or Shami) dialect.
2. The Arabian Peninsula Dialect, which represents the Hijazi (or Khaliji) dialect and includes the countries of Saudi Arabia, UAE, Qatar, and Bahrain.
3. The Maghreb dialect, also called "Darija," which is spoken in Morocco, Algeria, Tunisia, and Libya. Darija is directly influenced by Tamazight or Berber (a local indigenous language) and the languages of the former colonial powers that occupied these countries. Those languages are French, Spanish, Italian, and Portuguese.
4. The Egyptian Dialect, known as "Cairene Arabic" or "Masri," is considered to be comprehensively understood in the Arab countries because of the wide influence of television, film, and radio. It is one of the most prevalent dialects in the Arab world and was shaped through centuries of impact by other surrounding languages such as Coptic, Turkish, French, English, and Italian.

Regardless of all the distinct formal and informal variations in dialects that have occurred across continents over time, the Arabic language has survived and is spoken by millions of people around the world (Hanna, 1969).

2.3 Arabic Language in the United States

Following a sociolinguistic approach, some Arab scholars such as Abboud (1968), Al-batal (2006), Bale (2010), and Rouchdy (1992) have examined Arabic in the United States as an ethnic minority language.

2.3.1 Arabic as a Heritage Language in the United States

The first wave of Arab immigrants in the United States was reported between 1880 and 1925 (Kayyali, 2006). A more noticeable influx of Arab immigrants to the United States however occurred shortly after WWII (Bale, 2010). The formally educated, the wealthy, and the professional classes of the Arab world were coming to the United States with the primary purpose of obtaining an American education to return to build and improve their countries once independence from autocracy was achieved or independent governments were established after colonialism (Bale, 2010). Many of these newly educated Arabs, though, remained in the United States and even more came after 1965. They did so because of the economic and political crises in Middle Eastern countries such as Lebanon, Palestine, and Syria, and their arrival further diversified the Arab American community (Bale, 2010).

As those new immigrants settled and continued to live throughout the different regions of America, it became evident that they had a real motivation to learn English, build businesses, and participate in their new homeland while maintaining their own language (Bale, 2010). Thus, Arab immigrants, as a group, ultimately achieved economic advantages by occupying positions of management (Bale, 2010). Yet despite such success, comparative data show that many of the post-WWII immigrant Muslims, Arabs, and Arab Christians were better educated, selective, and wealthier than later Arab immigrants (Bale, 2010). Also, much like other immigrant groups, Bale notes that there is a great language shift towards English in the U.S.-born generations (second or third generation Arab Americans). This means that not all of the 3.5 million Arab Americans

have total command of the Arabic language nor are they able to speak it fluently as their first language (Bale, 2010).

For example, in a study looking at two groups of Arab American immigrants, Rouchdy (2002) discovered that one group spoke almost all Arabic with a limited form of "pidginized" English, a simplified form of speech used while interacting with English speakers who do not share Arabic as a common language. The second group spoke only English, retaining a very limited use of Arabic (mostly referring to food or cursing) (Bale, 2010, p. 138). Rouchdy (2002) reports that both populations of bilinguals of Arabic and English speakers tend to reflect high degrees of code-switching and borrowing. The author then argues that this blending is a direct result of the social context (i.e., Arabic speaking immigrants in a dominant English-speaking society), which structures the linguistic usage. Rouchdy also points out that a contrast between an ethnic language and English is lessened through borrowing and code-switching, making the resulting language distinct from the Arabic used within the Diaspora, and the Arabic used in the Arab world (Bale, p. 139). To remedy the problem of Arabic fluency, a considerable number of dual language schools in the United States, like the Khalil Gibran International Academy in Brooklyn, New York, have emerged to give middle and high school students the opportunity to learn Arabic (Bale, 2010). Also, from a security and competitive standpoint, other governmental agencies and businesses have developed sponsorships with institutions of higher learning to provide a high level of proficiency in Arabic as a critical needs language in the United States. The Flagship Program, for instance, offers an intensive Arabic curriculum to specific schools such as the University of Oklahoma, the

University of Michigan, Michigan State University, the University of Maryland (MD)-College Park, and the University of Texas-Austin.

While these programs are assets to Arab American youth for their curricula, there are opponents to the teaching of Arabic in public education. Adversaries claim that language-learning centers are associated with a fundamentalist Islamic curriculum. The controversy largely results from the aftermath of 9/11, which caused the rise of profiling as well as the negative targeting of Muslim and Arab Americans. Advocates such as the Endowment for Middle East Truth and the Center for Security Policy, however, have stated the declarations of the opponents to be unreliable (Bale, 2010).

2.3.2 The Presence of Arabic in the United States in the Higher Education System

Despite the strong presence of the Arabic language in the world and despite its strategic and economic power, it has been one of the less commonly taught languages in the United States (AATA, 2011). The language was first taught at Yale University in Connecticut in 1700, but it was not taught again until the very early 1800s at Dartmouth College and Andover University. By 1822, Princeton Theological Seminary also had an established Arabic program (Ryding, 2006). Since then, there has been a steady increase in Arabic language classes with an even stronger enrollment just after September of 2001 (Alosh et al., 2006; Al-Batal, 2006). Because of the flood of Arabic learners, AATA found that there have not been enough institutions offering Arabic programs (AATA, 2011). Survey results conducted at the US-national level by the National Capital Language Resource Center reported that nationwide 165 institutions of higher education offer Arabic programs (AATA, 2011).

Hence, with the marked increase of Arabic learners and the need for teaching the language to support the many individuals involved with national interests and security after the events of September, 2001, it was not long before it became apparent to educational institutions that there was a need to begin a swift search for Arabic instructors. In spite of the deficiency of Arabic teachers to fulfill the needs of students (Al-Batal, 2006), a large number of colleges and universities across the country added Arabic language programs to their curriculums. As a result, many intensive summer, winter, and study abroad programs in the Arab world have gained popularity in America (Al-Batal, 2006). This new interest in Arabic has prompted linguists to investigate the issues of the Arabic language in the United States and explore the use of Arabic as a language and dialect among Arab Americans through the generations.

2.3.3 The Impact of 9/11 on the Teaching and Learning of Arabic in the United States

Soon after the horrific events of September 11, 2001, the LCTLs, (less commonly taught languages) like Arabic, have witnessed a turning point in the educational field in the United States to promote them internationally in terms of expertise and future interaction with the rest of the globe. For a long period of time, there was a lack of ability to teach Arabic and support financing Arabic programs by those involved in the FL departments of federal and national governmental agencies (Edwards, 2004). With these shortfalls, Edwards points out that it was obvious that there could ultimately be serious consequences within the governmental agencies of immigration, terrorism, and peacekeeping as well as with ongoing judicial hearings. Thus, he claims that Arabic language professionals around the world have been continually affected by the 9/11

events, and a greater awareness regarding the teaching of foreign languages and their cultures has grown, most importantly of Arabic in the agenda of homeland security (Edwards, 2004). Concerning instruction, Edwards holds that both students and teachers have the belief that Modern Standard Arabic should play an important role within the Arabic language curriculum. Placing such importance on the language would allow for further enhancement of performance and speaking competency in Arabic, not just in the United States, but in the world at large.

These beliefs combined with the result of the shocking events of 9/11, have led the Modern Language Association (MLA) to report in 2007, that from 2002 to 2006, the enrollment in Arabic language programs in universities around the United States increased more than any other FL (Hashen-Aramouni, 2011). Hashen-Aramouni further adds that as a result, more American students in Arabic language programs will want to study abroad in parts of the Arab world. From the point of cultural immersion initiatives, however, he argues that much research is still needed to develop and guide the Arabic language immersion programs, not only for the learners of Arabic, but for instructors, as well.

2.3.3.1 Teaching Arabic in Post 9/11 United States Universities

A considerable number of researchers have conducted studies that explore the teaching of Arabic in the post 9/11 era in universities in the United States. Taha (2007) investigated the position of Arabic language programs within American universities and found that 66 percent of American students believe that Arabic programs currently run in American institutions should be maintained exactly as they were prior to the 9/11 terrorist attacks, whereas only 32.4 percent believe that the Arabic programs would benefit by

being supported. This compares to 38.7 percent of the students surveyed who believe that current Arabic programs need enlarging and refining. Overall though, international students showed greater support for future development of Arabic programs than American students. Furthermore, international students reported that these programs needed to reflect current trends in other areas of the Arab world (Taha, 2007).

Since the tragic events of 9/11, the vast majority of individuals have become more aware and alerted to violence around the world, particularly terrorism. Global conflict has given scholars, educators, politicians, and authors the idea that not only are there global and international issues to be addressed, but that the teaching and learning of Arabic is among the most important of the less commonly taught foreign languages (Marcus, 2011). Elizabeth Bergman, Director of the American Association of Teachers of Arabic (AATA) claims that, "We all were made aware in a very dramatic way - it couldn't get any more dramatic - that there were groups of people out there about which we knew little or nothing" (cited by Marcus, 2011, para. 10). So consequently, the Department of State has created funds and grants not only to encourage and introduce students to the field of Arabic, but also to send those students to the Middle East and North Africa for study abroad purposes (Marcus, 2011). This pragmatic shift may open doors to job markets within governmental offices, such as homeland security or defense, as well as offer positions overseas within international organizations.

2.4 The Teaching and Learning of Arabic in Higher Education in the United States

Al-Batal & Belnap (2006) report that there has been a great increase in the number of Americans of all ages studying foreign languages in general, specifically Arabic since 2004. In the United States, the number of Arabic learners reached 23 percent

of FL learners in the last decade (Rammuny, 2005). In addition, The National Middle East Language Resource Center (NMELRC) reports after surveying 37 United States institutions, that most of the enrolled Arabic language learners are planning to acquire an advanced level in Arabic for them to function in the arenas of political and social sciences requiring technical, analytical, and interpretive skills.

Al-Batal and Belnap (2006) state that the increasing interest in Arabic stems from the needs and desires of the United States' population to enhance their link with the Arabic and Islamic world for global communication. Such contact may result in the increase in the number of Arabic language learners and could generate a positive attitude for promoting the understanding of Arab cultures and societies. Therefore, further research will need to be conducted in the near future as a joint effort by Arabic linguists, subject matter experts, curriculum developers, and instructional system designers to improve the learning of Arabic as well as to build bridges and cross-cultural understanding within the Arab speaking world, especially with the major changes happening in this new millennium (Al-Batal & Belnap 2006; Alosh et al. 2006; McCarus & Rammuny, 1967).

2.4.1 The Arabic learners

During the second half of the twentieth century, few Arab linguists and researchers, such as Abboud (1968) and Hanna (1969), investigated the teaching of the AFL in the United States. Within the higher education context, Abboud (1968) argues that there are two groups of learners who are interested in Arabic programs. The first consists of Peace Corps volunteers, business personnel, scholars such as orientalists, and institutions like The Defense Language Institute. In these agencies, objectives are

determined and followed by procedures and measures to attain specific educational goals (Abboud, 1968). These explicit educational goals can be structured to obtain particular knowledge such as the geo-political climate of certain nations, their beliefs and value systems, culture, and religion.

The second group, which is the focal point of this study, encompasses college students who expect to have uncomplicated elementary written and oral competency. The ultimate goal for these college students is to be able to converse with a native speaker on different topics (Abboud, 1968). Abboud explains, however, that learning Arabic in a few semesters in college does not enable students to master AFL. Therefore, extending the study of Arabic into a high school curriculum would lead to students' increased proficiency at the upper level (Abboud, 1968).

A third group of learners of Arabic, not previously identified by Abboud, is the group of American Muslims of diverse ethnicities with an Islamic heritage who seek to learn Arabic through college or Islamic institutions. American Muslims are a very important group because of their increasing presence in higher education Arabic language classrooms and their differing degrees of Arabic proficiency.

To meet the needs of all these learners, the teaching of Arabic has been updated and adapted over the last half of the twentieth and early 21st Century in the United States. Course design has been adjusted, modernized, and subjected to technological innovation and current methodologies and teaching practices (i.e. dialect, MSA, or both; computer-mediated communication; content-based instruction; task-based instruction; student-centered approach) (Abboud, 1968).

2.4.2. Teaching Arabic in the foreign language classroom

From a pedagogical perspective, Abboud (1968) describes the approaches used to teach American students MSA. Reading aloud in the class, for instance, was considered important to enhance pronunciation. Compared to Arabic dialect courses, which utilized the audio-lingual method (a method used in teaching foreign languages based on repetition, reinforcement, and memorization), MSA courses comprised two- or three-year programs and met four to five hours a week with little emphasis on the audio-lingual method. In these courses, professors encourage the use of the transliteration system, a way of teaching that is still maintained with more current approaches. The transliteration system decrypts the script of a target language by utilizing the letters of another script (in this case, the Latin alphabet), adapting the orthographic complexity of Arabic.

Students in the elementary level, for instance, rely on the transliteration format until they master the Arabic script, pronunciation, and letters' connection technique, including special characters, letters, and sounds that have no equivalent in English (e.g., "SabaaH al-khair," which means "Good morning"). In high elementary Arabic courses, students are able to decode the greeting from Latin characters into Arabic script with appropriate pronunciation, using the Arabic phonemic chart as a guide (See figure 1 below).

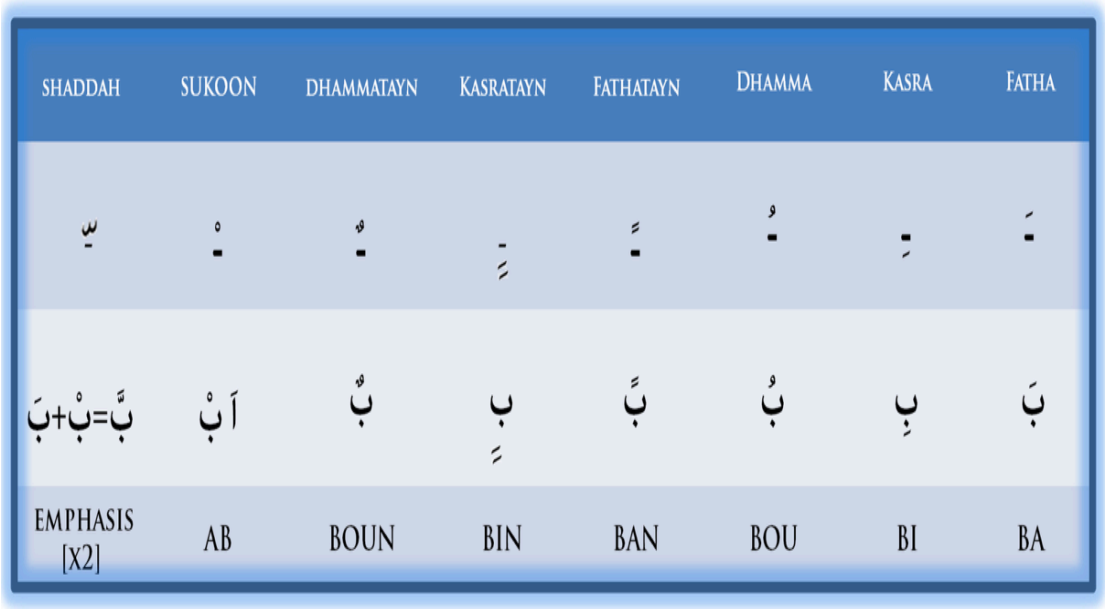
Figure 1: Arabic Phonemic Chart

		Labial	Inter-dental		Dental/Alveolar		Post-alveolar	Palatal	Velar	Uvular	Pharyn-geal[3]	Glottal
			plain	emphatic	emphatic	plain						
Nasal		م m				ن n						
Stop	voiceless				ط tˤ	ت t			ك k	ق q		ء ʔ
	voiced	ب b			ض dˤ	د d	ج ʒ~dʒ~g[1]					
Fricative	voiceless	ف f	ث θ		ص sˤ	س s	ش ʃ		خ x~χ[5]		ح ħ[4]	ه h
	voiced		ذ ð	ظ ðˤ~zˤ		ز z			غ ɣ~ʁ[4]		ع ʕ[4]	
Approximant						ل l[2]		ي j	و w			
Trill						ر r						

Retrieved from Ryding (2005), p13

According to Abboud (1968), the approach to learning grammar in MSA depended on the level (i.e., elementary, intermediate, advanced) of a specific course, starting with the basics to help students practice and identify patterns relative to extensive morphological or syntactic grammar. Subsequently, in order for students to perceive grammatical patterns, instructors used traditional grammatical terminology such as case endings and vocalization, also known as "Harakaat" or diacritical-marks (See figure 2), which guided students' pronunciation and reading fluency. The diacritical-marks in figure 2, which are considered to be short vowels, are marks that are added to the Arabic script to demonstrate essential language characteristics and fundamental grammatical features that help students master the Arabic language and conquer the language difficulty (i.e. Fatha as the short vowel "a", Kasra as the short vowel "e" …etc.) to demonstrate essential language characteristics and fundamental grammatical features that help students master the Arabic language and conquer the language difficulty.

Figure 2: Diacritical-Marks (Case-Ending)



Retrieved from: http://tasheeltadrees.blogspot.com/2010/12/arabic-diacritical-marks-harakat.html

To improve the teaching of Arabic dialects as a second language, a variety of instructional methods and techniques were applied several decades ago. One of these, as noted earlier in this section, was the Audio-lingual method. Certain institutions and schools in the United States offered the study of one of the Arabic dialects for one year only. These classes met five to eight hours a week in a classroom in conjunction with a laboratory component (Abboud, 1968). In order to enhance phonology skills, students of Arabic were asked to complete sentences in phonemic format along with an English translation. Students were exposed to special pronunciation practice based on mimicry of sounds and intonation patterns. An approach blending the use of inductive and deductive techniques was used, allowing students to practice and apply the use of grammatical structures. Memorization, which is the essence of Audio-lingualism, was encouraged in order to enable the student to retain more complex forms. The use of bilingual dictionaries was discouraged in memorizing vocabulary. Students acquired vocabulary by

using texts and long lists of vocabulary words comparing their meaning to English (Abboud, 1968).

Over the last decade, new teaching methods and approaches have been developed, providing a variety of ways for instructors to meet and communicate with other teachers and students. Videos and online technology are just two of these modes available to educators and learners. There is room for further growth in the video library and tools made available online. This new infusion will help those with the desire to "improve their teaching and experiment with new techniques and approaches" (Al-Batal & Belnap, 2006, p. 395). Yet, as Al-Batal and Belnap (2006) state, the following areas are in great need of further research and development:

- Instructional materials that address special needs such as varieties of spoken Arabic, reading, listening, and reference grammars.
- Testing instruments, including proficiency assessments.
- Online and distance learning materials.
- Relationships with applied linguists and language pedagogy specialists who can offer methodological guidance and insight to Arabic language instructors.

Improvements such as these will aid anyone with the desire to "improve his/her teaching and experiment with new techniques and approaches" (Al-Batal & Belnap, 2006, p. 395).

2.4.3 Teachers and Instructors

From a pedagogical standpoint, Abboud (1968) reports that teachers of Arabic have been found to fall into five basic categories. Although his study was conducted in 1968, the five categories are still relevant today: First are the *linguists,* the language specialists who have a relatively small interest in teaching Arabic but who have moved

into the teaching arena through working in the field of applied linguistics. Their applied linguistic background, as well as their development of course and instructional materials, often gives other instructors the impression that these linguists have the ability to effortlessly teach Arabic, even though they maybe deficient in pedagogical techniques (Abboud, 1968). The second type of teachers is *native-speakers,* or those with some knowledge of Arabic with doctoral degrees related to Middle East history and political sciences. These specialists typically have little interest in FL instruction but they teach because of stipulations within their job requirements at learning institutions (Abboud, 1968). The third category of instructors is known as *orientalists*. This group tends to have in-depth knowledge of the many aspects of the ancient as well as the modern-day Middle East. *Informants*, the fourth group of teachers of Arabic, are native speakers who have moved into the Arabic instruction field through other fields of work and study. Their knowledge of MSA (Modern Standard Arabic) is typically only functional with little knowledge of how MSA works. The fifth and final instructional group is the *teaching assistants*: graduate students in the field of linguistics who, through learning from their colleagues, gain valuable lessons and training, aiding in their development as qualified and valued teachers (Abboud, 1968).

In addition to describing the five groups of Arabic teachers in the United States, Abboud also forecasted the consequences of this diversity, such as the variation of the Arabic dialects and other subsequent issues previously discussed. As educators, Arabic instructors should have a heightened knowledge of dialect variations in Arabic to accurately teach in the classroom and know, as much as possible, about the speech, idioms, and writing of specific stylistic colloquial varieties (i.e. Egyptian and Levantine).

In doing so, Arabic instructors will feel they are productive and present a proper model to their students.

The diversity of Arabic instructors from different dialect backgrounds (e.g. Egyptian, Sudanese, Palestinian, and Jordanian), who integrate a dialect with MSA in the same course of instruction, generates disorientation among learners. The confusion happens because students are exposed to various articulations of certain words and expressions; for example, the expression "how are you?" which is "Kaifa Haluk?" in MSA, "Izzayak" in Egyptian, "Sh'lounak" in Levantine, and "Kidayr?" in Moroccan (Munther, 2006). Nevertheless, Munther (2006) suggests in his conclusion that this blended experience of dialect and MSA in the classroom may lead learners to internalize and comprehend the role and function of the target dialect alongside with MSA. It is important to remember that MSA is basically used to read formal passages but not to speak to one another in daily life activities.

Concerning the linguistic and educational skills of Arabic instructors, Abboud (1968) points out, through his research, that the acquisition of a Doctoral degree in any one of many fields of study of the Middle East is typically the only prerequisite to becoming an Arabic language instructor. However, in some colleges and universities, an Arabic instructor may be qualified simply by having multiple years of experience in FL instruction. Abboud also notes that while most FL instructors receive instruction on how to teach their specific languages, Arabic language programs provided limited training in instructional methodology and materials to teachers, for example lack of hands-on training or practical strategies. The traditional Arab memory-based culture and instruction that is used predominantly by native-speaking Arabic teachers is the

instructional technique typically employed by Arab instructors who were taught in their native countries; this technique does not always match with American students' previous language learning experiences. Therefore, the educational background of the five distinctive groups, the lack of teacher training, and the implementation of memorization of paradigms not common to the American audience bring some challenges to the teaching of Arabic in the US.

However, despite the little consistency among Arabic instructors as a whole, and the lack of group involvement or "little desire for improvement, experimentation and refinement of methods" (Abboud, 1968, p. 8) of the five teaching groups, Abboud (1968) and Al-Batal and Belnap (2006) observe that increasing attention is being paid to the "professionalization of the teaching of Arabic." Based on this analysis, the hope is that in the near future, there will be a unification of purpose and fulfillment of the need for Arabic instructors to develop their professional expertise and be recognized by their counter-parts as respectable and significant contributors to the FL curriculum. As early as 1962, there was an interest in developing a professional organization devoted to promoting "study, criticism and research in the fields of Arabic language and literature" (Abboud, 1968). Through the American Association of Teachers of Arabic (AATA), which was established in 1965, Arabic instructors are able to discuss concerns and successes with one another. They are also able to share the newest developments in teaching methodologies, professional articles, and the most current teaching aids and materials. Sponsored by, and with the collaboration of the American Council of Learned Societies (Joint Committee on Middle Eastern Languages and the Inter-University Summer Program Committee), there have been continuous offers of a series of two-week

teacher training seminars and workshops (Al-Batal & Belnap, 2006). These sessions, designed to explore different characteristics of Arabic language teaching at American institutions (Abboud, 1968), have given the attendees the opportunity to share thoughts, opinions, and teaching methods related to their teaching of Arabic. In addition, participants receive updated methodologies and guidelines of FL instruction and assessment, they observe new content and methodologies of teaching elementary and intermediate Arabic and they attend conferences concerning available instructional materials (Abboud, 1968).

Yet, as of 2011, teacher training is the greatest need to insure the availability of highly qualified Arabic teachers (Al-Batal & Belnap, 2006). Over the last several years, multiple institutions, with the support of NMELRC, have offered a series of teacher-training workshops in two-week seminars to Arabic instructors (Al-Batal & Belnap, 2006). These two-week seminars have demonstrated that the most beneficial components for the instructors of Arabic language are class-observation, micro-teaching, and reflection of experience (Al-Batal & Belnap, 2006). Furthermore, these workshops are beneficial from the standpoint of technological innovations for the 21st century and for incorporating a Computer Oral Proficiency Instrument and Arabic Training Kit (Thompson et al., 2009). In doing so, Arabic instructors can learn and implement better assessment practices and improve their knowledge in computer-based assessment.

Despite the availability of educational training opportunities for Arabic instructors, Al-Batal (2006) and Belnap (1995) report that a significant proportion of all Arabic language instructors are lacking pedagogical training in FL teaching. In addition, there have been few, if any, teaching standards for the training and/or certification of

Arabic language teaching. It was only at the beginning of the 21st Century that, with enormous collaborative efforts[3] based on Al-Batal and Belnap's (2006) assertions, standards have been implemented to promote less commonly taught languages, including Arabic (LCTLs).

The STARTALK program, for example, a project by the National Security Language Initiative (NSLI) appointed by former President George W. Bush in January of 2006, aims to magnify and enhance the teaching and learning of the less commonly taught languages (LCTLs). Thompson et al. (2009) report that in FL education "Everyone (STARTALK) needs this training. This should be a pre-requisite for all programs (teachers & students)" (p, 12). Arabic STARTALK training is offered to both students and teachers and creates a productive and engaging summer experience aiming to improve the practices of Arabic as well as the Arabic instructors' continuous improvement in eclectic teaching methodologies (i.e. content-based & task-based instruction, standards-based curriculum planning, learner-centered approaches, substantial assessment of outcomes, computer-assisted language learning, etc.)

2.4.4 Arabic Script, Writing, and Pronunciation and their Challenges for Arabic Language Learning

Numerous Arab linguists agree that Arabic learners believe that the complex derivational morphology system (i.e. root systems, long vowels, short vowels, doubled root consonants) of Arabic may require several semesters of learning to acquire the basic linguistic structure of Arabic. Yet, although the Arabic language is part of the Semitic family of languages, there are some similarities between Arabic and other non-Semitic

[3] Among the American Council on the Teaching of Foreign Languages, the American Association of Teachers of Arabic, the U.S. Department of Education, and the National Endowment for the Humanities, among others institutions.

languages such as Persian, Urdu, and Kurdish and even Romance languages (Awde & Samano, 1986).

In order to demonstrate the interconnection between Arabic and other languages, Awde and Samano (1986) examined the Arabic, Roman, Greek, and Russian languages and suggested that "alif and baa," the names of the first two letters of the Arabic alphabet correspond to the Greek letters "alpha-beta." This junction demonstrates an interconnection among languages that have common distant ancestors (Awde & Samano, 1986). In addition, some letters in the Arabic alphabet (K<L<M<N) are configured in the same sequence as in the English alphabet (Awde & Samano, 1986). However, despite the similarities with the English/Latin alphabet, the cursive nature of Arabic script, as well as the differences for each character depending on its written position—isolated, initial, medial, or final position—demonstrates the unique characteristics of the Arabic alphabet (see Figure 3). To further complicate matters for Arabic language learners, the Arabic alphabet is written and read from right to left, the opposite of the Latin alphabet.

Figure 3: twenty-eight Arabic characters with their phonetic/customary transliteration

Name	Phonetic	Isolated	Final	Medial	Initial
alif	[ʔ]	ا	ـا		
ba:	[b]	ب	ـب	بـ	بـ
ta:	[t]	ت	ـت	تـ	تـ
tha:	[θ]	ث	ـث	ثـ	ثـ
ji:m	[j]	ج	ـج	جـ	جـ
ḥa:	[ħ]	ح	ـح	حـ	حـ
kha:	[x]	خ	ـخ	خـ	خـ
da:l	[d]	د	ـد		
dha:l	[ð]	ذ	ـذ		
ra:	[r]	ر	ـر		
za:	[z]	ز	ـز		
si:n	[s]	س	ـس	سـ	سـ
shi:n	[ʃ]	ش	ـش	شـ	شـ
sa:d	[sˤ]	ص	ـص	صـ	صـ
da:d	[dˤ]	ض	ـض	ضـ	ضـ
ṭa:	[tˤ]	ط	ـط	طـ	طـ
ẓa:	[ðˤ]	ظ	ـظ	ظـ	ظـ
'ain	[ʕ]	ع	ـع	عـ	عـ
ghain	[ʁ]	غ	ـغ	غـ	غـ
fa:	[f]	ف	ـف	فـ	فـ
qa:f	[q]	ق	ـق	قـ	قـ
ka:f	[k]	ك	ـك	كـ	كـ
la:m	[l]	ل	ـل	لـ	لـ
mi:m	[m]	م	ـم	مـ	مـ
nu:n	[n]	ن	ـن	نـ	نـ
ha:	[h]	ه	ـه	هـ	هـ
wa:w	[w]	و	ـو		
ya:	[y]	ي	ـي	يـ	يـ

Retrieved from: http://www.ancientscripts.com/arabic.html

Another major area of difficulty for Arabic learners is the linguistic structure (Abboud, 1968). In addition to its structural shape and the multiplicity of its graphemes, the Arabic alphabet has short vowels that are customarily omitted and need to be

interpreted from context (Abboud, 1968). Also, the morphological and syntactic structures in conjunction with the semantic roots, patterns and complex inflectional endings have posed problems for Americans trying to learn Arabic since it was first introduced in the United States in 1942 by the Army Language School (Abboud, 1968; Hanna, 1969). Specifically, the phonology of Modern Literary Arabic (MSA) creates learning difficulties for American students (McCarus & Rammuny, 1967). McCarus and Rammuny (1967), who analyzed the Arabic writing system and its association with Arabic phonological structure, compiled and compared eleven textbooks in order to identify the comprehensive usage of Arabic vocabulary and pronunciation in class.

From a pronunciation standpoint, for example McCarus and Rammuny (1967) find that the characteristics of the Arabic language that appear most commonly confusing for students are short vowels (diacritical-marks) and long vowels, such as in the words (Katab-Kaatab, "كتب , كاتب"). A particular short vowel produces a distinctive emphasis when used with consonants (i.e. katab "كتب" and kattab, "كتّب"). Furthermore, when a consonant carries a "Shaddah," (doubled letters marking long consonant), it changes the meaning of the word (i.e. darsa "دَرَسَ" means "he studied" and darrasa "دَرَّسَ" means "he taught"). Another challenging sound is the *trilled* rr with a special pronunciation difficulty for American students because of its rolled sound in Arabic, different from any sound found in English (McCarus and Rammuny, 1967). The distinction among the four emphatic versus non-emphatic consonants (see Figure 4) is also problematic for American learners of Arabic. For example, the frontal sound of the letter "س" (s) is described by its lower pitch, but "ص" (S) has a deep sound and is pronounced with more intensive muscular stress in the mouth.

Figure 4: Arabic emphatic and non-emphatic sounds

Arabic Alphabet Carrier	LDC Symbol	Non-Empahtic Counterparts
Dhaad ض	D	/d/ Daal
Saad ص	S	Voiced: /z/ (Zain); Unvoiced: /s/ (Seen)
T_aa ط	T	Voiced: /d/ (Daal); Unvoiced: /t/ (Taa)
Dhaa ظ	Z	/TH/ (Thaal)

LCD: Language Data Consortium; Retrieved from (Alotaibi et al… 2009)

Also the differences between velar and pharyngeal fricatives (see examples below), which are a special Arabic type of consonantal sound with fricative articulation, are complex for American learners (McCarus & Rammuny, 1967).

1. Velar vs. Uvular stop: kalb-dog (كلب) vs. qalb-heart (قلب)
2. Velar: Fricatives in initial position: khilaaf-dispute (خلاف) vs. ghilaaf-cover "as a noun" (غلاف)
3. Voiceless pharyngeal fricatives vs. glottal fricatives: Huruub-wars (حروب) vs. huruub-escape "as a noun" (هروب)
4. Voiced pharyngeal fricative vs. glottal stop: sa^{C}ala-coughed (سعل) vs. sa'ala-asked (سأل)
5. The ^{C}ain (ع) sound in initial position: ^{C}ain-eye (عين) vs. ^{C}aid-feast (عيد)

American students also struggle in reading Arabic because of confusion with letters identified only by a dot, such as (خ - ح ، غ - ع ، ظ - ط), or in the case where two dots occur, such as in the letter "ى" (Alif maqsura) versus "ي " (Yaa') as final position and the

letter "ه" (haa) at the end of a word versus the letter "ة" (taa morbouta). Additional letters with almost the same shape such as "د" (d) and "ر" (r) are also confusing. A different type of challenge, unrelated to reading, occurs in writing when students are attempting to connect Arabic letters with other letters that cannot be connected from the left (e.g., وردة , أدب , أزواج , رداد…etc) (Awde & Samano, 1986).

2.4.5 Arabic instructors and Arabic training programs: Their challenges

Another major factor that contributes to the difficulties of the Arabic language and the challenges in the teaching of Arabic is the insufficient number of programs for training Arabic instructors. There are few graduate and doctoral programs focusing on the study of the literature and the teaching of Arabic as a foreign language (TAFL) in the United States. The lack of programs is even more problematic if we take into account the current and future needs of Arabic language training (Al-Batal, 2006). With Arabic language programs depending mostly on inconsistent funding since the 1950s, the lack of money has limited the development of programs and instructional materials. It has also limited the number of teachers and the training of instructors. Additionally, there is a lack of support for faculty and few resources to measure students' proficiency, as well as the efficacy of the instruction itself (Al-Batal, 2006). At present, in addition to increasing their financial and human resource capabilities, proponents of the Arabic language need to focus on program development and training of instructors, as well as on strategic plans for study-abroad programs.

Al-Batal (2006) states that there are three major areas needing a great deal of research, development, and implementation for university Arabic teaching and learning

programs to function successfully. These three critical areas include programmatic development, professionalization of the field, and curricular needs.

The first area highlights that Arabic language programs, in order to improve and be efficient and successful, need an increased level of federal and institutional support. These programs also need to focus on the development of an Arabic language infrastructure that will develop study abroad programs, graduate programs in Arabic language and literature, and the teaching of Arabic.

The second area, professionalization of the field, emphasizes the increased need for teacher training and for the hiring of trained Arabic teachers to accommodate the rapid growth of Arabic language learners. Qualifications must be prescribed and job requirements outlined, including the stipulation that teachers develop "a sustainable, publishable research agenda" (Al-Batal, 2006, p. 45).

Finally, there is a need to focus on the curriculum, along with "assessment tools for both placement and proficiency" (Al-Batal, p. 45). As Al-Batal (p. 45) notes, there is also a need for the "development of instructional materials that address special needs, such as various dialects of spoken Arabic and reading comprehension" (Al-Batal, p. 45). Research has established that while content, communicative, and task based teaching methods are being used in the teaching of Arabic in many U.S. classrooms, there is limited research available concerning the "different varieties and registers of Arabic in the classroom and the curriculum" (Al-Batal, 2006, p. 44). The impact of dialect diversity in the instruction of Arabic in the United States cannot be underestimated (Abboud, 1968; Al-Batal, 2006; Badawin, 1985).

The divergences and variations within the Arabic language have created categories and sub-categories in the spectrum of Arabic dialects and MSA, which lead to numerous important questions that might be asked by learners and developers of Arabic language instruction. The major questions are: Which dialect of Arabic should be learned or taught? Is the teaching of only MSA enough for learning Arabic? If some dialects are important to learn, where should foreign learners of Arabic begin? Should dialects or MSA be taught first? With attention to Arab linguists, they are undeniably aware of the complexities of incorporating the dialect variations in a curriculum. Abboud (1968), who justified the teaching of dialects in the United States during the last half of the 20th century, presented the issue of variations of dialects and questioned whether it is essential that these dialects are needed in addition to MSA. According to Abboud, the learning of Arabic, whether dialects or MSA, should be based on the demand and availability of experts, as well as the practice of various institutions.

Although up until the 21st Century, these Arabic teaching and learning issues and difficulties had yet to be addressed, especially in classes of basic Arabic at the elementary level, several suggestions and recommendations have been proposed (Abboud, 1968; Hanna, 1969; McCarus & Rammuny, 1967). For instance, McCarus & Rammuny (1967) proposed a set of instructional materials for first-year Arabic courses at the University of Michigan consisting of drills using a complex contrastive English-Arabic phonetic transcription (such as the case of transliteration explained previously on page 19). These instructional materials allowed students, after listening to Arabic sounds with the assistance of an instructor or a tape recording, to generate the sound recordings. Specific techniques were also adapted in order to improve students' reading skills by including

practicing the alphabet, reading aloud the letters by interpreting their sounds, and retaining the shapes in their memory. Similar techniques were used for students to identify letter combinations and words. In addition to reading and pronunciation, writing skills are also a crucial element, particularly when dealing with a new alphabet. To facilitate their development, the researchers demonstrated a mechanical movement to simplify the Arabic script, especially in forming letters, shapes, and combinations of letters. Practice with reading and pronunciation was integrated with writing in order to reinforce the appropriate pronunciation and sustain comprehension. Despite the recommendations provided by McCarus & Rammuny (1967) and others, there is still a deficiency of instructional materials and use of up-to-date methodologies for teaching Arabic, which needs to be addressed, particularly because of the increasing demand in recent years for Americans to learn the Arabic language (McCarus & Rammuny, 1967).

2.4.6 Toward achieving a higher level of language skills in Arabic

Despite the difficulty of Arabic, studies such as those by Husseinali (2006) and Samimy (2008) reveal outcomes that could inspire and enlighten Arabic learners and educators. Samimy explains that according to the Interagency Language Roundtable guidelines, a communicative method is an effective approach that enables the learner to achieve high levels of proficiency in speaking, listening, and reading in foreign languages. In a case study conducted between 2005 and 2007, Samimy (2008) argued that an American Arabic learner in higher education was best taught through a learning methodology that incorporates the "Superior" oral proficiency level into the curriculum, not limited to only elementary and intermediate levels. The instructor needs to foster the use of Arabic both in thought and self-conversing by encouraging learners to watch

Arabic television channels, read aloud an Arabic newspaper, or attempt to interact with Arab society in the United States or abroad. In addition, the learner must train speech and mouth muscles to develop the tongue movements and create the sounds used in speaking Arabic, and must gain the personal ability to recognize the specific Arabic language linguistic tones (Samimy, 2008). The study also shows that to become orally proficient in Arabic, the learner should attempt to think in Arabic or interact socially with native Arabic speakers.

Husseinali (2006) reports that there are very few research findings as to why some foreign learners of Arabic become rapidly and fully proficient in Arabic while others become disinterested and drop out of Arabic language courses. Samimy's analysis reveals that "a learner's access to the target language communities can be greatly enhanced and facilitated by allies or mentors" (Samimy, 2008, p. 412), such as the coordination of study abroad offices in universities with other institutions in Arab countries. Access can also be provided by the organization of field trips to Arabic exhibitions, museums, cultural/religious events, and restaurants. This notion supports the "communities" goal within the National Standard for FL Learning.

Regarding reading skills, Brustad (2006) identifies three important factors needing further research involving reading in Arabic: the role of linguistic and cognitive skills, the nature of the reading process, and the pedagogical applications. The author also states that there is a continued need to teach and combine both language skills and reading strategies for learners to become successful readers in foreign languages. Two specific types of processes are needed to become a successful FL reader. The first type is known as "*top down processing";* this type of learning is based on the readers' using

previous background knowledge and cultural experience in addition to schema in their readings of text. The second type is known as "*bottom up processing,*" which primarily uses prior knowledge of grammar and linguistic skills, as well as focusing on grammatical structure. Brustad notes the continued need to, as well as the importance of, teaching interactive reading and language-based strategies. Regarding the sentential syntax of Arabic, it is vital that the word order is observed when reading Arabic because Arabic and English syntax are significantly different. These differences, which can all become potential obstacles in learning Arabic, are most notable in the "verbal sentence Verb Subject Object (VSO), word order, indefinite relative clauses, and present tense verb absence in addition to complex noun and noun-adjective constructions" in Arabic (Brustad, 2006, p. 344). Brustad explains that "the challenging features of Arabic are [balanced by] syntactic and morphological features that give the learner-reader helpful tools in constructing meaning from a challenging text or passage" (p. 345). She goes on to recommend the use of parallel syntactic structures to aid the learner in following the systematic patterns of sentences while acquiring a new language. These structures are followed by grammatical agreement, which demonstrates that it is virtually impractical to synchronize subject and verb or subject and predicate, for example, "kharaja att-aalibu mubakkiran" (the student went out early); in this case, the subject is a noun, and the predicate is a verb paired with an adverb (Brustad, 2006).

The American Council for Teaching Foreign Languages (ACTFL) provides guidelines for teaching Arabic in all levels of education in the United States. The introduction of the learner's personal representation of grammatical clues will ultimately aid in "identifying and guessing the meaning of unknown words within familiar contexts"

(Brustad, 2006, p. 348). The student moves on to sentence level discourse and the ability to deconstruct long sentences within text. As the learners approach upper levels, they are able to start processing discourse within paragraphs and text. Ultimately, the familiar subject matter is recognized within the text; thus the learner can synthesize close and global reading skills. Finally, the advanced learner becomes more fluent in reading through attaining vocabulary and specific literary instruction in the academic field (Brustad, 2006).

2.5 The National Standards for Foreign Language Learning in the 21st Century

During 2004-2005, in a project sponsored by the National Capital Language Resource Center, The National Standards Collaboration, The American Association of Teachers of Arabic, and the National Middle East Language Resource Center, the National Standards for Learning Arabic K-16 in the United States were developed. These standards were established with the intention to create language instruction guidelines for those instructors teaching the Arabic language at all levels of education (Standards, 2006). Soon after 2006, Arab linguists in the United States crafted a significant linguistic project in order to align current standards with 21st Century demand and a mechanism through which the Arabic language, as LCTLs, could advance (Alosh et al., 2006).

In addition, teachers, administrators, researchers, and linguistic scholars from around the globe participated in the development process and presented drafts of papers during conferences. This project received feedback from The American Council on the Teaching of Foreign Languages Conference in November of 2004, the Council for Islamic Education in America in February of 2005, the Northeast Conference on the

Teaching of Foreign Languages and the National Council of less Commonly Taught Languages in April 2005 (Standards, 2006).

Before the new edition in 2006 of the National Standards for Foreign Language Learning in the 21st Century, the American Council on the Teaching of Foreign Languages, The American Association of Teachers of Arabic, and other associations of teachers of other foreign languages collaborated and developed a major project that was funded with a grant by the U.S. Department of Education and the National Endowment for the Humanities. The aims of this project were to develop standards, promote FL learning in the 21st Century, empower American students to communicate effectively in a pluralistic American society, and meld into multilingual cultures. Many American students who have chosen to study foreign languages, particularly the LCTLs such as Arabic, have already envisioned early career paths, while others are encouraged by ethnic or regional background and/or are curious to explore a newly perceived challenging language (Standards, 2006).

While developing these new Arabic standards for this new millennium, Alosh et al. (2006) examined the current teaching of Arabic in the United States. Alosh and his team acknowledged that the content for K through 16 Arabic teaching would need to be adapted and well defined in order to prescribe age and culturally appropriate materials for each level (Standards, 2006). Standards for teaching foreign languages in the United States in the 21st Century focus on five essential elements (The 5C's): Communication, Cultures, Connections, Comparisons, and Communities (Standards, 2006). (These are discussed in more detail on p. 62) Having national standards for the teaching of the Arabic language is vital to boosting and empowering Arabic language teaching as well

as, drawing a road map that will aid in enhancing and refining the development of curriculum and assessment tests. These standards are considered to be guidelines, also known as "Sample Progress Indicators," and are used to facilitate course design for teachers and curriculum developers to meet learners' needs.

The Task Force on Standards for the Learning of Arabic in the 21st Century identified three core beliefs (National Standards, 2006):

1. Developing competence in the Arabic language and cognizance of the Arab culture facilitates the task for students to communicate and express themselves during their speech performances, as well as in their printed compositions, such as acquiring, treasuring, and grasping the multidimensional array of literary, religious, and cultural heritage. This competence also allows students to build bridges and connect the Arabic language to other disciplines to promote efforts within the global community and marketplace.
2. Learning Arabic and its culture through attaining language and culture, studying of various settings in cultivated environments, and maintaining the enhancement of the language proficiency by interaction with the Arab community and seeking opportunities for study abroad and distance learning.
3. Focusing on the learner centered theory and interactivity, in addition to the concentration on communication and cultural appreciation as well as the improvement of basic communication skills and higher order of thinking.

2.5.1 The Five Standards (5C's)

The standards for Arabic Language are based on the same framework as the standards used for other foreign languages in the 21st Century. They focus on five

essential components called "The 5C's," which are Communication, Cultures, Connections, Comparisons, and Communities. The following is a brief description of each of the 5C's and their related standards; it also includes Alosh et al.'s (2006) sample progress indicators for grade K-16. The sample indicators are important because they spell out the skills and competencies that students need and should gain as they progress in each of the "5C's" to function effectively in an Arabic language-speaking environment.

1. Communication: The main goal to communicate in Arabic is based on three major divisions of the Communication Standard.

Standard1.1 This standard encourages students to engage in conversation and correspondence in Arabic to produce and acquire information, express feelings and emotions, and reciprocate opinions. The use of oral and written interpersonal communication is the primary goal of standard 1.1. Students are introduced to a number of phrases that facilitate interactions. Throughout the learning process, students' speech performance, and written capabilities are expected to improve while merging the cultural aspects of the Arabic culture to the language. The purpose of this standard is to improve students' speaking and enhance their fluency by promoting interactivity and stimulating their interpersonal communication in an environment enabling them to converse effectively and completely in various settings, either formal or informal. Alosh et al. (2006) suggest as a sample progress indicator that students participate in sharing their impressions of literary artwork (e.g. poems, plays, short stories and novels). The authors discuss the possibility for students' conversations to involve daily life activities such as sports, films, and popular music. A concrete example would be for students to discuss

their preferred character in a story or express whether they like a movie. Another progress indicator includes students' ability to problem solve in a group work setting and collaborate in order to suggest a remedy to a social conflict such as housing, street violence, or women's rights. An essential indicator examines the ability of a student in exchanging and supporting opinions and demonstrating personal perspectives with classmates and native speakers of Arabic in various topics related to social sciences. For instance, students may debate the aptitude and competency of two systems of government and/or illustrate a perspective to protest public transportation. The ultimate progress indicator in this standard analyzes students' ability to demonstrate and share personal information in formal and professional settings. A good example for this component is for students to prepare biographical information concerning their academic backgrounds and experiences (e.g. curriculum vitae).

Standard 1.2: This standard proposes one-way listening and reading in an interpretive mode. This approach allows students to understand and interpret written and spoken Arabic within various materials. The purpose of this communication standard is to develop students' understanding of the multidimensional informal and formal scenarios in both written and spoken Arabic (Alosh et al., 2006).

From a higher education standpoint, the sample progress indicators show that learners display evidence of retaining the main ideas of authentic topics related to current events in both live and recorded Arabic conversations, such as a discussion regarding the current situation in the Middle East. The following indicator points out the student's ability to identify the general idea of the text and roles of characters in authentic literary stories; for example, understanding the debate of a topic related to Nagib Mahfouz's

trilogy (Alosh et al., 2006). Another indicator discusses student's competence in comprehending levels of formality and informality and graphs the meaning of the written and spoken Arabic. A good example would be to demonstrate a comparison between different articles and newspaper editorial writers and identify the formal, as well as, the informal aspects of the writing style. The distinguished formal and informal plays and novels of Ghassan Kanafany are recommended for the third indicator as they permit students to not only analyze linguistic instances, but also to assimilate cultural distinctions, especially in writing and speaking by native speakers in an informal situation. The last indicator in this section includes understanding the visual arts in Arabic, as well as assorted literary styles from coherent materials related to the culture. An example would be interpreting the literary works of Sa'adallah Wannous, who transformed the regular Arabic literary pattern.

Standard 1.3: This communication standard discusses students' learning outcomes while performing and presenting their thoughts and information retained through learning Arabic and its cultures. Students exhibit their outcome in spoken and written formats to readers and audiences on a number of topics. Students reflect on their difficulties in attaining the techniques needed to produce Arabic scripts, letter connection with their sound analogy, word order, right to left position, and phonemic cognizance.

Alosh and colleagues underline four basic progress indicators. The first specifies that the learners are able to discuss, examine, and interpret reading passages related to Arab cultures demonstrated in authentic literary registers or the fine arts. For instance, the scholars proposed the analysis and presentation of the literature of the known Arab traveler "Ibn Battuta" in contrast to Marco Polo. The second progress indicator pinpoints

the student's competency in summarizing in writing an article taken from the Internet, which is initially targeted to native speakers of Arabic, such as a document listed on an Arabic website. The third progress indicator addresses the students' skills in performing conversation in Arabic, a given topic related to current events from both the U.S. and Arab cultural standpoints. In this case, the authors propose a suitable sample that demonstrates findings on research investigating globalization. The last progress indicator introduces the feasibility of Internet library sources and technology in Arabic, for students to sharpen their knowledge and stimulate and strengthen their presentation. For example: exploring Islamic architecture using power point presentations in Arabic to reinforce the scope of work on this particular topic.

2. Cultures: This goal aims for students to embrace knowledge and acquire an understanding of the cultures of the Arab world. This goal consists of two standards.

Standard 2.1: This standard emphasizes students' displaying a comprehensive understanding of the interconnection between the practices and perspectives of the multiple cultures of the Arab world. This section concentrates on diverse cultural practices related to traditions, norms, beliefs, and institutions of Arab regions. Students are encouraged to develop cultural awareness through interactions with native speakers of Arabic. In addition, students demonstrate capabilities to identify and interpret cultural attributes and values.

The sample progress indicators suggested by Alosh et al. (2006) include the examination of the role of family alliance and personal contacts in a business environment within the Arab world, as well as the living arrangements of young adults and their social networks. The authors also propose, in the first sample, that the students

interpret cultural settings, social etiquette, and business etiquette in the Arab regions. Students are synchronically able to identify the power of other elements, which participate in developing various behaviors such as religion, economics, politics, and social behaviors. The second sample progress indicator focuses on a students' ability to explore the various communities in the Arab regions, the effects of the media and technology on the Arab youth of the new generations, and how telecommunication predominates their practices, doctrine, and attitudes. In this sample the authors propose an example, which discusses topics to be debated and are related to different avenues in accessing and exchanging information among Arab youth. The third sample progress indicator for the 16th grade in this standard highlights students' competence in examining the contemporary topics in Arab regions (i.e. gender relations, political conflicts, education, family and traditions, etc.). The authors suggest, as an example, the discussion of the role of women in the work force. The next sample progress indicator focuses on students' ability to analyze the primary aspect of Arab cultures related to family relationships and notions of time and space. At this stage, students are able to examine how these aspects are observed from different perspectives. For instance, students are capable of exploring the roles of authority when establishing businesses in Arab countries, and more importantly, they are able to interpret the role of physical proximity among Arabs. In the last sample progress indicator, students are competent in communicating in a culturally appropriate manner with native speakers of Arabic in various contexts (i.e. discussion seminars related to current events in the Arab world).

Standard 2.2 In this standard, an understanding of the products in conjunction with the perspectives of different cultures of the Arab world is emphasized. Students are

proficient in defining and examining the array of cultural products of Arabic heritage (i.e. architecture, calligraphy, textiles, gastronomy, music, and arts). Students are also capable of recognizing the fundamental cultural values and beliefs demonstrated by those products.

Alosh et al. (2006) developed five sample progress indicators for the 16th grade that represent this particular standard. The first sample points out a students' capacity to examine the usage of the Arabic language system and explores the way the Arab media incorporates various linguistic expressions. Moreover, students are able to recognize and analyze the knowledge and mindset of Arabs. For instance, students discuss analogies and comparable topics published in Al-Watan al-Arabi in London and Al-Aalam al-Arabi in Cairo. The second indicator emphasizes students' competence in identifying the products of Arab media (e.g., newspaper articles, commercials, documentaries, television, and other online sites) to designate the Arab mindset and their cultural paradigm, as well as, social behaviors. The next sample indicator addresses students' ability to register, interpret, and acknowledge Arabic literature and poetry in addition to comprehending the mission, ideology, dogma and political opinion of writers. For example, students explore the image of "Mother" in literature and poems and examine its impact on Arab heritage and society. The following sample indicator points out students' competence in investigating and conceptualizing the significance and power of technology and innovation on the evolution of the social paradigm of Arabs and their civilizations and societies. For instance, students examine the impact of Cyberspace communities on the growth of interconnection and communication among Arab youth. The last sample indicator discusses students' openness to social, political, and cultural topics addressed in

an assortment of Arabic cyberspace sites such as blogs, chat rooms, twitter, and Facebook.

3. Connections: This goal emphasizes the utilization of Arabic in order to connect with other disciplines and attain related information. It consists of two standards.

Standard 3.1: This standard encourages students to use various disciplines as a medium and vehicle to supplement the target language. This interdisciplinary approach strengthens students' learning processes in gaining knowledge as well as enhancing their skills in both language and culture. Students are engaged in communicative settings while exploring a variety of subjects to expand and reinforce cultural understanding, as well as the language morphology. In higher levels of learning Arabic, learners are capable of interacting with native speakers and conversing about particular topics related to history, art, politics, and economics.

Alosh et al. (2006) suggested three sample progress indicators. In the first, students are able to acquire information in Arabic in accordance with their specific interests or content areas. For instance, students majoring in history are skilled enough to analyze passages in Arabic history and produce summaries. In the second indicator, the authors predicated that students are competent in utilizing Arabic language resources to collect data in Arabic regarding the philosophy of experts in their content area. Students, at this stage of learning explore and produce suitable information from topics they have learned from original resources. The last sample progress indicator of this standard exemplifies student's achievement in blending information in both first and second languages in order to fulfill the requirements of their academic disciplines. For example,

students gather information via the Internet and report sources that represent the outcome of a project on international relations related to economic studies.

Standard 3.2: This standard addresses the ability of learners to access information and identify various standpoints attainable only via the Arabic language and culture. Through elementary levels, students begin to explore a number of sources targeted to native speakers; however, at the advanced levels, students search for topics that fulfill their personal interests. At this stage, learners are capable of examining the meanings and comparing them to their native language order to facilitate the linguistic analysis and cultural divergences.

Alosh et al. (2006) proposed two sample progress indicators. The first indicator demonstrates that students are skillful in accessing information in Arabic media. It contrasts the specific topic with their L1 and then examines the distinctive perspectives in both references. For example, students may practice by contrasting the standpoints of broadcasts of the same events by both CNN and Al-Jazerra. The second indicator states a students' ability to access and utilize information from various Arabic sources in order to transmit the information into oral and written formats and then discuss it with Arabic speakers. For instance, students can examine and access the impact of cheap imports on the U.S. economy.

4. Comparisons: This goal implies that students are able to distinguish the linguistic aspects of Arabic while comparing and contrasting it with their mother tongue. This goal is composed of two standards.

Standard 4.1: Through this standard, students gain experience in analyzing their first language, expanding, and evolving conjecture in perceiving the structure and

morphology of the target language curriculum and instruction, which embodies coadjutant drills and tasks in order to facilitate the understanding of the language differences.

Alosh et al. (2006) developed three sample progress indicators. The first indicator denotes students' exhibition and perception of the variances between passages in both English and Arabic. For example, students employ a topic sentence of a passage in English adjacent to an Arabic paragraph to be developed and elaborated into a simple idea. The second indicator points out the students' ability to identify conjunctions in English and Arabic, such as distinguishing the use of "literally" drank a cigarette in Arabic, as opposed to smoked a cigarette in English. The third indicator denotes students' competence in comparing the degree to which poetry and musical lyrics expose social controversy. For instance, students identify and distinguish the poetry of Nizar Qabbani and Mahmoud Darwish that are affiliated with popular music. This type of artwork is considered unique and uncommon in modern western art and in the music industry.

Standard 4.2: This standard focuses on students' ability to establish recognition of cultural ideology while contrasting the cultures of the Arab regions and their own. As described in Standard 2, students gain awareness and understanding of the cultures throughout the Arab and Islamic world. Moreover, students in this section broaden their knowledge of cultures and label important prospects, practices and products while comparing and contrasting them to various cultural experiences of their own. Essentially, students are competent at developing a systematic pattern about cultures at large via a synthesis of cultural instruction at the elementary levels of their learning experiences.

Alosh et al. (2006) recommended five sample progress indicators. The first sample highlights students' capability in contrasting relevant comparable Arabic and American films while drawing attention to particular cultural practices and beliefs. For example, students compare *The Extras* (Syria) with *Fahrenheit 911*. The second indicator stresses students' competence in contrasting the system of broadcasting topical news in both the U.S. and Arab press. For instance, students report the Arabic information of *An-Nahar* and compare it with the *Des Moines Register* and *The Washington Times*. The third sample indicates students' achievements in contrasting Arabic and English telecasting as a comparison between *Star Academy* and *American Idol*. The fourth sample denotes students' capabilities in distinguishing the figure of the Arabic league and comparing it to the figure of the United Nations. The last sample emphasizes students' aptitude in interpreting and contrasting legal, social and economic systems between Arab and U.S. society. For instance, students analyze and contrast the difference between the notion of "Shura, mutual consultation" in Arab society, and legal arbitration in the United States.

5. Communities: This goal endorses the students' performances and interconnections in multilingual communities in their home country and abroad. This goal comprises two standards.

Standard 5.1: This standard emphasizes students' adeptness in using Arabic in different environments such as the classroom, social settings, and worldly travels. Students are capable of performing and producing the Arabic language based on what they have acquired throughout their learning experiences. Moreover, students perceive the significance of being productive and competent in communicating multiple languages

and acknowledging the divergences of languages. This standard introduces students to a host of opportunities to employ the Arabic language in a real world context. Upper level Arabic students are competent to manipulate Arabic in communicating not only in professional situations but also in their personal lives.

Alosh et al. (2006) proposed five sample progress indicators. They suggest, in the first sample, that students explore the language while job shadowing native speakers from Arabic society to expand their vocabulary and acquire new expressions and etiquettes. The second sample affirms the possibility for students to be engaged in internships in the Arab world or in their home country with multilingual organizations that necessitate Arabic language expertise. The third sample reinforces students' participation in community services such as tutoring or assisting beginners to join the community. The fourth sample highlights students' ability to utilize Arabic resources in both community and regional institutions to investigate and explore subjects related to professional activities. The last sample demonstrates students' aptitude in translating and interpreting for organizations and institutions and supporting the community through their Arabic language abilities.

Standard 5.2: This standard substantiates students' capability in demonstrating the sustainability of using the Arabic language for their preferred interest, further progress, and improvement. At this stage, students are confident to explore authentic materials designed for native Arabic speakers. Being physically present in the Arab world will expand and broaden the students' knowledge and cultural tolerance.

Alsoh et al. (2006) recommend five sample progress indicators. They first affirm that students are able to foster their knowledge of Arabic by being engaged in Arabic

cultural events, seminars, and workshops or are able to participate in Arabic institute protocol. The authors then confirm students' competence in sustaining reading and analyzing notable products of Arabic literature and culture. In addition, students continue in compiling a variety of publications and novels depending on their occupation. At this point, students are qualified to build web sites and blogs in Arabic that promote conversation and discussion about language and culture of the Arab world. By doing so, students could increase their personal knowledge and expand their ability to explore the Arab world for enjoyment and cultivation.

2.6 Conclusion

This chapter examined the evolution of the teaching and learning of the Arabic Language in the United States while transitioning and planning for new learning styles in the new millennium. This research explores how the addition of the standard-based learning in the information-age enhances the learning of Arabic in higher education.

From the beginning of this new millennium, there has been a remarkable growth in the area of Arabic language teaching and learning not only in curriculum, but also in the development and production of considerable numbers of textbooks and software and through the increase in enrollment of students. With the rise in the number of those seeking to acquire the Arabic language, important challenges have emerged relating to curriculum and developing and maintaining qualified teachers of the language in the United States.

Currently, there is a pressing need for the assessment of programs, standards, and professional organizations. The continued development of training, workshops, and seminars is also essential. Arab linguists, curriculum developers, and educators are

collaborating to address teaching challenges such as linguistic difficulties, fluency issues, and the reinforcement of cultural awareness. These forces, when combined, can have a positive impact on language instruction and on bridging cultural differences and promoting understanding of cross-cultural conflicts. In terms of the standards for FL learning in the 21st Century, the methodologies of teaching and learning from the last century were considered the key foundation of the standards for FL learning today. These standards enable learners to communicate in a language other than their native tongue and expand their knowledge and appreciation of other cultures. They also allow students to connect with other disciplines and attain information in Arabic (Standards, 2006). Moreover, the standards hone students' capacities in improving insight into the environment of language and culture, as well as reinforcing their contributions to multilingual communities in their homeland and around other global communities.

Chapter 3: Literature Review

"Constructivism has multiple roots in psychology and philosophy, among which are cognitive and developmental perspectives of Piaget, the interaction and cultural emphases of Vygotsky and Bruner, the contextual nature of learning, the active learning of Dewey, the epistemological discussions of von Glasersfeld, postmodernist views, and the paradigm and scientific revolution of Thomas Kuhn" (Driscoll, 2000, p. 375)

3.1 Introduction

This chapter discusses the use of technological tools in FL education from the standpoint of educators and teachers. Specifically, this chapter explores the utilization of computer-mediated communication (CMC) and computer-assisted language learning (CALL) in the instruction of Arabic in order to supplement face-to-face, hybrid, or web-based courseware. The role of the online language instructor as a facilitator or e-moderator in the virtual learning environment (VLE) is also explored to identify applicable and effective e-moderator practices that could be shared with Arabic educators. This study reflects constructivism and social constructivism theories to enhance our understanding of FL education.

3.2 An overview of constructivism and social constructivism approaches to teaching foreign languages

Constructivism is a theory of learning (Dewey, 1938; Piaget, 1973; Vygotsky, 1978), which stresses that knowledge construction is a function of learners' capability to decipher knowledge in the context of their own experience (Duffy & Jonassen, 1992). Knowledge acquisition is a progressive evolution of self-construction (Piaget, 1937), in which learners must use their own minds to obtain information (Burner, 1966). Learners

are motivated to construct their own knowledge and form new information based on previous knowledge (Kanselaar, 2002).

According to constructivist views, learning is a process leading to personal problem solving methods and contributes to intellectual development, as well as being a communal activity and sharing of cultures (Bruner, 1966). Learning is also action-oriented and conducted through collaboration, self-teaching, and active participation in specific projects. This is because knowledge is a "web of relationships" (Can, 2009, p. 62) and through the learning process, learners actively construct specific meanings for themselves. Holistic learning, authentic learning environments, diverse multimedia, online teaching applications, and instructional technologies are all supported by the constructivist approach (Reinfried, 2000). Constructivism may have the potential to reconceptualize notions of learning AFL and aid in the development of Arabic communication and social skills. It may also help in generating a proactive, responsible, and autonomous Arabic learner. Thus, the teaching and learning of AFL could benefit from perspectives on constructivism to aid in overcoming the linguistic difficulties and cultural complexities.

Driscoll (2000) argued that the following conditions are necessary for learning within a constructivist environment.

1. Support of multiple perspectives and modes of representation. It is important for students to participate in activities that allow them to value answers to their questions concerning, for instance, linguistic challenges in the target language (Duffy & Cunningham 1996; Honebein 1996).

2. Encouragement of learning ownership. Learners have an active role in their own learning and are in charge of their goals and objectives. The teacher, in this case, assumes the role of a facilitator who guides learners to achieve their goals (Duffy & Cunningham, 1996; Honebein, 1996).
3. Embedding learning within relevant and real life environments. Social interactions have a substantial effect on students' intellectual progress. In this respect, students are encouraged to interact with one another and with their teacher (Cunningham, 1991; Duffy & Jonassen, 1991; Honebein, 1996).
4. Provision of socio-moral atmospheres and social negotiation. In other words, the teachers' attitude of respect for students' ideas, interests, and feelings is of fundamental importance for the learning process (Bruner 1966; Devries 2002; Piaget 1973; Vygotsky 1978).
5. Nurturing of knowledge construction processes. This goal exposes the notion of fostering self-awareness of the knowledge (Cunningham & Duffy 1996; Jonassen 2003).
6. Provision of adequate time to investigate and participate. This goal helps students to re-conceptualize their current knowledge into new patterns by granting them sufficient time (De Vries, 2002).

Learning is a lifelong process, and learners build their knowledge through context and associations with previously learned knowledge at their own pace through personal social and physical environments (Duffy & Jonassen, 1991). In the technology environment, this implies that second language (L2) learners are encouraged to use

computers, instructional technologies, and diverse media available through the Internet to interact with the content. Such an environment allows learners to build their knowledge from online work and interactions through meaningful activities (Brown, Collins, & Duguid, 1989).

While constructivism focuses on the interaction of the individual with knowledge, the socio-constructivist perspective takes into account the interaction that occurs among or between individuals who acquire information where "learning is a social negotiation of meaning" (Vygotsky, 1978). Hence, new knowledge is constructed through the use of old knowledge acquired from past experiences and through social interaction. Learning is considered a lifelong process that is a result of our interactions with others, as well as actions in specific situations, where we are able to communicate, exchange information, and build knowledge (Brown et al., 1989). That is, to the idea that "people construct their understanding of the world through constant restructuring of their thoughts and experiences" (Can, 2009, p. 62) and that human beings relate to, and interpret their knowledge from realistic situations and occurrences (Von Glasersfeld, 1996), social constructivism stresses an efficient learning process through interactive pedagogical practices. In this context, learners are "active constructors of their own learning environment" (Mitchell & Myles, 1988, p. 162) and are also interrelated to their environment, where active participation is developed via the association of social and individual mechanisms in the construction of their knowledge (Bruner, 1966; Cobb, 1994; Vygotsky, 1978).

As a result, negotiated interaction and dialogues frequently occur between teacher and students, and among students themselves, who become aware of what they have

learned and interrelate with the social context (Vygotsky, 1978; Wilson, 1999). The continuation of these types of interactions creates extra linguistic experiences for the learner but also generates the Zone of Proximal Development (ZPD), the distance between what a learner is able to do with help and what the learner is able to achieve without help (Vygotsky, 1978). This original concept of ZPD has expanded from an explanation of the learner's cognitive capabilities, with and without support, to a notion that "the essential element in the formation of higher mental functions is the process of internalization" (Kozulin, 1990, p. 116). In this case, the internalization is seen as the internal reform of an external process that took place in the social plane (Mayer, 2008).

Therefore, to promote interaction between students, both in their homes and around the world, as it pertains to social constructivist theory, classroom activities such as simulation, role-play, and games are fostered, together with the use of online multimedia tools. Online learning opportunities provide enriched learning activities, as well as chances for interaction to sharpen the learning experience. Faryadi (2007) notes that in a constructivist Arabic classroom, the use of technology facilitates students' learning process to reinforce problem-solving competence and stimulates their ability to collaborate and engage in productive activities. The teachers enhance students' involvement and motivate them to participate. By doing so, they both learn about the Target Language (TL) and culture and practice their communication skills. Thus, students improve their performance and accomplish their goals. This approach, adopted by Malaysian educational programs, which supports student-centered learning and fits nicely with a learning environment using technology, ultimately prepares students to become effective members of their community (Faryadi, 2007).

In terms of technology integration-use (software, the Internet, other emerging technologies related to a virtual learning environment, micro worlds and hypermedia), socio constructivism adds a social dimension that was less apparent in previous technological applications by offering authentic language activities revolving around social negotiations. The Internet, for example, is an avenue for FL instructors to combine realistic and authentic resources from around the world that include visual stimuli, video media, live TV, text, listening, and vocabulary (Dudeney, 2000). Combining these teaching resources with e-mail, chat, and real time communication, along with an active autonomous learner, FL proficiency may increase significantly. It is because, as social constructivism posits, L2 learners will be more likely to develop their cultural and linguistic ideas through reflective inquiry and interactions with their peers, instructors, and native speakers of the TL.

3.3 Reinforcing and enhancing foreign language learning using technology

From the turn of the 21st Century, the demand for online FL courses in the educational field has increased dramatically (Garnham & Kaleta, 2002). As a result, current research indicates that the increased number of students showing an interest in learning more than one language, including LCTLs, has encouraged the development of online FL courses. Other contributing factors to online learning have been geographical issues, like the lack of language classes in locations close to students' homes, and learners' busy schedules (Husseinali, 2006; Lambert, 2001; Yang, 2003).

In a traditional classroom setting and in a face-to-face platform, the above constraints coupled with limited class time, number of sessions offered, large number of students in one section, and a lack of teaching materials create scenarios not always

conducive to fostering in-class language competency (Blake, Wilson, Cetto & Pardo-Ballester, 2008). Hence, Blake et al. encourage the use of online activities that support hybrid or blended courses, in which a number of class meetings are held online and some are conducted in traditional face-to-face class settings. The hybrid language course would support not only a traditional face-to-face course, but also serve as a transition to a complete virtual learning environment, designed to fulfill the educational needs of this new millennium. Recent research shows that the hybrid learning system is supported by a multitude of technological tools that have become a prerequisite in the new digital era of the 21st Century (Diaz 2010; Dubreil et al. 2011; Egbert et al. 2009). Those tools provide students with numerous opportunities to enhance their language skills. Furthermore, the multimodality of these courses provides various pedagogical opportunities for both teachers and students to expand their knowledge in an environment where the information technology platforms are integrated.

3.3.1 Harnessing the semiotic power of multimodality

Maier, Barnett, Warren, and Burnner (1996) suggest that learners retain 20 percent of what they see, 30 percent of what they hear, 50 percent of what they see and hear, and 80 percent of what they see, hear, and do (Maier et al., 1996). Stein (2007, 2008) and Van Leeuwen (2004) discuss the semiotic environment perspective, which represents resources related to physical symbol expressions in non-linguistics communicative form (i.e. signs, symbols, significations). Van Leeuwen (2004) describes semiotic resources as "the actions and artifacts we use to communicate, whether they are produced physiologically – with our vocal apparatus; with the muscles we use to create facial expressions, and gestures, etc. –or by means of technologies–with pen, ink and

paper; with computer hardware and software […] etc." p. 3). Similarly, Stein (2008) explains that the multimodal social semiotic environment leads to an instructional practice where different modes of learning take place. A semiotic environment, therefore, represents a social context where learners exchange meanings and "teaching and learning happens through the modes of speech, writing, sound, movement, gesture, image, and space" (Stein, 2008, p. 871). Through this approach, teachers and learners participate in reading and designing these physical symbolic expressions to sustain the social semiotic environment. Stein (2008) emphasizes that "It is important to note that a multimodal social semiotic approach to learning is not a framework for pedagogy, but a reconceptualization of learning, which can lead to rethinking pedagogy" (p. 871). After an analysis of the field of multimodal semiotics in education, Stein hypothesizes that instructional practices that coincide with multimodality improve the learners' skills. From Kern and Ware's (2008) standpoint, they frame the semiotic environment in assorted modes of multimodal settings for communication. This type of environment currently includes an array of technological tools newly developed in the digital era of the 21st Century. These are both portable multimedia and Internet tools such as smart phones, I pads, Skype, and YouTube (Kern & Ware 2008; Terantino 2011; Van Leeuwen 2004).

As literacy and technology converge, users and learners from various disciplines and languages are advancing their knowledge in the literacy field. Wyatt-Smith and Elkins (2008) explain how, in general, the technology has become a part of daily human life. In their study, Wyatt-Smith and Elkins compare traditional methods such as understanding of print reading and reading comprehension in an online setting with the association to multimodal text. In their conclusion, these authors explain that

technologies in an online setting, problem solving, and collaboration support students' learning processes. Their finding supports the results of Lepani (1998), Leu & Kinzer (2000), Leu et al., (2004) who also found that "students are not just learning operational skills by using these types of software, they are developing a strategic knowledge base that includes a repertoire of technological options for accessing, evaluating, and transforming information into new knowledge designs and representations" (Wyatt-Smith & Elkins, 2008, p. 69). Thus, this notion of multimodal reading and comprehension using technological tools is considered very effective at engaging the learner to participate in the most modern ways of acquiring knowledge.

In the same respect, Warschauer and Ware (2008) analyze the association between technology and literacy from three different theoretical frameworks: *learning, change, and power*. The *learning* framework, which is commonly based on quantitative studies, concentrates on the impact of technology on students' improvement in learning measured by standardized test scores. The *change* framework focuses on new technologies and considers them as tools for improving students' reading and writing, communication skills, and enhancement of their acquisition of knowledge. The *power* framework is the most complex framework because it contributes to (and goes beyond) the *learning* and *change* frameworks with the notion that Information and Communication Technologies (ICT) promote digital literacy, which is the new print literacy of the 21st Century. The power framework examines the use of technology as tools in a formal educational setting and focuses on the use of technology in relation to issues of social, educational, and economic power (Ware & Rivas, 2012).

Current research in the area of the utilization of technology in educational contexts focuses both on whether schools should use technology in learning, and, if so, how: on "what kind of learning and literacy outcomes students achieve with new technology use at home or school as measured by standardized test scores" (Deno (2003) cited in Warschauer and Ware, 2008 p. 217). Findings from Warschauer & Ware's research show a positive relationship between technology use and test scores. Multimodality in literacy adds new meaning to the written and oral texts through different modes of production, such as digital stories, images, and sounds. Thus, research in digital communication media, like e-mails, chat, instant messaging, and blogs, is crucial since it studies the nature of the new fields, online identity representation, as well as, written and spoken language options. These investigations could be employed as models for future studies and employed in FL education, particularly to less commonly taught languages like Arabic.

3.4 The impact of Computer-assisted Language Learning (CALL) on current foreign language education

CALL has been identified as an effective means of supporting the communicative approach to language teaching and to sustaining interaction and information exchange. Levy and Stockwell (2006) describe CALL as an approach that encompasses tasks, software, courseware, websites, online courses, programs, packages, and learning environments. They suggest that it serves as a supplement to face-to-face language instruction that reinforces and enhances students' skills (Knoche and McCarthy, 2004). In support of CALL, Lever-Duffy et al. (2005) examine the use of technologies through instructional design and planning that can be used in creating teaching and learning

environments appropriate for a variety of learners and their learning styles. They also look at how an instructor can, and should introduce old and new technologies into the classroom to help cross over to the new information age.

From an empirical research standpoint, Lever-Duffy et al. (2005) examine an instructional planning system used in teaching and learning environments called Design, Plan and Act (DPA). Here, a strategic process and procedures are developed for learners by creating a curriculum and ultimately evaluating and revising the outcome of the program designed. This instructional planning system is created through the form of an Instructional Blueprint to better suit learners and their various learning needs. As suggested by Lever-Duffy and colleagues, the instructional design model must be adapted to the rapidly changing pace of technologies during the instructional planning process. Adaptations should incorporate revisions, additions, and deletions of design to accommodate learners' needs and the new and expanding digital age of the 21st Century. Lever-Duffy's approach, while general, can also be applicable to the teaching and learning of foreign languages.

To demonstrate the effect of technology on FL learning, Sidman-Taveau and Milner-Bolotin (2001) conducted research on applications to motivate students' higher order skills in FL education. The authors propose using technology in teaching while implementing a project-based learning approach, which is grounded in constructivism. According to these authors, the employment of the project-based learning model using technology, requires seven steps along with practical lesson planning to enhance students' language learning:

1. Set clear learning objectives

2. Select a real life problem
3. Describe the "real world"
4. Compile authentic materials and resources
5. Consciously employ the facilitator role
6. Describe how you will assess the students
7. Outline the appropriate artifact choices

Sidman-Taveau and Milner-Bolotin (2001) examine whether the exploration of a virtual authentic cultural experience enhanced students' language learning. In their study, 700 university–level students, majoring in different disciplines, who were mostly American with no previous knowledge of Spanish, completed a lesson using ELMUNDO, (The Hispanic World Webquest) over three semesters. While engaged in this virtual authentic experiential learning, the students used grammatical and lexical topics from the course for their tasks. At the end of the lesson, students were able to provide their own reactions regarding their learning experiences, which were positive. They expressed their appreciation of the virtual trip vacation and access to various authentic cultural topics. They also showed their satisfaction in acquiring vocabulary and researching the Spanish language on the web. Despite focusing on another language (Spanish), and not on Arabic, these conclusions add weight to the argument that current technological tools could enhance the study of Arabic. The activities described by Sidman-Taveau and Milner-Bolotin can be adequate for elementary and intermediate Arabic classes to strengthen and stimulate authentic cultural experiences using virtual trips to many Arab countries. In doing so, this constructivist-based approach and project-based learning online application may facilitate Arabic students' participation in

investigating real-world problems and engaging in simulated cultural experiences via a virtual environment.

From the information technology perspective, Thorne (2008) focuses on the mediated roles of technology in relation to second language learning. These technologies, which include blogs, wikis, discussion forums, interaction simulations and collaborative games among other tools, integrate different approaches to using computers for learning and teaching. Research using these tools examined learners' linguistic accuracy, syntactic complexity, fluency as well as student participation and opportunities for invention and expression of thoughts (Thorne, 2008; Wang, 2007). Thorne (2008) also suggested that students' language use in Synchronous Computer Mediated Communication (SCMC) generate more differentially configured social and contextual language use than face-to-face interaction. Thorne (2008) reports two vital issues related to technology use in second language education. First, from an interactional and relational association lens, technology communications are comparable to real-world communications. These virtual communications convey different uses and meanings in different communities. Second, the learning experience using the Internet is different from that in the formal classroom, which produces a gap in language learning as experienced by learners due to the lack of the instructor's instant feedback. Additionally, the growth in the number of Internet users and perpetuation of the evolution of Internet information and communication tools, as well as the CMC in the language education sphere, will necessitate continuous maintenance to adapt to the needs of the new population (Thorne, 2008).

3.5 Incorporating technologies into Arabic instruction

While a plethora of studies exist with the inclusion of technology in the instruction of languages such as Spanish and French, (Kern et al., 2004; Ma et al. 1999), the use of these tools has not been investigated sufficiently or explicitly in the teaching and learning of Modern Standard Arabic. Through research concerning the integration of technology in the Arabic language classroom, this section aims to identify the factors influencing the feasibility of using technology in Arabic language curricula in higher education in the United States, including the examination of the role of the Arabic instructor online. Such examination is important to explore the online Arabic instructor's competence to generate and oversee collaborative and interactive online learning environments. According to Ditters (2006), the use of multimedia technology has finally entered the teaching/learning of Arabic language. This is an appropriate time for it, given that the interest of students seeking to learn Arabic for both professional and personal reasons has grown vastly throughout the world over the last decade (Al-Batal, 2006; Alosh, 2006; Husseinali, 2006; Rammy, 2005).

3.5.1 Tools for the teaching of Arabic through technology-based solutions

As already mentioned, the increasing number of Arabic learners and the burgeoning presence of technology in the educational context have had a direct effect on the integration of online tools in the teaching of AFL classroom. In the past, instructors of less commonly taught languages often had difficulty finding and implementing the necessary teaching materials for effective teaching (Babler, 2006). Now that times have changed, many programs are available in multimedia that provide all instructors, regardless of computer knowledge, tools to develop their own web based programs to

offer learner specific contexts and proficiency levels in controlled environments. With these programs, teachers can introduce and incorporate practice in various listening, reading, and speaking skills into the curriculum (Babler, 2006).

To allow instructors to implement their personal "technologically enhanced and tailor made instructional materials," authoring systems have been developed (Babler, 2006, p. 276). These systems can respond to learners' specific needs and desires. The instructors, while seeking out the appropriate teaching materials for their learners, must determine if the activities and programs used address the needed pedagogical outcomes. While the "instructional/pedagogical design should be the starting point" (Babler, 2006, p. 278), another factor in the decision to implement specific multimedia teaching methods is the use of intrinsic and motivating feedback that offers learners rapid responses to their activities, including questions and comments. As Babler (2006) suggests, "Language learners tend to progress better if they understand why they made mistakes" (p. 278). Thus, these feedback features can promote rapid language acquisition and learning opportunities.

No doubt, there are several areas of linguistic difficulty for Arabic learners, which can be addressed by the use of multimedia technology. As mentioned in chapter 2, Van Mol (2006) emphasizes that the study, learning, and development of proficiency in Arabic is particularly difficult for Westerners for several reasons, including a new grammatical sentence structure, a new alphabet, and new vocabulary. As a result, Van Mol points out that using multimedia could facilitate the implementation of effective teaching methods into current curriculums through the use of software programs developed for the purpose of Arabic vocabulary acquisition (Van Mol, 2006). In terms of

vocabulary, for example, due to the fact there is no current and complete Arabic vocabulary list available to learners, a great deal of memorization is required to gain full vocabulary acquisition. As a result, the implementation of software programs in the Arabic language curriculum may facilitate the systematization and classification of the language vocabulary list and sustain the retention of the new word list and expressions. To help, the Institute of Modern Languages of the Katholieke Universiteit of Leuven sponsored a project called "Advanced Receptive Arabic Language Learning" (ARALL), which attempts to implement language software to stimulate and advance students' vocabulary acquisition at a high level (Van Mol, 2006).

Another area of learning difficulty concerns the Arabic diglossia (explained in chapter 2), which increases the difficulty of the learning environment and requires the Arabic learner to acquire two varieties of the language (Van Mol, 2006). Introducing learners to more than one variety of the Arabic language does not hinder their learning as might be expected. Rather, it has been discovered that it helps them with their pronunciation issues (Van Mol, 2006).

Arabic language difficulties also arise when learners attempt to pursue advanced levels of Arabic written and oral proficiency, either to become part of the Arab world while studying abroad or to concentrate on a specific area, such as Islamic religion. One of those difficulties occurs in writing of the Arabic script. As noted in chapter 2, the printed version and the written version differ significantly, as in the case of adding a definite article (ال) to the letter (م) in the initial position in a word (i.e. المغرب, al-maghreb, Morocco). The letter (م) in this word is embedded with the definite article (ال); however, a simple written version exists, where the letter (م) is distinguished and

readable. For this reason, that both styles must be learned. To address all these linguistic challenges, Van Mol proposes programs such as the ARALL software to accelerate the acquisition of vocabulary. He expects that these programs will become a substantial vehicle for the teaching of contemporary Arabic. The programs will ultimately adapt to the needs of a constructivist curriculum through the designing of a software package that would enhance students' learning (Van Mol, 2006).

This is important because to reach the objectives of a constructivist curriculum in the Arabic language classroom, incorporating collaborative technologies into the courses is necessary. Currently, the research of Madhany (2006) finds that while the use of Arabic communication through e-mail, word processing, and the Internet is not often used in the Arabic classroom, it is commonly used among instructors and learners in their personal lives. As a result, a transition needs to occur from the personal use of these technologies to the classroom setting.

These fundamental technologies of communication are exactly the type of Internet computer programs that will fit comfortably into the pedagogy of Arabic instruction. These technologies could also function as an organizing principle towards gaining higher levels of proficiency. To help, as of 2003, Microsoft has provided fully supported Arabic language computer programs to all Internet users. Microsoft Word, in addition to the application Microsoft Office Proofing Tools, provides total Arabic language support. These two programs, combined, contain the following Internet capabilities not offered by any other Arabic Language program:

A. Type right to left in Arabic scripts

B. Type left to right in Arabic transliteration in addition to diacritics (an ancillary glyph added to a letter)

C. Define Arabic keyboards as needed by the user.

D. Pop up access to interactive Arabic keyboard

E. Show of Arabic/English keyboard comparison and coordination.

F. Ability to switch from English, Arabic and Arabic transliterated text.

G. Copy and paste capabilities of Arabic and Arabic transliterations.

H. Grammar and spelling capabilities.

I. Bidirectional dictionary and Arabic Thesaurus.

J. The ability for learners of Arabic to interact as they would with their L1.

Madhany (2006) finds that learners of Arabic can become fully proficient and function in the language like a native speaker upon mastering the Arabic keyboard along with a total Arabicized PC. The opportunities to use these specific tools give the learner the ability to also learn the composition of Arabic. In addition, the use of e-mail enables learners to strengthen their reading comprehension skills (Madhany, 2006). Given that personal computing with Arabic word processors has become common and can be used by virtually anyone anywhere across the world, students are now able to e-mail, a form of asynchronous communication, through the use of a totally Arabicized computers using Arabic-based programs. For instance, when using Maktoob, (the first Arabic/English e-mail service provider), an Arabic keyboard pop-up is available with a text descrambler, allowing users to send and receive e-mail on any computer in the world. Madhany (2006) asserts that "Using Arabic in e-mail capitalizes on the use of technology as a form of "edutainment" that delivers the Arabic language to students at a technologically

sophisticated and inventively savvy level" (p. 298). Thus, it is safe to conclude that an Arabic word processor is a necessity when learning Arabic, particularly now that e-mail, as well as the Arabic language itself, is available through the Internet.

Another tool of great relevance in the teaching of Arabic is SCOLA[4], which is Satellite Communication designed and implemented for the use of higher educational institutions. SCOLA is able to transmit and receive, through the Internet, unedited current Arabic news and online educational content, in addition to TV programs previously viewable only in particular Arabic speaking countries. Through the use of downloadable and burnable MP3 files, the Arabic language learner learns autonomous cultural and language skills through repeated listening of the downloaded information while following along with the written text. SCOLA is considered to be a government resource and mainly utilized by the Defense Language Institute Foreign Language Center (DLIFLC).

Madhany also finds that the more flexible the technologies are with the computer programs that they support, the more effective these technologies will become for learners. Students, for instance, are in need of programs that offer non-linear use. In such an environment, students would be able to begin or finish any assignment at any time while saving their data as they quickly navigate through the programs (Madhany, 2006). As we increasingly depend on computers for learning, our expectations of them and of language teachers will inevitably change. Therefore, the aim is to include generic applications found on virtually any computer in the world so Arabic instructors will feel less apprehensive about employing the basic technologies of word processing, e-mail, and the Internet in Arabic language learning.

[4] Sutton College of Learning for Adults

These technological tools can be beneficial to learners and instructors because the Internet can provide a never-ending stream of authentic teaching and learning materials. It can also lead them to access additional aids in learning appropriate vocabulary, resulting in opportunities for learners to reach native speaker proficiency. Finally and most importantly, the technology used in the teaching and learning of Arabic needs to serve a purpose for the instructors' pedagogical needs. Madhany (2006) states, "The best Arabic learning still occurs at the hands of brilliant teachers who use flexible, universal technologies to amplify their pedagogy, not to replace it" (p. 301). As a result, these teachers become online facilitators aiming to promote not only the use of technological tools, but also to reinforce the learning of FL.

3.5.2 The use of instructional technology in the Arabic classroom

As with any other language, when integrating technology in the Arabic classroom, one needs to take into account the perspective of Clark (1983) and Kozma (1994) to use the least expensive and most cognitively efficient approach while including technologies, or to consider using the media as a means of delivering a subject matter (Samy, 2006). Clack (1983) argues media effects and relates the debate to cost-effectiveness and asserts that:

> Of course it is important for instructional designers to know that there are a variety of treatments that will produce a desired learning goal. However, the utility of this knowledge is largely economic. The designer can and must choose the less expensive and most cognitively efficient way to represent and deliver instruction. It cannot be argued that any given medium and attribute must be

present for learning to occur, only that certain media and attributes are more efficient for certain learners, learning goals and tasks (Clack, 1994, p. 22)

Dijksra (1997) adds that "the information represented in media is a reduction of the information in the real world, but the way of representation makes it possible to focus on the information relevant for the acquisition of the knowledge and skills chosen" (Dijksra, 1997, p. 140). Thus, the condensed information introduced to students by media like print, radio, television, and the Internet may reinforce the process of learning Arabic and foster familiarization with the cultural characteristics, history, values, and belief systems of the Arab world.

Several researchers, O'Brien & Alfano (2009) and Samy (2006), who have examined the impact of the combination of different tools within computer-mediated communication, such as videos or email on Arabic learning, report that the utilization of video, which combines both audio and text, is useful in the classroom. One of Samy's participants in the study reported that reading the text and listening to the native speaker at the same time in a web-based assignment, with a streaming video component, reinforced the comprehension of meaning and clarified the usage of words. Hence, Maier, Barnett, Burnner (1996) and Samy (2006) find that by using the appropriate technological tools, like video and audio clips, students' learning is enhanced and their exposure to spoken words, rather than words on paper only, is broadened. Subsequently, Samy argues that "appropriate movie clips can facilitate the presentation of detailed, as well as, dynamic social contexts and events that enable learners to construct rich, realistic mental models of such situations" (Samy, 2006, p. 265). Therefore, from the non-native speakers' standpoint, the video might become an essential tool to learning Arabic. Yet,

despite the benefits of technology in the Arabic classroom, there is no need to disregard books, which could also be more available than other media to interaction among learners and do not require technicians and labs to facilitate knowledge (Samy, 2006).

3.5.3 The path to sustaining information technology and instructive knowledge

Currently, there are several Arabic programs that, taking into account the principles of affordability and the inclusion of a cognitively efficient approach and the different online tools available to language educators, have created their own platforms for Arabic language learning. As such, the University of Michigan integrated technology in the teaching of Arabic and developed a supplemental program known as Arabic for Communication (AC). This program serves as an auxiliary practice integrated into the curriculum of intermediate Arabic courses, featuring the hybridity of a language course. Embracing pedagogical principles informed in second language acquisition, AC assimilates media into Arabic instruction.

Some of the integrated media tools in the program are video, audio/music, and text. With these, learners are able to focus on specific learning areas such as pronunciation, vocabulary, grammar, listening, translation, speaking, and culture. The AC methodology has specific features and functions that combine grammatical, communicative, and sociocultural competences to address learner concerns in acquiring fluency and linguistic accuracy in Arabic. The features of this multimedia program also allow learners to be in full control of their own learning, to see text while hearing it spoken by a native speaker, and to hear their own verbal responses. Through prerecorded voice programs with instant feedback, learners are able to compare their pronunciation of words or phrases to that of a native speaker, ultimately improving their own speaking,

listening, and pronunciation skills (Rammuny, 2005). Another feature of this program is the ability to highlight words or word groupings so that learners can hear the proper pronunciations and derived forms of words. One more pertinent option of the AC program is the ability, through highlighting of words, to find cultural explanations with contextualized interactive assignments (Rammuny, 2005). AC program functions include the creation of specific scenarios with appropriate exercises and tasks to improve oral and auditory foreign language skills in addition to developing learners' "communicative and social cultural competence" (Rammuny, 2005, p. 41). Another key function of this program is the learners' ability to review specific language functions and key vocabulary. These activities direct the learner to interact with the computer, which influences the improvement of oral / aural fluency and accuracy. As can be seen, the AC program aims to enhance the multimedia exercises used in computer labs and communication-based exercises and those of face-to-face applications. The enhancements are intended to aid learners' auditory and oral proficiency, allowing them to become self-sufficient and motivated in their Arabic studies in addition to appreciating the language and its cultural aspects. Through this program, Arabic learners have a study resource that not only meets their needs and allows them to be in control of their own learning, but it affords them a "rich learning environment and an efficient means for practicing their language outside the classroom" (Rammuny, 2005, p. 46). This is important because as Rammuny (2005) states, the AC program entails discipline, time, and practice, all of which are required in the learning of a FL, especially Arabic.

In addition to the observed benefits, learners also provided a positive perception of AC by expressing satisfaction with the multimedia programs offered, finding them

extremely valuable, particularly the organizational and step-by-step presentation of the materials and stated they would like to continue with further education using these methods. One of the students interviewed reported that "[The multimedia applications] improved my conversational skills through listening and responding to real-to life-faces on screen. I felt like I was talking to real Arab men and women from different Arab countries and backgrounds" (Rammuny, 2005, p. 48). The learners also provided positive feedback concerning the structural flexibility of the program, which gave them the opportunity to skip around multiple sections and activities as they chose. Furthermore, learners reported improving their Arabic speaking, listening, and pronunciation after participating in this program. Students also responded positively to the recording capabilities that allow them to speak their responses into a microphone then to listen to their responses compared to the voice of a native speaker of the target language. This activity enabled the learner to "focus attention on intonation, stress, rhythm, and tempo while imitating a native speaker"(Rummany, 2005, p. 47). The surveyed learners also said they had become appreciative of the Arabic language and its cultural aspects in addition to seeing a significant improvement in the accuracy and quality of their oral production. The AC program allowed them to become thoroughly confident with their newly learned Arabic skills so they could use it comfortably in both business and social settings. Thus, the author concludes that the AC multimedia program "offer[s] students a […] satisfactory and efficient means for practicing their language skills (vocabulary, grammar, pronunciation) out of the classroom" (Rummany, 2005, p. 49). These results attest to the importance of programs similar to AC in enhancing the learning of AFL. Therefore, AC at the University of Michigan is a good case study to diagnose the

advantages of integrating media as a type of technology in the instruction of AFL in the United States.

Another effective program that focuses on Arabic linguistics and literature (intermediate to advanced levels), as well as on specialized fields such as Islamic studies is presented by Ditters (2006). The lessons of this program emphasize information transfer and skill building by using activities related to the dynamic interaction of the learner with technology, individualized attention, adaptive presentation of the multimedia materials, and instantaneous and frequent feedback to the learner. Ditters states, however, that one of the necessary conditions is that "the teaching staff should be fully aware of these currently available means and inclined or even eager to stress technology for the learning process" (Ditters, 2006, p. 242). This is why instructors need to maintain current knowledge and continuously train in the use of the latest software and other technologies that can be utilized in the teaching of Arabic.

Multimedia, therefore, offers instant ability to access selected authentic information from Arabic newspapers and web based broadcasting regarding specific topics. The availability of such newspapers, together with other online reading materials in addition to web-based broadcasting, creates a host of new learning capabilities. As a result, Ditters found that native Arabic speaking instructors offer in an online environment "authentic data, proficiency, and interactive skill formation" (Ditters, 2006, p. 244) to the learners. Although Ditters also found that many learners have been able to become fluent and proficient in the Arabic language without the use of multimedia sources, he also argues that we are living in a world that is "characterized, controlled, and dominated by electronic information and communication technology" (Ditters, 2006, p.

245). With that in mind, we need to join the multimedia technological age and take full advantage of what it has to offer to our learning and teaching experiences, keeping in mind that technologies will continue to change and advance.

Yet, instructors using computers and multimedia methods find that despite the changes, they are able to "revise their pedagogical paradigms to accommodate the increasingly common use of such technologies" (Stevens, 2006, p. 254). Their ability to adapt in this new environment is important because teachers need to promote and sustain their technological and instructive knowledge, particularly since in some instances, students are more accustomed to using computer-based tools than their educators. Therefore, becoming familiar with the most current educational software (such as blogs, wikis, podcasts, chat, and instant messenger) to better communicate with students in an online environment and transition to the digital era, where a teacher is portrayed as an online facilitator, is becoming not an option but a requirement.

As noted earlier, this new transition and the introduction of online communications have introduced new teaching and learning capabilities in Arabic. Stevens (2006) for example, found that many of the chat and instant messenger programs include text, voice, and video. He also found that these programs allow the Arabic learner to access online dictionaries and translators while conversing and interacting with native speakers of their target language. Internet communities have developed their virtual learning environment in different languages, allowing communication between learners to support their learning through scaffolding (Stevens, 2006). Thus, instructional technology has become a major teaching/learning aid by allowing the learners/teachers to "engage in meaningful, authentic, and truly communicative activities that enhance their

ability to learn … Arabic through the use of the Internet"(Stevens, 2006, p. 260). As a result, this virtual learning format not only enhances students' linguistic capabilities of the target language, but it enriches their cultural knowledge, as well.

3.5.4 Harnessing the power of constructivism and socio-constructivism in Computer-assisted Language Learning (CALL)

Following the constructivist approach, the integration of technology has been applied to FL education, specifically e-mail, text conferencing, and electronic student dialogue programs (Weasenforth et al., 2002). According to Weasenforth et al. (2002) "Asynchronous communication realizes constructivist tenets in that it changes the role of instructors and students and extends the classroom in time and space. Students take on a more active role" (p. 59) and in doing so, they learn to "become problem solvers rather than just memorizers of facts" (Collins and Berge, 1996, p. 3). Yet, the role of the instructor cannot be undermined, and as Berge (1998) asserts, constructivist teachers "model cognitive processes, provide guided instruction, encourage reflection about thinking, give feedback and encourage connections between new and old information" (p. 73). These constructivist characteristics describe, as well, the role of an online facilitator.

Weasenforth et al. (2002) found that students' surveys indicated that the occasional instructor participation in online discussion often stimulated conversation regarding the course materials. These discussions offered valuable input and often created learner intentional construction of meaning. The primary goal was the "creation of [a] meaningful, coherent representation of knowledge over time and with support and instructional guidance" (Weasenforth et al., 2002, p. 64). Such guidance often set the pace for the discussion through thoughtful questions and prompts and the combination of

existing knowledge with new information. It was also noted that with explicit instruction and strict guidance, the learner often exercised thinking skills that reflected on his or her critical thought processes. Thus, the authors conclude that "the provision of instructor-provided prompts elicited selection of critical, analytic operations in dealing with course materials" (Weasenforth et al., 2002, p. 66).

In terms of technology integration, Bonk and Cunningham (1998) suggest that the instructor needs to combine a variety of multimedia to support constructivist and social constructivist practices. For example, such combination of multimedia allows learners to engage in threaded discussions, which would give them the ability to use multimedia to their advantage and learn through processes not occurring in the face-to-face environment of a classroom. According to the constructivist approach, as it relates to second language education, learners are unable to grasp formed or "pre-emptively encoded" word meaning; however, they are capable and skilled, taking into account the digital age in the 21st Century, to construct their own meaning from various online tools, such as online dictionaries or translators, including target language sound systems (Brown et al. 1996).

In regards to the Arabic language, Arab Academy, the world's global pioneer in e-Learning and in the development and implementation of online electronic and information technology software programs used in the instruction of Arabic, provides an applicable online software package encompassing most of the technological tools, including media that follows constructivist tenets. Arab Academy, despite being centered in Cairo, Egypt, has, since 1997, reached 25,000 learners in 190 countries. Arab Academy uses a university level curriculum that is based on the ACTFL (American Council on the Teaching of Foreign Languages) guidelines and covers all language

levels.

In addition to its online Arabic learning programs, Arab Academy also provides Arabic language training for instructors and students, Arabic immersion study abroad programs in its facilities in Cairo, and Arabic proficiency testing. All instructors approved to use Arab Academy in their teaching programs have been declared to have highly regarded skills in the teaching of AFL. Arab Academy offers an array of language, cultural, and instructional online programs to be included into an instructor-specific curriculum. The basic function of Arab Academy rests on the dedication to customize learning programs to increase the personal and professional fluency of the Arabic learners using its programs. Arab Academy's mission is to develop and build up Arabic language and culture worldwide through the use of its expertise in current multi-media technologies in the educational arena. Thus, through the use of its online language courses that follow a constructivist approach, Arab Academy provides a comprehensive learning experience that may be similar to, but also superior to the face-to-face classroom setting. Its online Arabic language courses are interactive in addition to allowing learners to work on the programs and assignments at their own pace to build language skills. It also offers its learners a variety of online support, including thousands of online assignments, in-depth vocabulary exercises, an instant online dictionary, and translation, all in addition to instructor support, attention, and feedback, as well as an online student community. Lastly, to increase students' learning retention and speaking confidence, there are language-speaking courses, where learners can converse with an expert Arabic language instructor; they can ask questions, and review and practice what they have been learning. While research is needed to evaluate the effectiveness of these programs, there

is no doubt that a myriad of online Arabic programs built upon constructivist tenets, could be an essential component.

3.6 The role of an e-moderator

The inclusion of online Arabic programs for language instruction would not be effective if it were not for the role of the online instructor or the e-moderator, who is the facilitator of the online FL course. The role of the e-moderator is to direct and stimulate learners' competence through a process of investigation and testing (Salmon, 2003; Al-Fadhli, 2009). As a result, the instructors' competence in moderation techniques and tools (i.e., students' online voice activated performance) utilized in CMC (i.e., e-mail, bulletin board, and conferencing) is indispensable for sustaining distance FL learning processes (Paulsen, 1995).

To be successful, a language course e-moderator needs to have pedagogical, social, management, and technical skills. Operating as an e-moderator in online teaching is not the same as teaching in a face-to-face classroom setting. There are many differences, as Dewar and Whittington (2000) point out, particularly when explaining the feedback of an online instructor. These authors affirm that "While educators definitely have a role in providing honest and constructive feedback, how it is done online requires more sensitivity" (p. 2). Salmon (2004) and Ellis & Hafner (2003) add that the e-moderators' online feedback should provide prompt, systematic, and thorough input to guide learners' acquisition of information. In doing so, learners may benefit from these various feedback strategies to gather information, verify their comprehension, and revise their understanding. Additionally, this type of learning may also provide a collaborative experience, where learners can share feedback and constructive criticism and allocate

ideas to enhance their cognitive processes.

Accordingly, online facilitators may benefit from understanding their students' learning styles and personalities to provide them with valuable and productive feedback. This can avoid ambiguities and sensitivities through the virtual learning environment, since the e-moderator designs, develops and introduces topics for discussion in addition to leading, moderating, maintaining focus, and summarizing the discussions. This process occurs through online forums, where students pose questions and look for answers. Such interaction ultimately helps learners explore new thoughts and ideas since the key role of the e-moderator is to help students build comprehension using online stimulation tools (Salmon, 2000). Thus, the e-moderator must entice learners through challenging communicative learning environments and train them to conduct and lead a discussion. A well-thought-out online discussion allows learners to look in on a designated topic, think about it, develop original ideas about that topic, then respond at a later time convenient to their schedules.

Equally important to teaching students is the e-moderator's ability to set goals for learners and to motivate them to want to participate, to contribute, and ultimately, to learn. To achieve successful student participation, the e-moderator must simplify and decipher data to enable the many different types of learners to merge into the new learner community. Moreover, the e-moderator must also give learners a reason to contribute and participate in discussions and create a social setting where the learners will feel their contributions have value to the discussion topic (Anderson & Kanuka, 1997). To establish a meaningful social online environment, the e-moderator must be creative in "baiting" the discussion group by posing thought provoking questions and responding to

questions and statements while maintaining total control over the learners participation on a discussion board. Berge (1995) suggests that consequently, the most important task of an e-moderator is to model successful and valuable teaching. Similarly, Rohfeld and Hiemstra (1995) and Berge (1995), confirm that the e-moderator needs to accept the responsibility to keep discussions on target, to also offer special knowledge and perception, merge different discussion threads and course modules, and sustain group synchronization. Finally, the e-moderator needs to assist the learners in overcoming obstacles with the hardware and software, making potential problems transparent and not a deterrent to online learning. Thus, an understanding of IT (information technology) will undoubtedly aid the e-moderator in acting as the bridge between the learners and the technology being used (e.g. software, hardware). Hence, there exist structured stages for an e-moderator to follow for better teaching and learning outcomes.

Salmon (2003) proposes a five-stage e-moderating model of teaching and learning for efficient online communication and collaboration among learners.

1. Access and motivation: The first stage confirms that the learner comprehends his/her learning environment and will have successful access to the online course. At this stage, the participants are motivated to learn by spending time and effort to master the new environmental system. The e-moderator's role, in this stage, is to welcome the participants and provide them with an outline of the course (i.e., rationale, objectives, course syllabus). The e-moderator needs to make sure that all participants have successful access to the course and encourage, reassure, and direct students to online help. An e-moderator also provides responses to students' contributions and acknowledges successes.

2. Online socialization: In this stage, participants establish online identities and find others with whom to interact. With the help of the e-moderator, the learners become familiar with using the tools and materials of the course. At this stage, the number of participants and their frequency of use increases. They are now capable of building discussions and creating opportunities for socialization; as result, the online communities develop. An e-moderator on the other hand, just weaves the discussions, summarizes topics, and provides feedback.

3. Information exchange: In this stage, participants begin to share relevant information and interact with others to become familiar with course materials to expand on the course content. The participants learn how to conduct online discussions and explore answers or aspects of problems and issues. An e-moderator provides direction to learners, and summarizes the topic of the week, and facilitates discussion when necessary. He or she also provides learners with comments where appropriate and guidance through learning materials.

4. Knowledge construction: In this stage, group discussions occur and interactions become more collaborative. The participants interact with each other and contribute by sharing ideas and thoughts on a given topic. Reading and responding to messages from other learners is the heart of knowledge construction. The participants learn as much from other learners as from the course material. A high level of tutoring from the e-moderator is expected in this stage, where he or she offers information and supports students' learning when needed. At this stage, an e-moderator provides timely feedback on students' productions, shows support, and helps when necessary.

5. Development: In this stage, participants search for ways to achieve personal goals

and benefit from the system, as well as, to integrate online processes into other learning processes. The learners become responsible for their own learning. The users demand better access and faster responses. At this stage, the learners are more confident about the learning environment and explore their own thinking, whereas the e-moderator provides constructive criticism and personal feedback.

Noticeably intertwining with Salamon's five stages is Shank's (2001) model. This model highlights four elements essential to any successful e-moderator strategy:

1. Administrative: E-moderators provide the framework for learning, create smooth course operations, and limit the anxiety of the learners.

2. Facilitation: Facilitation builds an online community, moderates the learner's interactions, and enhances the learning results. The facilitation element supplies thought-provoking questions for discussion.

3. Technical: Technical issues are addressed quickly so that the course runs smoothly. E-moderators must have a background in the technical systems and be able to direct learners toward technical help.

4. Assessment: In order to guarantee quality work and show the learner how he/she will be evaluated, the e-moderator must provide feedback, direction and examples of assignments to the learners. The e-moderator also needs to help those learners with difficulties in completing assignments and assist them in meeting those course objectives.

Looking at the last decade of Arabic education, it is evident that substantial growth in the interest in this language and the use of technology-based solutions (such as the Arab Academy program previously described) have occurred. However, while there is a great deal of development in many FL online programs, there is a lack of research

and investigation concerning the role of the online Arabic instructors / e-moderators. Yet, Al-Fadhli (2009), who examined the pedagogical effect of e-learning on higher education and compared traditional learning with e-learning, including the role of the online instructor, already found differences between the Arabic face-to-face instructor and the Arabic online one. Al-Fadhli describes the Arabic in-class instructor as authoritarian, strict, and controlling, while the online instructor already assumes the role of a facilitator (Al-Fadhli, 2009). Ultimately, it would be of great interest to see the extent to which Arabic online instructors apply Salamon's (2003) five-stages of the e-moderator model. Salamon's and Shank's models may possibly be applicable to Arabic learners to progressively amplify their participation in the CMC format and to become comfortable and competent with the virtual learning environment. Additionally, while the role of an e-moderator in the Arabic language field has not been explored sufficiently in the United States, the concept of the e-moderator discussed above can serve as guidance to Arabic programs using technology in the teaching and learning in online settings.

3.7 The future of online language teacher education and CALL in the U.S.

According to Worldometers, there were 2.1 billion people using the Internet around the world in 2010 (Barber, 2011). Also noted was the fact that the United States has a larger Internet user population than many other countries where there may not be the same Internet access capabilities, access to computers, or people with knowledge of how to use them. The net (the Internet and related technologies) generation and the digital natives, those who have grown up in the computer and technological age, are learners who are known to think and process information fundamentally differently than any previous generations (Prinsky, 2001). Arnold and Ducate (2011) affirm that learners

of this generation, from elementary age to university levels, find technology and the multimedia used in learning valuable and an important part of their educational experiences, social networking, and entertainment. The authors also note that as a result, "CALL implementations and research have made a lot of progress and will only grow in influence of the language teaching profession" (p. 13).

Yet, despite such progress, research in CALL development and language teacher training is difficult due to the fast growth and change in modern technologies (Levy, 2007). Besides technological changes in software and computers, other factors that will impact CALL as it is used in FL instruction in the future are level of language proficiency and physical environment. Chandler and Feenberg (1995) argue that while new technologies are being brought into the teaching arena, the results may not always be as anticipated. Warschuer (2004) holds that "computers generate learning the way that a fire generates warmth," (p. 1) implying that the quality of learning with computers is strictly based on how the computers are being used to learn. If utilized effectively, technologies of the future will be able to create social contexts that would shape how instruction and learning transpire. People who, for instance, would not be able to meet will have a way to connect. This idea has already given educators the opportunity to expand their classrooms to include a virtual space, where their students can meet experts or other learners (Kumari, 2001; Lomicka & Lord, 2007). Hence, CALL can lead FL instruction into new pedagogically sound directions.

Language instructors themselves are pivotal to the future of CALL in that they choose the tools they deem necessary for their specific teaching methods. Currently though, as noted in chapter two, many Arabic language instructors have received their

certification and degrees through programs with little or no formal training in the use of modern technologies in the teaching of foreign languages (Hubbard, 2008). In addition to the lack of appropriate training, Kessler (2006) and Robb (2006) point out seven elements that increase the inexpertness of FL instructors. First is *inertia*, when instructors often follow past successful teaching methods. Second is *ignorance*, meaning that instructors are not aware of, nor do they understand CALL and its capabilities. Third are issues of *time restraints*, described as the difficulty of adding the CALL approach to established and full curriculum loads. Fourth is *insufficient infrastructure*, which means that modern technologies are simply not accessible to instructors within their teaching environment and/or facility. Fifth are *insufficient standards*, where FL instructors may potentially not understand technology standards and therefore may not enforce them. Sixth, there is a *lack of established methodology* where there is absence of experience and clarity with the instruction in the methodologies of CALL. Lastly, there is a *lack of experienced, knowledgeable educators*; this is the most important obstacle, in that instructors who hold a Masters and/or PhD degree and are voluntarily using CALL, tend to be self-taught and self-guided learners. To remedy the above challenges and to ensure the future of CALL, improved teacher training to incorporate CALL and constant revision of classroom curricula that takes advantage of multimedia will be essential.

Bax (2003) defines CALL development as a state where the technology becomes invisible, where decisions regarding the use or nonuse of technology are made solely on the basis of what is best for a given teaching situation. In the same regard, Hubbard (2008) further explains that the role of CALL "is to equip current and future language teachers with the knowledge and skills, both technical and pedagogical, to incorporate

technology effectively into their classes" (p. 180). Like Bax, Hubbard believes that technology standards have an important role to play in the motivation of, and introduction of new technologies into existing educational programs for FL instructors. Yet at the same time, Hubbard believes that there appears to be a lack of value and recognition of the roles of CALL specialists and poor compensation for these specialists. While it is true that the roles of CALL in Arabic language teaching need improved recognition, professionals in Arabic language education are increasingly becoming more aware of CALL and the FL standards (5C's) associated with it through newly emerging training programs. As a result, instructors are already using modern technologies to give and receive communication and instruction, as well as, to collaborate with students and colleagues in addition to completing various tasks and projects within their curriculums. Also, more blended courses are being developed and offered using a combination of face-to-face and online instruction (Hubbard, 2008).

According to Luke (2008), for example, cultural aspects of FL education can be taught with the aid of technology, which can be an integral part of language instruction in the future. Prospective FL instructors simply need to reflect on past experiences and seek opportunities to apply classroom instruction to real-life situations, in addition to the prospect of employing networks that give instructors the ability to exchange ideas and to give and receive support. CALL offers ways of integrating modern technologies into teacher education programs through the use of discussion boards, a form of asynchronous computer-mediated communication (ACMC), in addition to promoting much needed social interaction and cognitive growth among existing and future instructors (Chun, 2011).

3.8 Challenges of using and researching the use of technology in the teaching and learning of Arabic

Despite the reported benefits of the online Arabic programs (i.e. ARALL, AC, Arab Academy), their development and implementation are not exempt from challenges. First of all, it is extremely time consuming to transfer the multimedia materials (i.e. video, audio, imaging, as well as, the texts) into software products because of the amount of virtual memory space these types of programs may require, tempting users to avoid any operating system conflict or incompatibility. The design of the interactive materials is extremely complex, especially graphical user interfaces, taking into consideration ease of usability and learnability, as well as the simplicity of navigation menu designs. Thus, while technology has proved to be extremely beneficial to the learning of foreign languages, there are some disadvantages to note, which are more evident in languages like Arabic. The first is that humans and machines are unable to process speech in the same manner or competency. Humans have the ability to recognize "phonological, lexical, semantic, grammatical and pragmatic conventions that constitute a language" (Ehsani and Knodt, 1998, p. 56), whereas computers recognize speech as digital values and operate in "clearly circumscribed linguistic sub-domains" (Ehsani and Knodt, 1998, p. 56). The greatest limitation found in speech reorganization programs is a large vocabulary of the target language. If the vocabulary is extensive, then the computer is more apt to make multiple reorganization errors because of similar sounding words within the language. In fact, the Arabic language has one of the largest vocabularies of the less commonly taught foreign languages. As a result, a noise-free setting and clear enunciation by the learner create a more accurate environment, causing the computer to

recognize words and respond faster with fewer inaccuracies. Accurate speech processing technologies are extremely complex and "customized to recognize and evaluate the disfluent speech of language learners" (Ehsani and Knodt, 1998, p. 61). However, there still exist some Arabic programs that have had a high rejection rate resulting from misrecognized utterances because of the learner's accent and pronunciation of the target language.

From a technical standpoint, Madhany (2006) adds that the downside is that Arabic often becomes jumbled and incomprehensible when sent through the Internet. As a result, Madhany recommends avoiding reliance on an Arabicized computer and to instead, using a typical computer and focus on using Arabic based e-mail and communication programs, such as the free site Maktoob (Madhany, 2006). Costs are also attached to the general maintenance of the programs in addition to instructor training. On the reverse side, authoring programs can be funded or offered by government or educational institutions to those Arabic instructors with virtually no previous programming experience. This allows instructors to be flexible with teaching activities, focusing on learners' needs and proficiency levels and includes web-based learning materials at a low cost to the institution. Nonetheless, the cost, in general, is of the utmost concern and authoring systems tend to be expensive.

Furthermore, most Arabic programs are expensive to implement; Software is extremely costly and can run upwards of $200,000.00. The Arabic for Communication (AC) Interactive Multimedia Program at the University of Michigan, for instance, requires additional costs for necessary workstations, maintenance, hardware, instructional training, and licensing rights. Additionally, once in use, the program may incur technical

issues such as version upgrades to the word processor and/or operating systems. Instructional technology specialists are required to implement the multiple complicated multimedia components used within each activity and exercise, transforming them into logical and rational computer applications. (Rummany, 2005). As a result, the cost of training and maintenance will always remain one of the major drawbacks in using technology in the education field (Sidman-Taveau, and Milner-Bolotin, 2001).

There are also significant challenges facing researchers promoting the learning framework described previously as discussed by Warchauer and Ware (2008). First, it is difficult to demonstrate the relationship between technology and literacy. Second, technology is better understood when examining its effect on restructuring the social ecology, as in a virtual social structure, rather than in improving students' literacy. Lastly, assessment tools of schools concentrate on the traditional measurements of reading and writing, lacking any automated measurements to fit the needs of the new century (Warschauer and Ware, 2008).

3.9 Conclusion

Over the last several years, advances in multimedia technologies have created an array of teaching/learning methods that supplement traditional face-to-face methods. Computer-Assisted Language Learning (CALL) has advanced and requires in-depth and sophisticated diagnostic tools, as well as, feedback that primarily focuses on the remedial practices needed for language proficiency.

Despite the fact that the federal government funds Arabic programs, the funds are few and production costs extremely high; the maintenance and teacher training also remain costly. Yet, these limitations will no doubt, be lessened, and CALL programs will

become greatly improved when fully available on a much larger scale within the commercial markets across the world.

From the online facilitators' standpoint, language e-moderators need to understand their roles, have a strong desire to instruct online, and be willing to explore their skills by mastering the online process. Through merging teaching experiences in the online and face-to-face environment, the language e-moderators will gain self-confidence in their abilities to facilitate learning and share knowledge. As a result, the outcome will be creative e-moderators who can create e-tivities and generate successful online learning experiences, whether through online language courses or other disciplines. To maintain such success however, e-moderators have to multitask to ensure the progress of the learners throughout the five stages of an online learning process as described by Salmon (2000). Furthermore, e-moderators must be aware of the technological and pedagogical challenges as a consequence of modifying a face-to-face or hybrid course. With a well-planned online course and outstanding teaching strategies, the learning process can develop into a gratifying experience for both participants and e-moderators. In Arabic programs, the virtual learning environment creates important opportunities for teachers and learners to expand their horizons due to the innovative communication approach and access to a range of exciting content. Eventually, this process will facilitate the construction of knowledge, linguistic capabilities, and cultural understanding as well.

Chapter 4: Methods

4.1 Introduction

This chapter describes the research questions addressed and explains the mixed methods design used to conduct this research. This chapter also describes the setting, participants, sampling procedures, and instruments used. Taking into consideration the definition of the independent, dependent, and intervening variables, this section also describes the analytical strategies used to examine the Arabic instructors' beliefs about the National Standards for Foreign Language Learning and the incorporation of Computer Assisted Language Learning.

4.2 Research Questions:

Through the main descriptive research question 1, this study aims to explore Arabic instructors' knowledge and use of the National Standards for Foreign Language Learning (NSFLL) in the 21st Century.

Question 1: To what extent do Arabic instructors in United States universities implement the National Standards for Arabic Language Learning in their teaching of Arabic?

This question is divided into sub-questions to investigate the Arabic instructors' previous knowledge of the NSFLL, and determine their attitudes concerning the NSFLL.

Sub-question 1.1: To what extent do Arabic instructors know the NSFLL?

Sub-question 1.2: What attitudes do Arabic instructors have towards the NSFLL?

The main descriptive question 2 examines current uses of technologies in the Arabic language classroom (i.e. web tools, including wikis, blogs, podcasts, forums, chat rooms).

Question 2: How do Arabic instructors incorporate CALL in their teaching of Arabic? This question is divided into comprehensive sub-questions to investigate the use of CALL in the Arabic classroom, explore the types and versions of Arabic tutorials and online alternatives implemented in the Arabic course, examine the degree of incorporation of technologies within the Arabic classroom, investigate instructors' perception towards Computer-Assisted Language Learning (CALL) in order to foster NSFLL in their teaching, and identify the role(s) of the Arabic instructor in the virtual learning environment.

Sub-question 2.1: On average, what is the proportion of Arabic instructors who incorporate CALL in the teaching of Arabic?

Sub-question 2.2: What is the perceived usefulness of CALL in the teaching and learning of Arabic?

Sub-question 2.3: What type of online resources do Arabic instructors use in their teaching of Arabic?

Sub-question 2.4: What is the role of the Arabic instructor in the virtual learning environment?

Sub-question 2.5: To what extent do Arabic instructors incorporate CALL to address the content of each of the standards (*Communication, Culture, Connection, Comparisons, and Community (5C's)?*

This sub-question will focus on each of the standards separately.

Question 3: To what extent is there an association between instructors' perceptions of the usefulness of CALL and their attitudes toward using CALL in the teaching and learning of Arabic at the university level?

It was fundamental for this study to implement this inferential question (Question 3) and to draw concrete and methodologically sound conclusions, so that carrying out the research would produce significant data (Trochim & Donnelly, 2006).

The main descriptive research question 4 focuses on Arabic instructors' attitudes concerning the use of CALL in their Arabic teaching.

Question 4: What are the attitudes of Arabic instructors towards the use of CALL in their teaching?

This question includes a series of sub-questions addressed in the qualitative section of this study and analyzed Arabic instructors' perceptions in reference to the benefits and challenges of using CALL in the teaching of Arabic.

Sub-question 4.1: What are the benefits that Arabic instructors attribute to the use of CALL in their teaching?

Sub-question 4.2: What are the challenges that Arabic instructors perceive with the use of CALL in their teaching?

Sub-question 4.3: To what extent do Arabic instructors think that CALL enhances the learning of each of the Standards (5C's)?

In order to address sub-question 4.3, a sequence of probes concerning the NSFLL was required: (*Communication, Culture, Connection, Comparisons, and Community).*

4.3 Research Design

This research is based on a mixed-methods design, where quantitative and qualitative methods of data analysis were utilized. The goal of mixed-methods is to draw from the value and the significance of data that represent the analysis of this research. The mixed-methods design aims to congregate both qualitative and quantitative data on

the topic of integrating standard-based technologies in the Arabic curriculum (Creswell & Clark, 2006). This approach allows for a more comprehensive evaluation and greater accuracy in order to maximize the credibility of the findings. Researchers discuss the importance of multiple methods and triangulation for obtaining a better understanding of the findings (Trochim and Donnelly, 2008; Remler and Van Ryzin, 2011). This triangulation metaphor "is largely a vehicle for cross validation when two or more distinct methods are found to be congruent and yield comparable data" (Jick, 1979).

The expectation was that the quantitative information regarding the use of standards for FL learning and the practice of technologies in the classroom, combined with the qualitative portion of this study would provide a clearer picture of the attitudes of the Arabic instructors concerning their utilization of CALL and NSFLL. This study used a non-experimental quantitative design because it describes the attitudes of the Arabic instructors, and the descriptive questions related to these attitudes provide reliable and credible responses to the research questions. Qualitative analysis complements the quantitative design and provides an in-depth understanding of the NSFLL, CALL, and their interactions in the classroom.

4.4 Population and Sample

The population of interest consisted of instructors teaching Arabic in universities and colleges in the United States. The study sample included Arabic instructors who are members of the STARTALK program (known as a division of the National Security Language Initiative, funded and established by the U.S. government in 2006), members of the American Association of Teachers of Arabic (AATA), and members of the American Council on the Teaching of Foreign Languages (ACTFL). To further expand

the sample of participants, individuals from the Center for Advanced Research on Language Acquisition (CARLA) (http://www.carla.umn.edu/lctl/db/index.php) were also included in this study. These organizations are the best-known professional associations of FL instructors in the United States. While a significant number of Arabic instructors at the higher education level are associated with CARLA, there are still some states that did not appear in the database, which indicates that these states did not offer Arabic. In addition, CARLA relies on institutions to report updates and changes in their foreign languages course offerings.

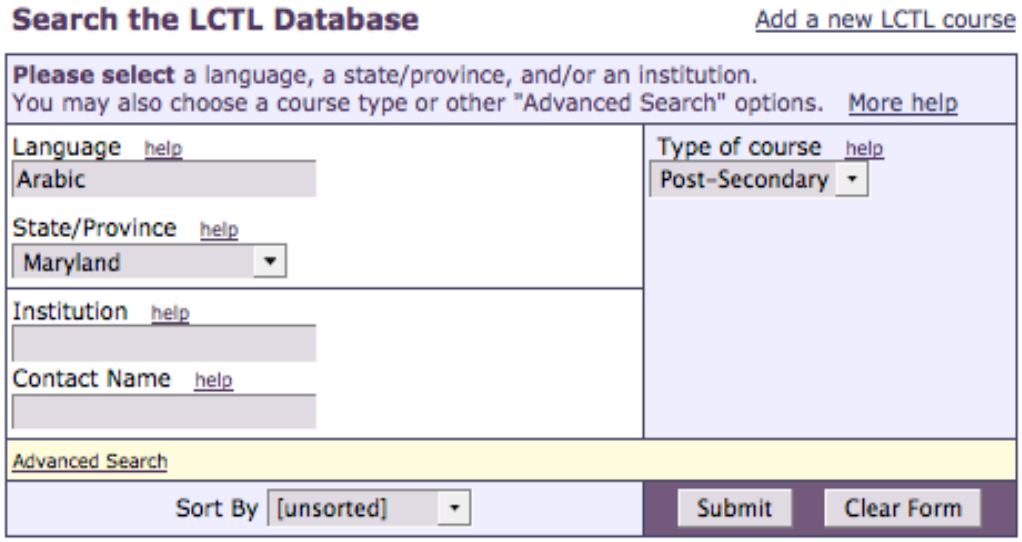
To select the sample for this study, a nonprobability intentional sampling method was used. This method focuses on retrieving data from participants who are experts in a particular subject or have a very specific perspective (Patton, 2002). Using this sampling method was important because of the need to sample for specific participants: Arabic instructors who might be using technology in their teaching of Arabic. Given the specific characteristics of the participants in this study, an intentional sampling method was the best approach to collect the sample.

A hundred institutions nationwide where Arabic language is taught were selected to be part of the sampling frame. These institutions were selected using the CARLA institute database, which is publicly accessible via the World Wide Web link mentioned previously. Through the CARLA database, it was possible to access Arabic course information, program information, and contact information of the Arabic instructors or coordinators from one hundred universities and colleges in the United States.

An invitation to participate in the study was sent to Arabic instructors who were officially listed in the database. This searchable database lists specific Less Commonly

Taught Languages (LCTLs) that are taught in North America with advanced search features (please see Figure 4.1 below).

Figure 4.1: North American LCTLs Course Listening Database (CARLA),



http://www.carla.umn.edu/lctl/db/index.php

To have a sense of the predominance of Arabic teaching in the United States, I searched in the database for all higher education institutions in the State of Maryland that offer Arabic language courses. As can be seen in Figure 4.2, 12 institutions in Maryland State offer Arabic language classes at the post-secondary level.

Figure 4.2: Post-Secondary Arabic Language Classes in Maryland State

Results

12 matching records.

Language	Institution	City State	Level	Type of Course	Special Affiliation
Arabic	Morgan State University	Baltimore MD	Elementary (1st year) Intermediate (2nd year)	Post-Secondary	
Arabic	Johns Hopkins University	Baltimore MD	Elementary (1st year) Intermediate (2nd year) Advanced (3rd year and beyond)	Post-Secondary	
Arabic	Washington College	Chestertown MD	Elementary (1st year)	Post-Secondary	
Arabic	University of Maryland, College Park	College Park MD	Elementary (1st year) Intermediate (2nd year) Advanced (3rd year and beyond)	Post-Secondary	
Arabic	Goucher College	Baltimore MD	Elementary (1st year)	Post-Secondary	
Arabic	Towson University	Towson MD	Elementary (1st year)	Post-Secondary	
Arabic	United States Naval Academy (USNA)	Annapolis MD	Elementary (1st year) Intermediate (2nd year)	Post-Secondary	
Arabic	Community College of Baltimore County	Baltimore County MD	Intermediate (2nd year)	Post-Secondary	
Arabic	McDaniel College	Westminster MD		Post-Secondary	
Arabic	Univeristy of Maryland	College Park MD	Elementary (1st year)	Post-Secondary Community	
Arabic (MSA)	University of Maryland, Baltimore County	Baltimore MD	Elementary (1st year) Intermediate (2nd year)	Post-Secondary	
Arabic	University of Maryland, University College	Adelphi MD	Elementary (1st year)	Post-Secondary Distance	

I anticipated having difficulty reaching a sufficient number of participants for this research, given the low response rate associated with electronic surveys (Flower, 1984). Thus, to increase my sample size, I also invited Arabic instructors I have met during conferences, workshops, and symposiums (i.e. STARTALK, LEARN, Qatar fellowship, etc.…) in the past few years to participate in the research. This study reached 112

participants from whom 6 cases were deleted from the database because they answered only the first two questions of the survey. The number of participants analyzed is 106 Arabic instructors.

This sample size (N= 106) was a suitable figure to support the statistical procedures utilized in this study and to avoid sample bias as much as possible. The participants in this study included Arabic instructors who may have taught or are currently teaching a hybrid Arabic course. A hybrid course, known also as a blended course, is "a course which includes both face-to-face meetings and online components" (Ko & Rossen, 2011, p. 16).

As Table 4.1 shows, the total number of participants was (N= 106). Over half of the participants (53.8%) were female and were between 35 and 54 years old (60%). About four-fifths of the sample reported Middle Eastern or Arab (81.1%) as their ethnicity; 15.1% reported to be White or European-American. Three participants were Hispanic and one was African-American. Furthermore, most of the instructors were foreign-born (82%) and native-speakers of Arabic (77.4%). Based on those who identified themselves as native-speakers of Arabic (N= 76), approximately half of them were originally from the Middle East, and 30.22% reported to be from the Maghreb region. Taking into consideration that an Arabic instructor may speak one or more dialects, about half of the respondents speak Levantine (Shami) dialect or Egyptian (Masri) dialect (50% and 42.5%, respectively). Nearly a quarter of the participants speak Maghreb (Darija) dialect and about one-tenth speak Peninsular (Khaliji) dialect (10.4%). Half of the participants have lived in the U.S. for more than 12 years.

Table 4.1: Demographic Characteristics of the Sample (N= 106 instructors)

	Percentage (%)	**% of missing cases**
Gender		0
Female	53.8	
Male	46.2	
Age (in years)		0
18-34	25.4	
35-54	60.4	
55 or older	14.2	
Nativity		1.88
Native Arabic	71.70	
Non Native Arabic	26.42	
Birth		0
Born in the U.S.	18	
Not born in the U.S.	82	
Ethnicity		0
Middle Eastern or Arab	81.1	
Black or African-American	1	
Hispanic, Latino or Spanish	2.8	
White or European-American	15.1	
Arabic Dialects (1)		0
MSA only	12.3	
Egyptian	42.5	
Levantine	50	
Maghreb	25.5	
Peninsular	10.4	
Lived in the U.S. (in years)		17
Less than 3	21.6	
3-9	21.6	
6-12	10.2	
More than 12	46.6	
Speak a language other than Arabic (1)		0
Berber (Tamazight)	7.5	
English	90.6	
Farsi	3.8	
French	46.2	
Spanish	18	
Other language	23.6	
Teaching Institution (1)		0
Community Colleges	12.3	
Universities	92	
Government Institutions (DLIFLC,	17	
Military, NSA)	10.4	
Other (Private Institutions)		
Years total teaching Arabic as L2		2.8
Less than 5	35	

5-10	31.1	
10-20	24.5	
More than 20	6.6	
Highest degree earned		1.9
Bachelors	12.3	
Masters	50	
Ph.D.	35.8	
Degree related to Arabic		1.9
Yes	58.5	
No	39.5	
Major of program		1.9
Linguistics & Foreign Languages	42.5	
Education	12.3	
Literature	12.3	
Islamic Studies	4.7	
Near Eastern Studies	4.7	
Others	20.75	
Distribution of Instructors by States (2)		5.7
California	13.2	
Maryland	15.1	
East (excluding Maryland)	56.6	
West (excluding California)	9.4	
Origin by region: (N= 76) (3)		1.88
Middle East	48.71	
Maghreb	30.22	
Egypt & Sudan	14.47	
Peninsula	6.59	

Note: (1) Percentages do not add to a hundred because instructors may teach in more than one institution and may speak more than one variety of Arabic. (2) Complete table in Appendix A. (3) Complete table in Appendix B.

In addition, almost all Arabic instructors in the sample speak English and teach in universities. Less than 20% of instructors teach in government institutions (i.e. DLIFLC, branches of the military, NSA, FBI), or in private institutions. About 70% of them teach in institutions located in the East Coast, including Maryland. In terms of years of experience teaching, over a third (35%) had less than 5 years of experience and approximately the same percentage (31.1%) had between 5 and 10 years. Almost two-thirds of the participants had obtained their Master's degree on topics related to Arabic,

and about half majored in foreign languages and linguistics. Over three-quarters of the participants reported that they use technology in the classroom.

For the qualitative portion of this study, I conducted in-depth interviews with 11 instructors, who accepted the invitation at the end of the survey (please see Appendix C) to be interviewed. These 11 interviewees were also among the 106 participants of the quantitative portion of the study. From the 11 interviewees, 10 of them reported that they use technology as a pedagogical tool in the classroom. Table 4.2 displays the demographic profile of Arabic instructors interviewed, including their identification number (ID), gender, age, state where they are currently teaching, country of birth, educational settings where they teach, their program of the study, and their highest educational degree.

Table 4.2 Demographic profile of Arabic instructors interviewed

Instructor ID	Gender	Age	State	Origin	Setting	Program and Degree
Instructor01	Female	44	MN	Egypt	Private Institution	Linguistics, MA
Instructor02	Female	35	WI	Maghreb	University	Education, Ph.D.
Instructor03	Female	32	MI	Maghreb	University	Linguistics, MA
Instructor04	Male	38	MD	Egypt	University	Political Sciences, Ph.D.
Instructor05	Male	26	MD	U.S	Private Institution	Interdisciplinary Studies, BA
Instructor06	Male	48	MD	Middle East	Community College	History, MA
Instructor07	Male	52	MD	Middle East	Private Institution	Art, MA
Instructor08	Female	30	TX	Middle East	University	Linguistics, MA
Instructor09	Male	28	NJ	Maghreb	University	Literature, MA
Instructor10	Female	47	MD	Middle East	Private Institution	Ancient studies, MA
Instructor11	Male	35	NY	Maghreb	University	Education, BA

4.5 Instruments and Variables

This study used two types of instruments to gather data. It used a non-experimental survey and an in-depth, semi-structured interview for collecting complementary qualitative data.

The survey used in this study followed a template and guidelines of a pilot study conducted by Heather Linville, a Ph.D. student in the Literacy, Language and Culture program at UMBC. Linville's study explores teachers' advocacy beliefs and actions of ESOL teachers who were previously enrolled in MA TESOL programs that used the TESOL/NCATE standards, which is comparable to this study. Linville's study focuses on the TESOL/NCATE standards, while this study focuses on the National Standards for Foreign Language Learning in the United States.

The non-experimental survey for Arabic instructors was implemented using an online format (see Appendix C). This survey was a self-administered instrument in a form of closed or short open-ended questions (Fink, 2006; Bourque & Eve, 1995). A computer-mediated self-administered survey is an instrument that can be conducted over the Internet, such as using the SurveyMonkey tool. Researchers confirm that this method saves time and eliminates the cost of paper and postage. Most importantly, it avoids data entry errors and ensures confidentiality (Dillman, 2000; Kwak & Radler, 2002, Singleton & Straits, 2005).

In the Fall of 2012, I developed the survey that was then reviewed by important Arab linguists and scholars on subject matter and content of FL pedagogy, teacher cognition, and survey design. These experts provided feedback and suggested modifications in order to ensure the face validity of the instrument, and which attempts to

measure the accuracy and relevance of the instrument, which is also very important support for the study of construct validity (Shuttleworth, 2009).

Shuttleworth (2009) points out that it is challenging to measure the content validity of research in the social and educational sciences because it depends highly on the extent to which the content found on the survey conforms and agrees with key theoretical constructs guiding the research project (Brown, 2001). This is why a panel of professional experts reviewed and analyzed the initial design and instruments for this study. I utilized their expertise to operationalize and re-define constructs for measurement purposes (Colton & Convert, 2007).

To prevent a low-response rate in the online survey, participants were invited via email to participate in the study. I sent a friendly reminder two times after the first invitation. The first reminder was sent two weeks after the first invitation and the second reminder was sent one week after the first reminder (Colton & Covert, 2007; Singleton & Straits, 1999). Additionally, participants were encouraged to apply for a reward, such as a gift card, after completing the survey. Researchers recommend persuading participants to increase the response rate by using raffles (Sue & Ritter, 2007).

After completing the electronic survey, Arabic instructors had the option to respond to an invitation to participate in a follow-up interview in English. Those who accepted the invitation to be interviewed were contacted via email or telephone to make the initial contact and to set up appointments. The follow-up interviews were scheduled right after the completion of the survey. The interviews aimed to obtain an in-depth understanding of Arabic instructors' attitudes toward the use of technology adhering to the NSFLL along with their challenges (see Appendix D). More specifically, the

interviews aimed at examining the suggestions and recommendations for Arabic instruction as they relate to the National Standards for Foreign Language Learning in the virtual learning environment. Additional information concerning Arabic instructors as e-moderators in an online setting, along with their suggestions and recommendations on the Arabic virtual learning environment, was also essential in this interview. This interview also intended to draw more information concerning specific technological tools and methodologies perceived as essential to improving the teaching and learning of Arabic.

The semi-structured interview protocol was developed based on extensive and adjustable structures that meet specific objectives (O'Leary, 2005, p. 116; Singleton & Straits, 2005, p. 222). In this type of interview, it is imperative to define and develop key questions in advance and be aware of the possibility of deviating from the original plan to maintain a spontaneous flow of conversation (O'Leary, 2005, p. 116; Singleton & Straits, 2005, p. 222). Yet, probing and providing exemplification, interpretation, and clarification are vital (Rubin & Rubin, 2005, p. 167). This study used analogous interview instruments, where all instructors were interviewed with the same questions. Prior to participating in the interviews, participants signed an interview consent form which explained the purpose of the interview and the statement of confidentiality (see Appendix E). Each interview lasted between 20 and 30 minutes.

Interviews with participants living in the Baltimore-Washington area were conducted in-person. However, to include participants from different regions of the United States, some interviews took place via phone or Internet (Skype). Researchers encouraged in-person, telephone, and Internet interviewing because of the advantages that they offer. With face-to-face interviewing, response rates are profitable and support

the reliability of the instrument of the survey (Singleton & Straits, 2005). Telephone interviewing is recommended because it saves considerable time and it is cost-effective (Singleton & Straits, 2005, p. 239). Nonetheless, regardless of the medium used to interview the subjects in this study, all interviews were digitally recorded, transcribed, coded, and analyzed promptly. To avoid forgetting and to provide substantial details, I kept notes (Singleton & Straits, 2005, p. 334).

4.6 Key Variables Collected in the Quantitative Sub-study

The following were the key variables in this study:

1) The main independent variables of this study were the Arabic instructors' *knowledge of the National Standards for Foreign Language Learning* (NSFLL) and *their perception of the usefulness of Computer-assisted Language Learning* (CALL).

It is important for Arabic instructors to know, understand, and use NSFLL in order to "give … students an effective working knowledge of the Arabic language and Arab culture" (Standards, 2006, p. 118).

To measure the NSFLL, Arabic instructors responded to one item, with a scale from 1 (Very knowledgeable) to 4 (Completely unknowledgeable). This question gathered instructors overall knowledge of the 5C's: communication, cultures, connection, comparisons, and community. When conducting analyses, this variable was reversed coded, so higher values represent a more positive response. Figure 4.3 shows the item used to measure Arabic instructors' knowledge of NSFLL.

Figure 4.3. Example of items to measure Arabic instructors' knowledge of NSFLL

The National Standards for Foreign Language Learning (NSFLL) in the 21st Century emphasize the importance of:

(1) Promoting *communication* in a language other than English
(2) Gaining knowledge and understanding of other *cultures*
(3) Sustaining the *connection* to other disciplines and acquiring information
(4) Endorsing *comparisons* in order to develop insight into the nature of language and culture
(5) Establishing and building a sense of *community* and encouraging contribution in multilingual communities at home and around the world

How knowledgeable are you of the NSFLL for Arabic as a foreign language? Mark only one

1) Very knowledgeable

2) Somewhat knowledgeable

3) Minimally knowledgeable

4) Completely unknowledgeable

Arabic instructors' perception of the usefulness of CALL was the second independent variable of this study. Recent research discusses the importance of using technologies in FL instruction curriculum not only to enhance their students' learning of the target language, but also to "use computers productively in their work… revise their pedagogical paradigms to accommodate the increasingly common use of such technologies" (Stevens, 2006, p. 254).

To measure this construct, I utilized two indicators: 1) overall perception of usefulness, and 2) usefulness related to the acquisition of language skills. To measure the overall perception of usefulness of CALL, I used one item with a scale from 1 to 5, (1= Extremely useful to 5= Not useful at all). This variable was reversed coded, so higher

values represent a more positive response. Figure 4.4 shows the item that was used to measure the first indicator of Arabic instructors' perception of the usefulness of CALL:

Figure 4.4. Example of items to measure Arabic instructors' perception of the usefulness of CALL

Please indicate how useful you believe CALL is for the teaching and learning of Arabic? Mark only one

1) Extremely useful
2) Moderately useful
3) Useful
4) Slightly useful
5) Not useful at all

The second indicator, usefulness related to the acquisition of language skills, was measured utilizing 7 items with a similar scale as the one used before (1= Extremely useful to 5= Not useful at all). These items referred to language skills including grammar, vocabulary, speaking, writing, listening, reading, and culture. These items were reversed coded, so higher values will represent a more positive response. Responses to these items were averaged to estimate an overall score. Cronbach's alpha for this composite indicator was 0.75, showing high levels of internal consistency. Figure 4.5 shows the items that were used to measure the second indicator.

Figure 4.5. Example of items to measure Arabic instructors' perception of the usefulness of CALL associated to Arabic language skills

Please indicate how useful you believe CALL is for learning the following?

Please check the box that best fits your case	Not useful at all	Slightly useful	Useful	Moderately useful	Extremely useful
1. Grammar					
2. Vocabulary					
3. Speaking					
4. Writing					
5. Listening					
6. Reading					
7. Culture					

2) Instructors' attitude toward the National Standards for Foreign Language learning (NSFLL), one of the dependent variables of this study, was an ordinal level variable measured using Likert-scale items. This scale is utilized to congregate participants' attitudes, beliefs, thoughts, and feelings (Brown, 2000). Likert-scale entries are frequently employed to "investigate how respondents rate a series of statements by having them circle, or otherwise mark numbered categories (for instance, 1 2 3 4 5)" (Brown, 2000, p. 27).

This variable includes items that emphasize the goals of the NSFLL (Communication, Cultures, Connection, Comparisons, Community), in addition to the relevance of the NSFLL in the teaching and learning of Arabic. In this section of the survey, Arabic instructors were asked to respond on a scale from 1 (strongly disagree) to 5 (strongly agree) on 7 items. Responses to these items were averaged to estimate an overall score. This variable was reversed coded, so higher values will represent a more positive response. Cronbach's alpha for this composite indicator was 0.81, showing high levels of internal consistency.

3) Instructors' attitude toward Computer-assisted Language Learning (CALL) was also a dependent variable of this study and it is an ordinal level variable measured using Likert-scale items. This variable includes items that underline the effect of CALL on students' Arabic language skills. In this section of the survey, Arabic instructors were asked to respond on a 5-point scale (1= strongly disagree to 5= strongly agree). The scale included the Arabic instructors' beliefs on the effect of CALL on students' learning specific skills such as listening, reading fluency, speaking fluency, hand writing, typing ability, vocabulary retention, and cultural knowledge. This variable was reversed coded, so higher values will represent a more positive response. Responses to these items were averaged to estimate an overall score. The reliability estimate for the Arabic instructors' beliefs on the effect of CALL on students' learning of Arabic was 0.78.

4) Instructors' belief about CALL adhering to NSFLL to enhance the learning of Arabic, a dependent variable of this study, is an ordinal level variable measured using Likert-scale items. This variable included items that focus on the use of CALL adhering to the NSFLL. In this section of the survey, Arabic instructors were asked to respond using a 5-

point scale (1= strongly disagree to 5= strongly agree) on 6 items. These items were reversed coded, so higher values will represent a more positive response. The items measured Arabic instructors' beliefs about the effect of CALL on students' learning of Arabic adhering to the NSFLL. Specifically, this variable measured students' communication abilities in a language other than English, students' knowledge and understanding of other cultures, students' competency to connect to other disciplines and acquiring information, compare in order to develop insight into the nature of language and culture, and establish sense of community in a multilingual environment at home and around the word, in addition to the relevance of CALL in adhering to NSFLL to teach and learn MSA as a FL.

Responses to these items were averaged to estimate an overall score. The reliability estimate for the Arabic instructors' beliefs about the effect of CALL on students' learning of Arabic was 0.94, showing high levels of internal consistency.

5) The main intervening variables of this study were the time allocated for online instruction in the Arabic curriculum, the type of NSFLL's training that Arabic instructors have attended, and the type of online Arabic tools used in an Arabic program. Time allocated for online instructions measures the hybridity of the Arabic course and focuses on the language skills, specifically listening, reading fluency, reading comprehension, speaking fluency, handwriting, typing Arabic, vocabulary, and cultural knowledge. To measure this construct, Arabic instructors were asked to rank on a scale from (1= 25%) to (4= 100%). Please see survey questions (Part III, 22.1 – 22.8) for these items. The type of NSFLL's training that Arabic instructors have attended was examined based on the criterion that identifies the nature of the training (i.e. STARTALK workshop, at a local or

national conference, colleagues, own research, etc.). The online Arabic tools include Learning Management Systems (LMS) and different Arabic tutorials.

Additionally, important demographic information was collected; some of these variables were used as controls in regression models. The following are the demographic data collected: age measured in years, gender (nominal variable), race/ethnicity (nominal variable), U.S. born (nominal variable), language spoken at home (nominal variable), teaching settings (nominal variable), and the state in which the Arabic instructor is teaching (nominal variable). Information regarding instructors' teaching experiences, including years of teaching experience, highest degree earned, program of study, native speaker, and dialects of Arabic, were also gathered. Please see questions (Part I, 1 -14). Most of these variables were included in regression models; at the same time, they were analyzed descriptively to answer questions 1 to 3.

4.7 Analytical Strategies

During quantitative data analysis, strategic analytical methods were used. Data were transferred into SPSS to conduct descriptive and inferential statistics. Measures of central tendency and dispersion were used to analyze the main variables of this study. Mean and standard deviation were employed to examine normally distributed continuous variables, whereas median or mode was utilized to evaluate skewed or normal data (Warner, 2008). Regression methods were applied to address the inferential question and analyze the association between instructors' perceptions of the usefulness of CALL and their attitudes toward using CALL in the teaching of Arabic at the university level. Before implementing statistical analyses, data were cleaned and I examined missing cases for each of the key variables.

I used Cronbach's alpha coefficient to measure the internal consistency or reliability of subsection scales, which determined the average correlation between multi-items in a scale and estimate the number of items (Kent, 2001). Therefore, the beliefs section of the survey was analyzed for reliability using Cronbach's alpha (N= 106).

To answer the quantitative research question associated to the inferential question, I utilized the following modeling strategy: Model 1 includes the Arabic instructors' attitudes as dependent variable and the control variables only (Arab, Female, Age, Years of experience, Educational level). Model 2 consists of the Arabic instructors' attitudes as dependent variable and the overall usefulness of CALL in the addition to the control variables. Model 3 to 9 include the participants' use of CALL for each of the following specific skills: learning, vocabulary, speaking, writing, listening, reading, and cultures, in addition to their attitudes toward CALL. Model 10 includes all language skills together and Model 11 comprises the Arabic instructors' attitudes as dependent variable and the composite score.

Data from participants' interview responses were analyzed qualitatively. Corbin and Strauss (2008) recommend specific techniques in order to analyze and interpret data. The authors propose ways to make comparisons among participants' responses. They also suggest asking questions during the data analysis stage in order to delve deeper into the data (Corbin & Strauss, 2008). Each of these responses was transcribed and interpreted using qualitative coding methods.

After transcription was complete, I analyzed the interviews. When analyzing the qualitative data, I paid particular attention to transcriptions, as well as to my notes. To analyze the interviews, I did not use a rigid pre-conceived set of codes; instead, I

implemented an "open coding" approach (Neuman, 2003). Open coding required that I read the transcript several times to identify concepts and categories based on the content of the interviews. Open coding is a recommended strategy to analyze qualitative data when the amount of data is manageable, as in this case because I only had 11 interviews. This technique is also recommended when researchers are interested in maintaining high levels of fidelity to participant's opinions, attitudes, and ideas. The codes were logically analyzed and classified while I attempted to detect noteworthy and significant emergent codes before gathering them into themes. The responses to the open-ended questions were classified to describe the patterns of frequencies in Arabic instructors' perceptions, attitudes, and ideas. Appendix F includes the main themes identified in the interviews.

I kept these important data in a locked cabinet and I provided a fake ID to each participant after removing any identifiable information. Advisors, committee members, and IRB are the only investigators who have access to transcripts.

Chapter 5: Results

This chapter analyzes Arabic instructors' implementation of the National Standards for Foreign Language Learning (NSFLL) and use of Computer-assisted Language Learning (CALL) in the teaching and learning of Arabic in higher education. I followed a mixed-methods design, collecting both qualitative and quantitative data. This mixed methodology research primarily consists of a quantitative component of survey data and a smaller qualitative component of interview data.

I utilized quantitative analysis to answer the first two research questions, except for the inquiry concerning the role of the e-moderator. The first question addressed the Arabic instructors' implementation of the NSFLL by examining their knowledge of and attitudes toward the NSFLL. The second question examined the utilization of CALL in the teaching of Arabic. This second question described the proportion of Arabic instructors who incorporated CALL, the perception of Arabic instructors of the usefulness of CALL, the type of online resources utilized, the role of the e-moderator, and the perception of Arabic instructors concerning the utilization of CALL adhering to the NSFLL.

To answer the third research question, I utilized quantitative analysis to examine the associations between instructors' perceptions of the usefulness of CALL and their attitudes toward using CALL in the teaching of Arabic.

To address the fourth question, I utilized qualitative analysis to explore the benefits and challenges of using CALL in teaching Arabic. In this question, I also examined the perception of Arabic instructors concerning the utilization of CALL adhering to the NSFLL.

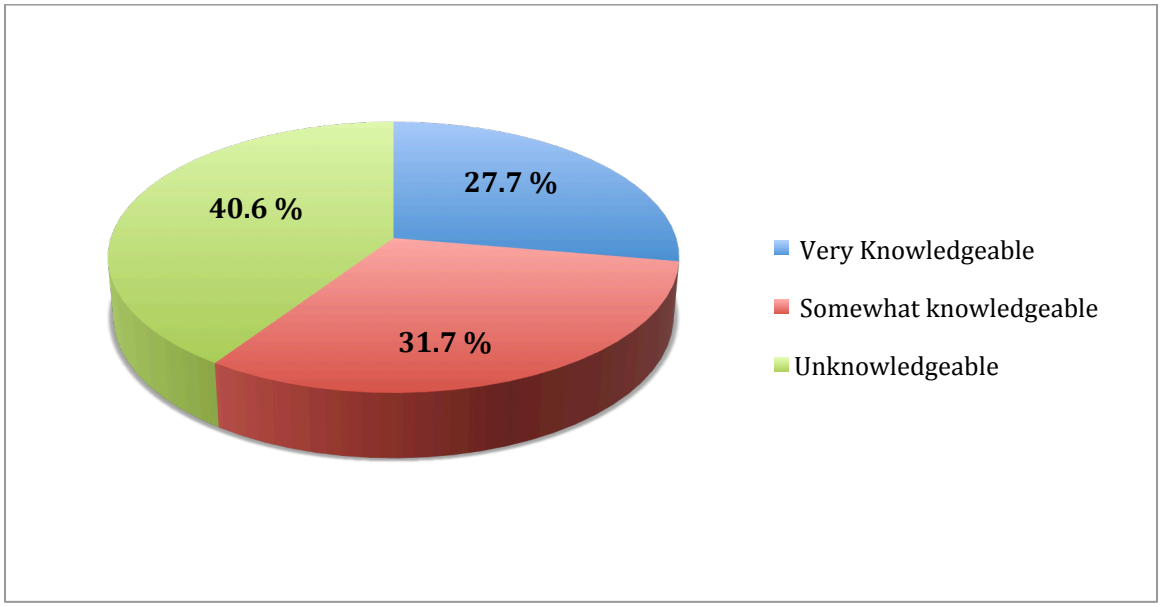
5.1 Implementation of the NSFLL in the teaching of Arabic in the 21st Century

I examined the Arabic instructions' implementation of the NSFLL to expand our understanding of these standards with a goal of improving the educational outcomes of students learning Arabic by enabling the development of effective and engaging course materials, learning strategies, and conductive teaching environments. This question was analyzed quantitatively and addressed the Arabic instructors' knowledge of and their attitudes towards the NSFLL. It is important to note that all Arabic instructors in this study who knew about the NSFLL reported that they have been implementing them to some extent in their courses.

5.1.1 Arabic instructors' knowledge of the NSFLL in the 21st Century

As Figure 5.1 demonstrates, an important proportion of Arabic instructors, two-fifth of the sample, reported minimal or no knowledge about the NSFLL. Only about one-fourth of the sample (27.7%) reported being very knowledgeable of the NSFLL.

Figure 5.1: Arabic Instructors' Knowledge about the NSFLL in the 21st Century (N=101)

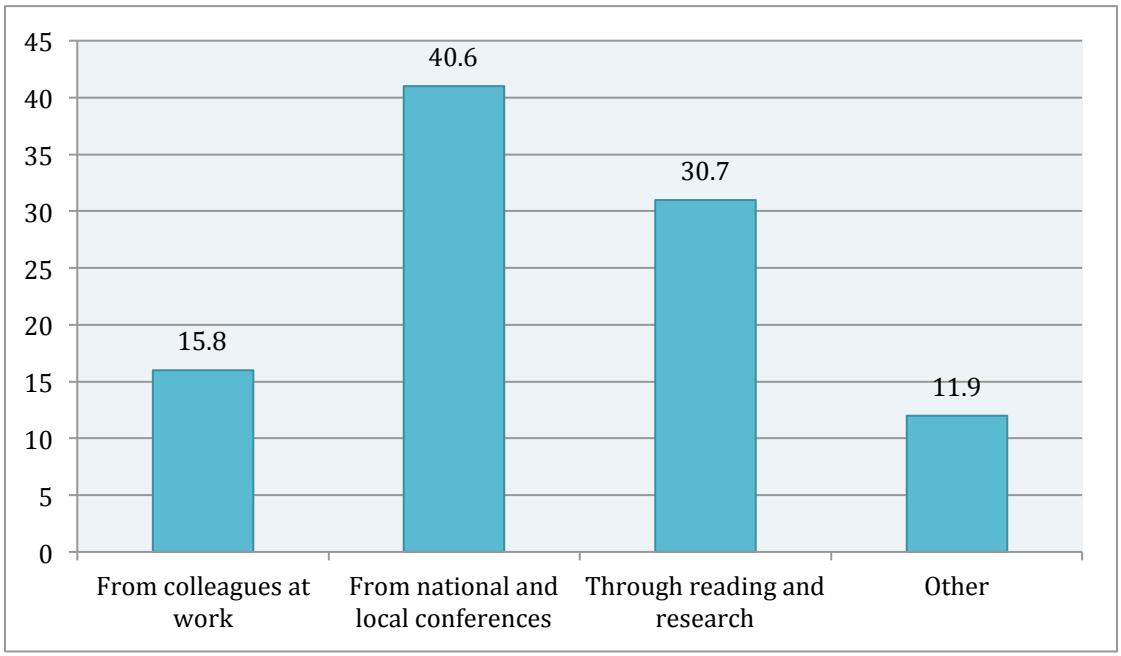


Mean= 2.41, S.D= 1.17

Next, I investigated the most essential venues that Arabic instructors used to learn

about the NSFLL. Data in Figure 5.2 show that the Arabic instructors learned about the NSFLL the most (40.6%) from national and local conferences and workshops, such as NECTFL (Northern Conference on the Teaching of Foreign Languages), ACTFL (American Council on The Teaching of Foreign Languages), the Arabic flagship program, and STARTALK (the language learning and teaching program of the National Security Language Initiative), and through their own reading and research (30.7%). Smaller percentages of instructors learned about the standards from colleagues at work (15.8%), and other channels mostly from Master's programs, but also from in-service training (11.9%).

Figure 5.2: Venues used by Arabic instructors to learn about the NSFLL (in percentages)



Note. Respondents could select all that applied

5.1.2 Arabic instructors' attitudes towards the NSFLL

Only participants who were knowledgeable about the NSFLL (about 65 participants) were capable of conveying their attitudes, beliefs, thoughts, and feelings concerning the NSFLL. This enquiry included items that emphasized the goals of the NSFLL

(Communication, Cultures, Connection, Comparisons, Community), in addition to the relevance of the NSFLL in the teaching and learning of Arabic. Arabic instructors were asked to respond on a scale from 1 to 5 (1= strongly disagree and 5= strongly agree).

As Table 5.1 illustrates, those Arabic instructors who knew about the standards, had overall positive attitudes toward them (overall mean=4.0 and SD=1.0). Arabic instructors agreed that the NSFLL support gaining knowledge and understanding of other cultures, and promoting communication in a language other than English. They also agreed that the NSFLL are relevant to the teaching and learning of AFL (overall mean= 4.06 and SD= .99). In addition, Arabic instructors reported positive attitudes concerning the impact of the NSFLL to establish and build a sense of community, sustain the connection to other disciplines, and endorse comparisons to develop insight into the nature of language and culture.

Table 5.1. Arabic instructors' attitudes toward the NSFLL (scale from 1 to 5)

	N	Mean	SD
Overall score	64	4.05	1.00
NSFLL promotes communication in a language other than English.	65	4.08	1.06
NSFLL supports gaining knowledge and understanding of other cultures.	64	4.16	1.10
NSFLL sustains the connection to other disciplines and acquiring information.	65	3.97	1.04
NSFLL endorses comparisons in order to develop insight into the nature of language and culture.	65	3.94	1.11
NSFLL establishes and builds a sense of community and encourages contribution in	65	3.98	1.15

multilingual communities at home and around the world.			
NSFLL is relevant to the teaching and learning of Arabic as foreign language.	65	4.06	.99

5.2 Incorporation of CALL in the teaching of Arabic

In this dissertation, I also investigated the Arabic instructors' use of technological tools in the classroom. Specifically, I examined the following aspects of the incorporation of CALL in the classroom:

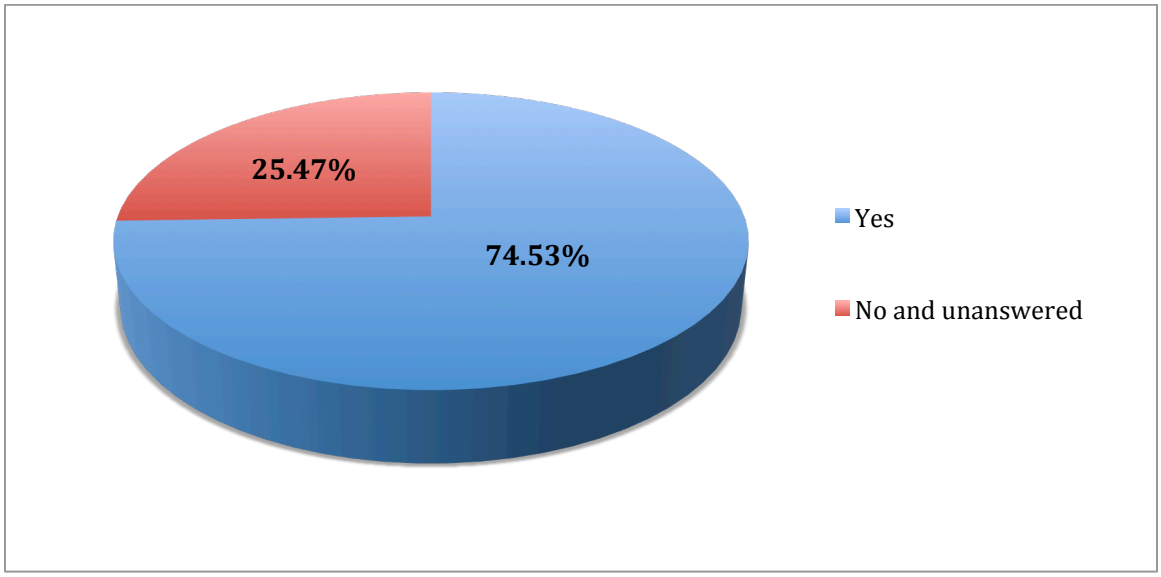
- Proportion of Arabic instructors who incorporated CALL in the teaching of Arabic.
- Usefulness of CALL, overall, and related to the acquisition of specific language skills.
- Type of online resources that Arabic instructors use CALL for in their teaching.
- The role of the Arabic instructor in the virtual learning environment.
- Incorporation of CALL to address the content of each of the standards (5C's) and perceptions of the relevance of the incorporation of CALL.

I examined quantitatively 4 of the 5 topics of this research question; the role of the e-moderator was analyzed qualitatively.

5.2.1 Proportion of Arabic instructors who incorporated CALL in the teaching of Arabic

As reported in Figure 5.3, approximately three-quarters of the sample used technology (74.53%) in the classroom. The remaining proportion either did not use technology (11.32%) in the teaching of Arabic or did not answer the question (14.15%).

Figure 5.3: Incorporation of technology in the Arabic teaching (N=106)

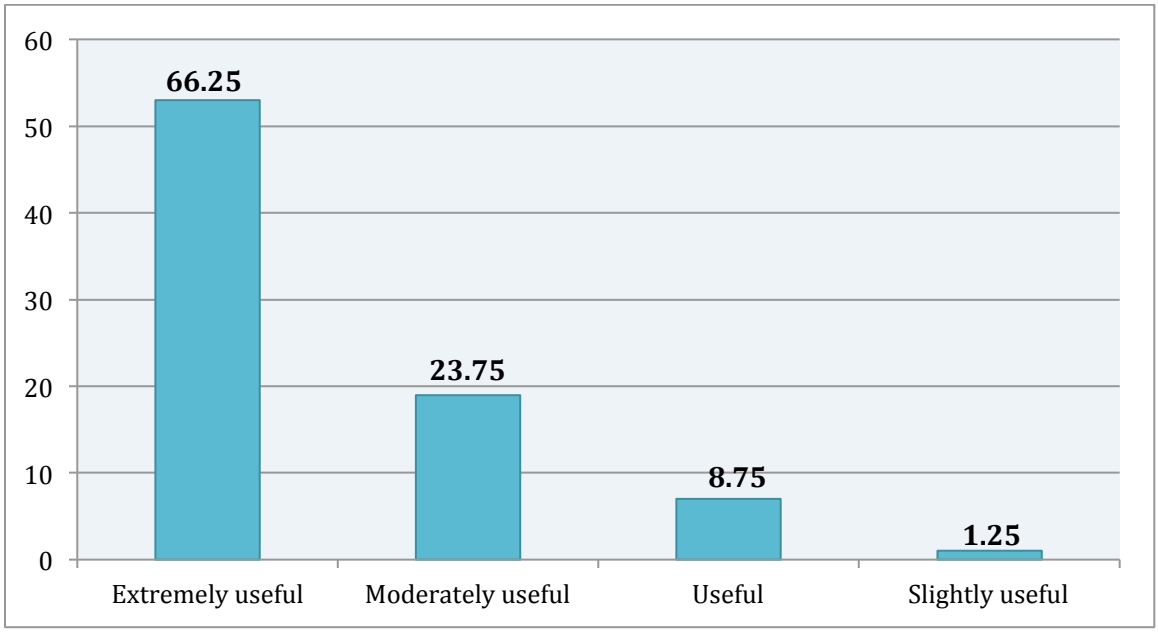


Mean= 1.13, S.D= .34; based on those participants who responded the question

5.2.2 Usefulness of CALL in the teaching and learning of Arabic

This question measured Arabic instructors' perceptions of the usefulness of technology in the teaching of Arabic utilizing scale from 1 to 5 (1= extremely useful and 5= not useful at all). Figure 5.4 reveals an overall positive perception of the usefulness of technology in the classroom. On average, Arabic instructors considered the use of technology in the teaching of Arabic very useful. Approximately two-thirds of respondents claimed that the incorporation of technology was "extremely useful" in the teaching of Arabic, and nearly a quarter of the participants declared that the incorporation of technology was "moderately useful."

Figure 5.4: Usefulness of technology in the teaching of Arabic (in percentages)



Note:
- None of the participants indicated that the incorporation of technology was not useful at all.
- Estimates based only on instructors who reported that they use technology of instruction (n=80)
- Mean= 4.55, S.D= .71

Previously, I examined the usefulness of technology with one overall indicator. I next measured the usefulness of technology in association with the acquisition of specific language skills (using a similar scale as before, from 1 to 5).

As Table 5.2 shows, when asked about the usefulness of CALL for learning specific skills, Arabic instructors reported positive perceptions (overall mean=4.17 and SD= .70). However, when compared with the overall perception of usefulness, the perception of usefulness for teaching specific language skills, on average, is somewhat lower (comparing 4.55 from Figure 5.4 to 4.17 from Table 5.2).

On average, Arabic instructors perceived CALL as more useful for teaching some language skills than others. CALL was considered more useful for teaching listening,

vocabulary, and cultural skills than for teaching reading, grammar, and writing, as shown in Table 5.2.

Table 5.2. Usefulness of technology in association with language skills

(N=80, scale from 1 to 5)

	Mean	Std. Deviation
Overall Scale score	4.17	.70
Listening	4.71	.76
Vocabulary	4.49	.81
Culture	4.44	.98
Speaking	4.22	.99
Reading	3.99	1.16
Grammar	3.64	1.15
Writing	3.60	1.26

5.2.3 Type of online resources that Arabic instructors use in the teaching

This question addressed the frequency of online instruction utilized for Arabic teaching, and the use of learning management systems, online tools, and online Arabic tutorials.

Table 5.3 demonstrates a wide variance among the Arabic instructors' frequency of online resources utilization; however, there are some important patterns worth noting. Arabic instructors utilized more online resources when teaching culture, listening, typing, and vocabulary than when teaching reading (fluency and comprehension) and handwriting. More than 40% of Arabic instructors utilized online resources very frequently (75% or more of the instructional time) when teaching cultural knowledge,

listening, typing and vocabulary. About 50% of these instructors utilized online resources infrequently to teach reading and handwriting (25% or less of the time).

Table 5.3: Frequency of online instruction (in percentages)

	N	Mean S.D	25%	50%	75%	100%
Cultural Knowledge	69	M=2.62 SD=1.16	26.1	14.5	30.4	29
Listening	74	M=2.30 SD=1.1	33.8	18.9	31.1	16.2
Typing (using Arabic Keyboard)	62	M=2.13 SD=1.13	43.5	14.5	27.4	14.5
Vocabulary	73	M=2.20 SD= .99	31.5	27.4	31.5	9.6
Reading fluency (out loud)	68	M=2.00 SD=1.09	52.9	11.8	25	10.3
Reading comprehension	66	M=2.00 SD=1.05	48.5	18.2	24.2	9.1
Speaking fluency	63	M=2.03 SD= .96	39.7	22.2	33.3	4.8
Handwriting	56	M=1.71 SD= .92	55.4	23.2	16.1	5.4

As Table 5.4 indicates, most Arabic instructors who used technology in their teaching utilized a learning management system (90%) or online tools (80%). A slightly smaller percentage of instructors utilized Arabic tutorials (only 35%). From the learning management systems included in the survey, the majority of Arabic instructors (64%) used Blackboard and fewer instructors utilized Sakai (17.5%), Moodle (16%), PBworks

(5%), or Desire2Learn (5%). From the online tools, instructors reported using blogs (40%) in their teaching, and almost one-fourth (25%) of the sample mentioned utilizing Podcasts and Wikis (22.5%).

Table 5.4. Online resources utilized in the teaching of Arabic (N=80)

	%
Learning Management Systems (LMS)	
Blackboard	64
Moodle	16
PBworks	5
Desire2Learn (D2L)	5
Sakai	17.5
None	10
Online tools for teaching Arabic	
Blogs	40
Wikis	22.5
Podcasts	25
Voice chat	30
Written chat	30
None	19
Online Arabic tutorials	
Arab Academy	12.5
Arabic2000	2.5
Sakhr	2.5
SCOLA	15
Babel Arabic	5
Al Mu'tamid	0
Rosetta Stone	9
None	64

Note. Respondents could select all that applied

5.2.4 The role of the Arabic instructor in the virtual learning environment

The role of the Arabic e-moderator in the virtual learning environment encompasses several tasks. Table 5.5 lists main tasks that Arabic instructors in the interviews identified in fulfilling their role as e-moderators. Most of the participants

considered that their responsibilities as e-moderators were, in descending order of mention, to keep discussions on target, merge different discussion threads and course modules, and sustain group synchronization. Also, instructors considered that they are required to assist the learners in overcoming obstacles with the hardware and software, making potential problems transparent and not a deterrent to online learning. Thus, an understanding of IT (information technology) was considered beneficial by these instructors.

Table 5.5: The role of the Arabic e-moderator in the virtual learning environment

Arabic e-moderators	Role / Task
	✓ Posting discussion questions on Blackboard ✓ Assigning speech presentations via online video ✓ Moderating online class discussions ✓ Grading online assignments ✓ Responding to student questions ✓ Reviewing students' work to check progress ✓ Providing feedback on assignments ✓ Monitoring students' login and logout times

Besides describing their roles as e-moderators, participants also shared some of the challenges they face in this role. All participants who used technology (10 out of 11) affirmed that a significant amount of time and effort is required to be an e-moderator in hybrid settings (where instruction is face-to-face and online). One interviewee mentioned that, "Actually, I was scared. Well, not scared, but I just thought it would take all this

time to record something and edit it and do all these things, which it does. It takes time." Other participants mentioned that grading, posting assignments, editing videos for pronunciation, and giving feedback were very time consuming.

A second important challenge of being an e-moderator was related to having the required technological expertise and training. E-moderators' tasks required hard work and sound knowledge of the online software being used. One interviewee said that "using technology requires work, but it is also learning that not all students' questions need to be addressed immediately." Some participants added that staying current with the technology and receiving training were challenging. As a result, one interviewee said, "Schools need to do more to provide training."

Furthermore, some participants described challenges related to technology. One participant referred to technical glitches, such as students' voices not heard clearly through computer microphones, students' computers not working, or software in the labs not functioning properly. Other interviewees were concerned about their inability to control and monitor students' work (e.g. completing online assignments on time). This was because students, many times, claimed that a site or software was not working and the instructor did not have the resources to verify whether this was true. For example, one participant mentioned that sometimes students failed to post assignments on time:

> Online, some students do not post their assignments in due time. And sometimes, if you send them an email, or if you use online tools as the only means of communication, there are some students who do not keep track or follow with you. So, you still need to talk to them in class personally and to insist on doing the assignments in due time.

While the participants mentioned these negative aspects of the virtual learning environment, overall they felt that fulfilling their roles as e-moderators was very valuable. This is because learners love technology and as a result, it kept them motivated. Utilizing an online environment also facilitated managing their course tasks, such as posting handouts, creating video presentations, and assigning online quizzes. To sum up, participants shared the view that it was necessary to utilize technology to make lessons engaging. If not, they felt that students would lose interest in the content quickly since technology has become a part of their daily lives. As one participant mentioned "I think it [technology] is very positive because the students, they grow up with technology that they do not know anything else but that is how the world is."

5.2.5 Incorporation of CALL to address the content of the NSFLL

In this inquiry, I explored the incorporation of CALL to enhance the content of each of the 5C's utilizing a 5-point scale (from 1= strongly disagree to 5= strongly agree)

As Table 5.6 shows, when asked about utilizing CALL for addressing the NSFLL, Arabic instructors reported positive perceptions. On average, Arabic instructors agreed that CALL enhanced students' learning of Arabic adhering to the NSFLL, including *Communication, Culture, Connection, Comparisons, and Community* (overall mean= 4.27 and SD= .73). Furthermore, Arabic instructors indicated greater importance of utilizing CALL for understanding of cultures, sense of community, and communication in a language other than English. They indicated that CALL was slightly less important for enhancing students' connection to other disciplines and improving students' comparisons in order to develop insight into the nature of language and culture as shown in Table 5.6.

Table 5.6: Arabic instructors' attitudes toward CALL adhering to NSFLL (n=72)

	Mean	S.D
Overall score	4.27	.73
CALL enhances students' *communication* in a language other than English.	4.31	.87
CALL enhances students' knowledge and understanding of other *cultures.*	4.45	.81
CALL enhances students' *connection* to other disciplines and acquires information.	4.23	.84
CALL enhances students' *comparisons* in order to develop insight into the nature of language and culture.	4.20	.85
CALL enhances students' sense of *community* and encourages contribution in multilingual communities at home and around the world.	4.33	.83
CALL is relevant in adhering to NSFLL to teach and learn MSA as a foreign language.	4.1	.74

5.3. Usefulness of CALL and attitudes towards CALL (inferential analysis)

The inferential question was conducted to determine the degree of the association between Arabic instructors' views about the usefulness of CALL and their attitudes towards CALL. To have a detailed understanding, I utilized two indicators, the overall usefulness of CALL and Arabic instructors' perspectives toward the usefulness of CALL

in teaching specific skills, including the examination of each individual item (see Table 5.7).

As indicated in Table 5.7, Model 1 included only control variables and shows that the Arabic instructors' years of experience was the only statistically significant control variables. Instructors with more years of teaching experiences had less positive attitudes towards CALL. In Model 2, I included the overall usefulness of CALL indicator in addition to the control variables from Model 1 to examine the adjusted association between perception of usefulness and attitudes towards CALL. As Model 2 indicates, there was a statistically significant association between these two variables. As the perception of usefulness increased, so did instructors' attitudes.

Table 5.7: Usefulness of CALL and attitudes towards CALL (inferential question)

	Model1	Model2	Model3	Model4	Model5	Model6	Model7	Model8	Model9	Model10	Model11
Overall usefulness of CALL		.227**								.045	.081
		(.088)								(.669)	(.100)
Usefulness for grammar			.085							.012	
			(.057)							(.876)	
Usefulness for vocabulary				.190**						-.100	
				(.073)						(.357)	
Usefulness for speaking					.186*					.032	
					(.060)					(687)	
Usefulness for writing						.125**				.060	
						(.049)				(.415)	
Usefulness for listening							.303***			.239*	
							(.075)			(.031)	
Usefulness for reading								.163**		.076	
								(.051)		(.313)	
Usefulness for culture									.194***	.111	
									(.058)	(.134)	
Overall usefulness for skills (composite)											.334***
											(.084)
Control variables											

Arab	.200	.169	.165	.181	.090	.144	.202	.133	.197	.112	.096	.104
	(.146)	(.141)	(.150)	(.141)	(.147)	(.144)	(.132)	(.139)	(.136)	(.144)	(.137)	(.138)
Female	.027	.034	.015	.019	-.005	-.011	.021	.012	.067	-.002	-.017	-.015
	(.128)	(.123)	(.132)	(.123)	(.122)	(.126)	(.115)	(.120)	(.120)	(.118)	(.117)	(.118)
Age	-.038	-.034	-.034	-.047	-.018	-.031	.060	-.046	.025	-.021	-.023	-.025
	(.076)	(.073)	(.079)	(.073)	(.072)	(.074)	(.069)	(.071)	(.073)	(.076)	(.070)	(.070)
Years of experience	-.025*	-.018	-.023*	-.019	-.022*	-.021*	-.015	-.019	-.026*	-.012	-.016	-.014
	(.012)	(.012)	(.012)	(.012)	(.011)	(.012)	(.011)	(.011)	(.011)	(.012)	(.011)	(.011)
Educational level	.066	.005	.066	.097	.056	.056	.050	.033	-.017	-.059	.029	.015
	(.106)	(.105)	(.109)	(.103)	(.103)	(.104)	(.096)	(.100)	(.102)	(.108)	.100	(.102)
Intercept	4.124	3.168	3.829	3.202	3.384	3.709	2.717	3.591	3.245	2.256	2.631	2.440
Adjusted R^2	.081	.155	.095	.157	.188	.154	.256	.196	.206	.307	.294	.290

Note. For each dependent variable, the unstandardized regression coefficient is shown on the first line; standard errors are in parentheses. *p ≤.05. **p ≤.01. ***p ≤.001.

In Models 3 to 9, I included the perceptions of usefulness of CALL for learning specific language skills (grammar, vocabulary, speaking, writing, listening, reading, and cultures) separately. In these Models, all associations were statistically significant, except for learning grammar. When all skills were included together in a Model (see Model 10), only the listening skill remained significant. The listening skill captured the effect of the other specific skills, which was expected as affirmed by Warschauer (2004).

Given the relationships between the perceived usefulness of CALL for learning specific skills (grammar, vocabulary, speaking, writing, listening, reading, culture), I created a composite usefulness score for language skills after averaging all these indicators to examine the combined influence of these seven skills on instructors' attitudes. Model 11 shows a significant association between instructors' opinions of the usefulness of CALL and their attitudes towards CALL, even when this composite score was examined.

To sum up, after examining several model specifications, I conclude that there is a significantly positive association between instructors' perceptions of the usefulness of CALL and their attitudes towards CALL.

5.4. Arabic instructors' attitudes towards the use of CALL and NSFLL in the teaching of Arabic (qualitative analysis)

This question was analyzed qualitatively through interviews with 11 Arabic instructors. As Table 4.2 indicates, about three-quarters of the interviewees were under the age of 44 years with almost equal number of females and males. Most of them teach in Maryland in public institutions and were born in the Middle East. After obtaining a broad understanding of CALL and the NSFLL utilizing a quantitative approach, I

gathered detailed data on the perceptions and attitudes of these 11 Arabic instructors toward these topics utilizing a qualitative approach. One out of the eleven participating instructors, in the qualitative component of this study, had no knowledge about the NSFLL. Another interviewee out of the eleven participating instructors did not use technology in teaching Arabic.

It is important to consider that even though the qualitative portion of this research corroborates most of the quantitative findings, there were differences worth noting. The interviewees who participated in the qualitative portion of this study were younger, on average, than the survey participants. Interviewees were also more used to integrating technology in their classroom than surveyed participants. Thus, while interviewees provided more in-depth data, some particular findings were not representative of the entire sample participating in the quantitative portion of this study,

The qualitative portion of this study addressed these Arabic instructors' perceptions of the benefits and challenges of using CALL in the teaching of Arabic. This inquiry also reported the participants' thoughts concerning CALL in relation to the NSFLL.

5.4.1 Benefits of using CALL in teaching Arabic

Consistent with the quantitative findings, when asked what the benefits to using CALL in their teaching were, the participants shared positive views of CALL. With the wide variety of multimedia tools available to instructors, together with learners' enthusiasm for using them in their learning, the participants considered the benefits of CALL to be immense as discussed below. Overall, the respondents recognized the benefits of CALL as follows:

- A pedagogical/learning tool
- An assessment tool for instruction
- A motivational tool for learning
- A tool for attracting and retaining students in Arabic courses.

To further explain the benefits of CALL cited by participants, I will discuss them in greater detail below.

5.4.1.1 A pedagogical/learning tool

Through the use of CALL and its various online programs such as Blackboard, VoiceThread, the Internet, and Skype, the instructors considered that they were able to include teaching activities that enhanced face-to-face learning and textbook instruction. One interviewee mentioned the following in support of online learning, "with these technological times, the textbook has now become a supplemental tool to the teaching." Another added, "With these technologies there are a lot of materials available in teaching that books cannot afford."

The instructors also motioned that as a pedagogical tool, CALL provides flexibility to facilitate instruction in the classroom and a diversity of activities to fit different students' needs. One participant explained:

> I think that using computer assisted language teaching in the classroom and in teaching sort of offers the students something that can't be offered otherwise. It is kind of hard when you're by yourself or co-teaching to create every possible situation or to offer someone else pronunciation, to offer a part of culture that wouldn't have popped into your head. When you're using CALL and your videos and anything else, it offers them to see something that you might have otherwise

not have created on your own. Then additionally, it allows them to work with the language in sort of a new way, which especially for people, even my generation of current college students, but especially the next generation, everything we do is with technology. So, it's a more comfortable way for us to work with the language and it's something that we know how to do well. And so it makes us use the language in a new way to better comprehend it and that couldn't have been done before.

5.4.1.2 An assessment tool for instruction

Participants also acknowledged the importance of CALL as a tool for assessment. One respondent stated the following in support of CALL: "It gives me a variety of alternative assessment tools and not to stick to the traditional assessment tools in assessing all aspects of the language--speaking, listening and reading. I use technology as an alternative assessment. It's very convenient for me and the students." For example, instructors were able to design online quizzes, where the software automatically assessed students' responses.

5.4.1.3 A motivational tool for learning

Participants also recognized the motivational benefits of using online technologies in the classroom; utilizing technology in the classroom helped students maintain interest in the course. As one instructor simply summarized that technology was "the most important thing is to keep students connected and engaged. The younger generations are cyber connected. They want everything online. They want to be able to pull out their computers and find everything there. If your course is not online, you don't provide a part of what you do online, you're losing students."

5.4.1.4 A tool for attracting and retaining students in Arabic courses

As evident from previous respondents' comments, CALL was considered to be a fundamental tool for attracting and retaining students in Arabic courses. As stated in chapter 2, Arabic is considered one of the most difficult languages to learn because of factors relating to diglossia, as well as reading and writing the language. Thus, instructors were concerned about students' diminishing interest in their courses or withdrawing from them entirely. This concern was acknowledged by those instructors who used CALL in the classroom and also by those who did not. One interviewee who did not use CALL due to lack of departmental funding, mentioned he wished his department had the funds to provide online technologies to keep students more engaged in his classes. Another participant remarked, "It is important for students to have online technologies available to them in their learning experiences. This way, they want to learn more and explore new things."

5.4.2 Challenges to using CALL in teaching Arabic

The second portion of the interview asked instructors what challenges they perceive with the use of CALL in their teaching. With the introduction of CALL into FL teaching, several challenges have arisen as a result of its use.

When asked about those challenges, interviewees cited the following overall difficulties to using CALL:

- Lack of knowledge or insufficient training
- Lack of funding or changes to programs
- Ill-equipped classrooms technologically
- Time consuming to use technology in teaching and assessing students

- Students knowing more about use of technology than their teachers
- Technical glitches in using technology

The above challenges are in order of importance, with the most frequently mentioned being lack of knowledge or insufficient training and lack of funding, with the least mentioned being technical glitches. To further explain the challenges cited by participants, I will discuss them in greater detail below.

5.4.2.1 Lack of knowledge or insufficient training

The majority of the instructors mentioned the lack of knowledge about how to use technology and the lack of support from their departments to learn and implement CALL in their courses as the most important challenge. One participant explained, "One of the challenges is that most of the teachers of Arabic, they lack this training in using this computer assisted program. So teachers need to be trained in how to use these materials and how to implement them. They also lack how to assist students work and interaction with these materials."

A different interviewee shared the feelings of the previous respondent by recognizing her/his lack of technological skills:

> Honestly speaking, the first challenge is my own limitations of and comfort with this whole idea of the new technology. Sometimes, I find myself hesitating getting to something. There is a fear really based on ignorance on my part but the minute I feel safe working with one aspect of the technology or another, then it becomes more possible. So, I would say that is one. So in this case of course, workshops for faculty, and I'm talking hands-on workshops not lectures, where the faculty

get their hands dirty while learning and becoming more comfortable, to make us more at ease with these benefits.

For some instructors, the lack of experience with technology, coupled with how important technology is for improving the learning opportunities of students, undermined their feelings of teaching efficacy. One respondent shared:

> I was new to it. Technology. I didn't know from where to start or from where to end. I didn't know how to use it. At the beginning, I wanted to use it in my classroom, but I found it takes a long time, and sometimes, the students help me when I'm using the computer or something very short, and I felt very embarrassed. I found myself way back behind my students in using the technology in my class. I started attending a lot of conferences and workshops … to train myself to use the technology and to acquire the standards in my teaching… there was no interest in the language or caring of teachers. They just leave you by yourself.

This participant expressed her frustrations when she was new to technology and the implementation of the NSFLL in her teaching. Because of the department's lack of interest in CALL and the standards, she was left alone to pursue training in technology and to attend workshops in the NSFLL. Lastly, one participant added:

> There are a lot of training programs for using these kinds of technological tools, and they are, even if you sometimes find them in other states, that they are far from where you are working, and the language department, even if they have a budget for this training, it's dedicated for full time faculty and not for part time professors.

Several instructors also mentioned lack of departmental funding for ongoing training.

5.4.2.2 Lack of funding for instructional technology and changes in program technology use

In addition to a lack of knowledge and insufficient training, the participating instructors felt that a lack of departmental funding in their universities prevented them from utilizing technological resources during class. One instructor highlighted the lack of resources and summarized the concerns of other instructors:

> I think some of the difficulties are, at least in my case, less with students and more with the resources available. At the school where I teach, we don't have as many technological resources. We have the basics but trying to get more in there is hard sometimes. There are a lot of resources out there for IPads and for other things for students to be more interactive with and we don't have the funds to offer every student an IPad or anything like that. So, we're sort of stuck to the traditional this is our PC and our projector. We can show you stuff and then we hope you'll go home and do stuff and sign up for some things online, but it's difficult if you don't have the actual resources …

The lack of funding not only limited instructors training opportunities or access to restricted technological resources, some of the universities had to unsubscribe to software that instructors and their students liked and were using in the computer labs. One instructor mentioned:

> … Sometimes, it's the budget. Using software where you have to pay a monthly fee or something. I remember we used to use Winba in our classes for voice recording, instead of students writing emails, we could send voicemails in Arabic.

But two months later, we didn't have access to Winba because the university didn't pay for it anymore …

Instead, the instructors noted that other times, less expensive alternatives to Wimba and Voice Band were chosen, which were not as effective in the teaching and learning of Arabic due to the limited number of built-in interactive features they offered.

5.4.2.3 Ill-equipped classrooms technologically

Another challenge cited by some of the participants was classrooms not equipped with computers or media stations. One instructor mentioned, "… some colleges don't have classrooms that are equipped with computers and sometimes, you have to bring your own laptop which is not always convenient. Many of these classrooms don't have media stations …" Another instructor added:

> One of the challenges that I had last semester was that depending on where you teach, my university, which has more than thirty thousand students with classrooms of different capacities and last semester, I had to teach in a classroom which was not in a small classroom so we had to bring TV. Then, after spending a whole summer break preparing activities with technology or those that are computer based, you find there was a change to a room, which was not equipped.

This means that those teachers had to use their own laptops during class (or using limited technology tools) and found that doing so was inconvenient for them.

5.4.2.4 The time consuming to use technology in teaching and assessing students

A couple of the participants stated that while CALL has its advantages, one drawback was that it takes time to take advantage of technological tools; preparing materials such as PowerPoint slides and posting discussion questions online for students;

sometimes this was more time consuming than expected. One participant said the following concerning this drawback:

> As an instructor, I think my biggest challenge is keeping everything up to date. I rely on making flashcards for them in class. I rely on creating PowerPoint for the grammar. I rely on my worksheets. I have to do this every day. It takes a lot of time to prepare this material. If I have new material, if they see I have flashcards, new PowerPoint with bright colors they're more into it. To go to the website, grade homework, and to post questions and to add discussions and chat, it's time consuming.

Another participant added, "For me, even though working with technology does take a little longer, it's much more productive at the end of the day and everyone is satisfied."

5.4.2.5 Students knowing more about use of technology than their teachers

Learners, many times, know more about using technology than their teachers, which presents challenges for instructors, but also serves as a positive force in the learning process.

In terms of challenges, students' computers or other electronic devices experienced occasional glitches and although the learners were knowledgeable about their devices, they were unable to solve the issue alone. Thus, they turned to their teachers for help thinking that their instructors could solve their problems. The teachers could not, since they knew much less than the student about technology. One participant explained this by saying:

My biggest challenge with technology is keeping updated with the new technology and the new systems and the new apps. If they ask me questions, I don't always have the answers for them. So I feel like besides all my responsibilities as an instructor, I have to keep myself updated.

This instructor reported one scenario with her student who said, "I converted my Apple computer to Arabic and I can't make it type in English again." The instructor responded, "Neither can I." Then another student told his classmate the steps. The instructor reported, " I grabbed a pen and started writing down the steps" and the instructor told the student "I should know how to switch your keyboard from Arabic to English."

On the positive side to students knowing more about technology, one participant said, "… students like technology. It's not something we have to teach them how to use. They know better than we do and all of them have tablets, computers, smart phones, and they are eager to learn anything. They can learn something using their smart devices." Another said, "…students love technology now. It is their life. They use technology. They cannot stay away from their cell phones for five minutes, and when they leave class, they feel they've learned something. They take away something. We have to be in their shoes. You have to think the same way they are thinking …"

As noted earlier, students knowing more about technology than teachers helps them to remain motivated with their learning and it encourages instructors to design coursework specifically with the students' learning needs in mind.

5.4.2.6 Technical glitches in using technology

One participant stated that problems with the technology were sometimes an issue. She said, "The challenge happens in the lab in using the computer when a technical issue arises. If you're using it for testing, for example, they're taking, it's part of the test, that might slow down that part of the test if that's one part that you're using technology for …" However, while CALL has its challenges, the participants favor it highly over the more traditional ways of teaching, which are through textbooks and class worksheets.

5.4.3 Thoughts concerning CALL in relation to the NSFLL

The second half of the interview described Arabic instructors' thoughts about CALL in adhering to the NSFLL in teaching and learning Arabic. To address those thoughts, a sequence of probes concerning CALL in relation to the NSFLL was required. Focusing on how they implemented each of the standards (e.g., communication, culture, connection, comparisons, and community)[5] in their teaching while using CALL.

5.4.3.1 Benefits of the NSFLL

In this question, I asked the instructors about the benefits of applying the National Standards for Foreign Language Learning in their teaching. Out of the eleven participants, ten had prior knowledge of the 5C's and were actively implementing them in their classroom curriculum while using technology. The one participant who had no previous knowledge of the 5C's could not comment on this aspect. Participants implementing the 5C's in their teaching, however, viewed all as equally vital in defining

[5] (1) Promoting *communication* in a language other than English
(2) Gaining knowledge and understanding of other *cultures*
(3) Sustaining the *connection* to other disciplines and acquiring information
(4) Endorsing *comparisons* in order to develop insight into the nature of language and culture
(5) Establishing and building a sense of *community* and encouraging contribution in multilingual communities at home and around the world

the key skills that students need to gain for increasing their knowledge in Arabic in and out of the classroom.

Participants felt that implementing all the 5C's significantly benefits the learning of Arabic because it makes coursework more effective and better focused.

The most important benefits of the 5C's noted by participants were:

- More effective coursework
- More authentic course tasks
- Help in setting teaching standards
- More comprehensive view of culture and language together

5.4.3.1.1 More effective coursework

By implementing some components of the 5C's into their Arabic coursework, instructors, for instance, gave activities/assignments that were interesting to students and encouraged their learning of Arabic at a much faster pace. One instructor highlighted this by saying:

> I myself think that the 5C's are a good outline of how to teach a FL. Even before I was learning it, all the rote memorization and repetition, memorizing sentence patterns that weren't really useful in life, it did not really show you what was important for teaching a FL. Whereas with the 5C's, you focus on culture, communication, and different things like that. It is much more useful. Students nowadays, even if they do not go far in a language, they are much more functional then they used to be. It used to be functional in a language; you had to do years, years, and years of it. Now, even after a year or two, you can get buy. This is

because of the way the national standards have shifted to the focus on communicating and what is really necessary to make that happen.

5.4.3.1.2 More authentic course tasks

While instructors gave students "real life" tasks to enhance their students' learning of Arabic without using technology, they also saw the value of using CALL, as indicated by this teacher: "I use Facebook to help students connect to the other side when they're learning greetings." Assigning authentic tasks to students was important because the participants felt that such tasks made lessons more meaningful and gave learners skills that were practical in daily life.

5.4.3.1.3 Help in setting teaching standards

Instructors used the NSFLL to help them identify key skills students needed to master to function in Arab society, as well as, to compare how well teaching standards were maintained for Arabic in comparison to other modern languages like English, Spanish, and French. One participant said:

> The benefits are when teachers implement the standards in Arabic, so they keep up the standards in comparison to other languages, so they keep up with how other languages are taught, like more developed languages like Spanish, English, or other languages, so the teachers of Arabic can see to what extent the teaching of Arabic is implemented hand in hand in modern language departments the same as it is done with other departments and disciplines.

Another participant also added the following in support of the standards as they relate to the 5C's: "Students feel proud when the approach in the language classroom is communicative and they can speak." This instructor continued to describe that her

students also feel proud when they can utilize Arabic to produce meaningful utterances such as saying their names or asking a question which is in line with the aim of the standards which are intended to help teachers identify important skills learners need in the Arabic classroom and beyond.

5.4.3.1.4 More comprehensive view of culture and language

Instructors used all skills for better understanding of culture and language. One participant stated "The 5C's offer a comprehensive understanding of the culture and the language together," since Arabic is learned using an integrated skills approach, meaning listening, speaking, reading, and writing. Hence, ten participants, in essence all who were currently implementing the 5C's in their teaching, felt they were vital to the instruction of foreign languages since they offer students more authentic ways of learning these languages.

5.4.3.2 Challenges of the NSFLL

While the NSFLL provided instructors with numerous benefits, some participants perceived them to have limitations as well. Those participants who implemented the NSFLL in their teaching mentioned two limitations:

- Lack of training
- Lack of time to implement all 5C's

5.4.3.2.1 Lack of training

The instructors felt that they were left primarily on their own by the universities where they taught to learn and implement the NSFLL in their lessons. This led them to feel frustrated because they wanted formal training. The absence of formal training in the

standards made them question whether they were implementing the standards correctly. One of the instructors expressed her concerns by saying:

> To be honest, at the beginning, I was not incorporating the standards. It was not clear in my mind. At the beginning, I started; I know the 5C's. I was very confused. Which is the interpretive part, which activity goes with which activity. I managed by myself at the beginning; I was in the proper classes to study those 5C's, so I was confused how to use them and how to do my lessons. Nobody told me, but then I found myself having to find someone to show me how to use them the right way, and it was very difficult for me.

5.4.3.2.2 Lack of time to implement all 5C's

Some participants felt that they could not implement all the 5C's in their lessons as prescribed by the NSFLL due to class time constraints and course level (especially for beginners,). Attempting to implement all the 5C's in a single lesson would require not only extensive lesson planning preparation, but also class time far beyond the fifty-minute period to complete assignments. As a result, participants did their best to cover as many of the 5C's in their lessons. One instructor said:

> Well, sometimes, you cannot meet all the 5C's in your teaching, especially in Arabic 101 [low elementary Arabic]. You can hardly meet culture and communication. Most of the students around that time are just learning how to memorize big chunks for functions like greetings and saying hello, introducing people to each other. So, I do not know. Most of the time, it's two or three C's at most. I do not know how greetings can help in making connections or in … Most of the time, you cannot fulfill all of them in one setting, and another thing, oh, the

lesson plan, when you are working on the 5C's, it takes more time to fulfill all of them, especially when teaching four to five times a week and working on the 5C's and trying to meet all of them. It takes more time in fact. Just for one class, it can take a few hours to come up with just one lesson plan.

As can be seen, the implementation of the NSFLL in Arabic teaching is both exciting and challenging for instructors. Yet, no matter the difficulties that might emerge, Arabic instructors have found the standards valuable. They hope for improved training in the NSFLL so they can continue to implement it effectively in their teaching.

5.4.3.3 Incorporation of CALL in teaching standards

In this qualitative question, I asked the participants to talk about their attitudes toward each of the standards in relation with CALL. This inquiry was designed to better understand the relationship between CALL and the NSFLL and to draw more detailed data.

5.4.3.3.1 Specific technological tools to promote communication

Each of the 5C's encompasses specific goals for Arabic instructors to adhere to. For example, to promote the standards for the communication goal (first component of the 5C's) of the NSFLL, most participants utilized technology in varying degrees. They encouraged students to use cell phones for texting in Arabic, IPads for searching in Arabic on the Internet, Facebook for interacting with native-speakers, and YouTube for posting videos in Arabic. Additional tools used are Skype, Wimba and WebSwami software for voice recording and speech production. One participant reported using voice and typing chat so that students could see him online and ask questions or make comments, typically in transliterated English. Another interviewee used technological

tools to record students' voices online to check their pronunciation at a later time and to teach them Arabic through the use of a blog stating that, "Technology could help reading and vocabulary."

A few participants focused on accuracy in speaking and allowed learners to self-correct first through online programs. One instructor stated that learners "benefit from the mistakes they make in class." She continued to say that she utilizes Moodle and Blackboard every day, even after class, because "there is so much information available online and it is productive in strengthening their vocabulary, language, and speaking skills." Another participating instructor helped develop students' communication skills by having them create a video journal, "a video blog where they verbally talk about specific aspects of their lives on campus or about studying Arabic" in the target language.

Other interviewees said that in addition to using electronic media, they found the textbook and the accompanying DVD to contain a great deal of information for all areas of teaching Arabic, including communication. Others, however, promoted the communication component of the 5C's even further by sending students to websites such as the Georgetown University website, Aswaat Arabiyya and Al-Kitaab Companion (referred to as Al-Kitaab), that offers various levels of authentic videos and lectures and pictures based on the students' learning level. The site also mimics how people live in the Arab world, providing students with visuals of how it would be in an immersion program living with native speakers. In addition to Al-Kitaab, seven of the participants used YouTube as a tool that offered many online video resources for students to specifically expand their communication skills.

5.4.3.3.2 Specific technological tools to promote cultural knowledge

To further adhere to the standards for the culture goal (the second component of the 5C's of the NSFLL), nine of the instructors who used technology engaged students in various activities and programs. Although these instructors used a number of activities that did not involve technology in their focus on teaching Arabic culture (including living a week with Arab families, walking students through the process of making Moroccan mint tea in the classroom, using role play to create a cultural scenarios and stimulate discussion concerning cultural etiquette), they also found that technology enhanced their students' cultural experience. For example, instructors used Facebook to allow students to chat with other Arabic speakers in the world, YouTube for listening and watching Arabic language videos, Skype for chatting with other Arabic speakers anywhere in the Arab world.

Another participating interviewee discussed a possibility of inviting a guest speaker from Lebanon utilizing Skype in the classroom to talk about cultural customs in Lebanon related specifically to guest hospitality. The instructor added that the guest speaker interacted with students synchronously and explained to students that "Usually in Arab culture when you offer someone sweets or something, they usually say 'no' on the first round. Usually it takes a second or third round for the person to accept it. So for instance, I will do that in the classroom and then have students role-play the scenario." By introducing students to real-world cultural scenarios through authentic tasks, such as the one described above, learners can better understand specific rules of etiquette in the Arab cultural.

5.4.3.3.3 Specific technological tools to promote connection

Instructors used a number of technology-enhanced activities to promote the standards for the connection goal (the third component of the 5C's of the NSFLL), where students are able to connect Arabic to other subject matter and acquire information. A third of the interviewees, for instance, used math as a way of teaching the Arabic numbers, ultimately relating Arabic back to mathematics. One instructor did the following when teaching numbers:

> I do something, like in terms of math, when you mentioned the math, phone numbers. I'll give out a phone number and at that time, we'll learn how to write, let's say, one through ten. So then, we'll watch a segment of two people exchanging their phone numbers, and then, I will have them re-enact it by exchanging their phone numbers, asking the class, "What's your phone number?" The person will recite it in Arabic. And of course, most of them will make the mistake of writing from English to Arabic the numbers, when it's the reverse. So I have utilized mathematics that way.

There were additional activities and tools the participants used to help students connect Arabic to other disciplines. One participant, for instance, sent learners to the Al-Jazeera website, where they were able to find a wealth of information on politics and culture, thus relating Arabic back to other disciplines. As a result of sending students to the Al-Jazeera website, he claimed that learners with majors such as political sciences focusing on Middle Eastern studies tended to concentrate on the cultural and historical aspects of the Arabic language. Similarly, a different interviewee stated the following

about his students, "They are interested in knowing more about other disciplines and they like to relate the language to their discipline."

5.4.3.3.4 Specific technological tools to promote comparison

To promote the standards for the comparison goal (fourth component of the 5C's of the NSFLL), most of the interviewees used activities and technologies to promote students' ability to compare Arabic to their native language. Although these instructors used a number of activities that did not involve technology in their focus on the comparison goal (including constant classroom comparison and translation of both languages), they also found that technology enhanced their students' ability to accomplish the comparison goal. One instructor used links to short videos and songs for translation and comparison and emphasized to students that "Arabic is a phonetic language and English is not." She explained the differences in the languages by stating,"there are things in Arabic that do not just compare to English." Finally, one participant used the Hooked on Phonics website for the Arabic sounds and created trivia slides with PowerPoints for re-enforcement.

Nonetheless, two interviewees argued that despite such activities, this type of comparison was challenging, especially for beginning students who had not yet acquired the knowledge to compare Arabic to their native tongue. Those learners still needed more skills to compare Arabic to their native language from a grammatical and phonological standpoint.

From a cultural comparison standpoint, one participant used videos to show pictures for comparison purposes. He assigned a task for his students in which they had to compare a coffee shop from the Arab world to Starbucks. The instructor explained

students' interpretation of the task by saying, "Starbucks does not have a lot of tables, just one or two tables inside. People just pick up their coffees and they run, versus the Arab world where they have to stand for the whole day." By comparing cultural and linguistic aspects of American and Arab world through technology, students are able to gain appreciation of the similarities and differences between them.

5.4.3.3.5 Specific technological tools to promote community

Most of the instructors tried to promote the standards for the community goal (the fifth component of the 5C's of the NSFLL), which builds a sense of community and contributes to Arab communities at home and around the world.

Although these instructors used a number of activities that did not involve technology in their focus on promoting sense of community (including immersing students in cultural programs, being hosted by Arabic native-speakers, demonstrating role-plays to create cultural scenarios, taking students to an Arab restaurant or local mosque to witness the sermon), they also found that technology enhanced their students' sense of community experience. For example, one instructor encouraged his students to converse with native speakers through Facebook and Skype. Another instructor had students connect online with learners in his home country to speak and compare, as well as to receive help with their learning of the language and the culture. Additionally, he made use of in-class discussions about Arabic films, using YouTube and online Arabic television channels, to enhance the understanding of Arab culture.

Other participants utilized Skype to create a cultural bond between American and Arab students around the globe. One participant mentioned:

> A lot of my friends back in Egypt or Sudan do have friends who want to learn English. So, I have paired two American students with two Sudanese native Arabic speakers who want to improve each other's language. The American student will speak in Arabic for thirty minutes while the Sudanese will speak in English for thirty minutes, and they have to correct each other's grammar and pronunciation. … Skype is like a window for them to ask a lot of questions. So Skype is the most important tool so far.

Other instructor added: "I encourage students to write letters, using their email accounts, to other students in the Arab world to explore the culture of other communities and share it in class with their classmates." As can be seen, introducing American students to other communities through technology will expand their knowledge of Arab culture and language through their exposure to real world situations.

Overall, the qualitative portion of this study supported the quantitative analysis and drew more detailed data. While the qualitative design intended to provide detailed findings to the generalization of the quantitative part (Lobe, 2008), it also afforded an in-depth exploration of the research questions and expanded the prospects of the study by sharing the Arabic instructors' voices and recognizing their ability to express their opinions. Patton (1990, p. 132) indicates, "qualitative data can put flesh on the bones of quantitative results, bringing results to life through in-depth case elaboration."

Chapter 6: Discussion and Conclusion

I have been an instructor of Arabic at UMBC since I designed the Arabic program at UMBC in 2004. Since my first year as an Arabic instructor, I have been very interested in improving the learning experiences of my students by incorporating technologies, a standards-based approach, and a student-centered approach in foreign language teaching. I designed the Arabic program at UMBC. I designed, developed, and implemented an online Arabic tutorial consisting of practice lessons and quizzes for students learning Arabic at UMBC. Furthermore, my participation in local and national conferences and workshops strengthened immensely my knowledge of foreign language education and reaffirmed my convictions around the importance of Computer-assisted Language Learning. It was also when I was attending those conferences and workshops that I learned about the NSFLL not only for their implementation at the K-12 level but also in higher education. For the last years, both the integration of technology and the NSFLL in the Arabic classroom have guided my instruction and my research. I have witnessed their benefits in my own teaching practices.

The purpose of this study was to examine the implementation of the National Standards for Foreign Language Learning (NSFLL) and the incorporation of CALL in the teaching of Arabic in higher education in the United States. First, I surveyed 106 instructors of Arabic in universities across the United States to examine their knowledge and attitudes towards the NSFLL and their perceptions of CALL. Second, I interviewed 11 instructors to gain a deeper understanding of beliefs and attitudes about the NSFLL and the use of CALL in the teaching of Arabic.

In this chapter, I summarize and theoretically analyze the key findings of the research. I then discuss implications for the teaching of Arabic and the main limitations of the study. Finally, I discuss directions and recommendations for future studies on the NSFLL and the utilization of CALL in the teaching of Arabic in the United States. This research provides important theoretical and practical contributions to the field of teaching of Arabic in higher education given that no prior research, to the best of my knowledge, has simultaneously examined the NSFLL and CALL in the context of teaching Arabic.

6.1 Brief description of main findings regarding the NSFLL

Three main findings regarding the standards emerged from this study. First, a significant proportion of Arabic instructors in this study were unfamiliar with the NSFLL. A large number of Arabic instructors teaching at the university level (40.6%) were not knowledgeable of the NSFLL; only about a quarter of the sample reported being very knowledgeable of the NSFLL. As a result, the teaching of Arabic is still, in 2014, behind (in comparison to the teaching of more commonly taught languages such as Spanish or French) regarding the implementation of the NSFLL in higher education. This lack of knowledge leads to the continuation of using traditional ways of teaching, focusing on the textbook and memorization of vocabulary, which does not facilitate the learning experiences of students in the United States who are interested in learning the language to use it to communicate with Arabic speakers and/or to better understand Arabic culture and society. As Abboud (1968) and Alosh et al. (2006) argued, Arabic is a complex language because of the phonological, inflectional, and syntactic systems, as well as issues concerning diglossia, dialect diversity, and cultural understanding. Because of these complexities, it is important to have instructors who can bring the FL standards

and the innovative technological tools into their instruction and keeping students highly engaged classroom environment.

However, those who were knowledgeable of the NSFLL reported an overall positive attitude. Participants in this study considered that the standards were valuable because they served as an important guide of the skills students need to acquire to communicate effectively linguistically and culturally in Arab society. The instructors' opinions mirrored the goals (the 5 C's) of the NSFLL: to promote *communication* in a language other than English; to help students gain knowledge and understanding of other *cultures*; to sustain the *connection* to other disciplines and acquire information; to endorse *comparisons* to develop insight into the nature of language and culture; and to build a sense of *community* by encouraging contributions in multilingual communities at home and around the world (Standards, 2006). The instructors' enthusiasm and support of the NSFLL is both exciting and encouraging. The positive attitudes of Arabic instructors towards the standards show great promise for their increasing implementation in the classroom. As Arabic instructors continue to use and become trained in the NSFLL in the future, they will ultimately become more effective, meaningful, and engaging for learners.

Even with positive attitudes toward the NSFLL, many instructors had little or no formal training of the NSFLL and were unsure how to implement the NSFLL in teaching Arabic. Arabic instructors with some knowledge of the standards were able to utilize the NSFLL as guides in their lessons; however, some were not confident that they were using the NSFLL correctly. Results from this study suggest that Arabic instructors are self-motivated and try to be up-to-date regarding teaching and pedagogical innovations;

however, these efforts are not supported by a formal in-service training structure from their departments.

More than a third of the Arabic instructors who were knowledgeable of the NSFLL claimed that they learned them from national and local conferences and workshops (40.6%). These include NECTFL, ACTFL, Arabic flagship, and STARTALK and through their own reading and research (30.7%). While these data are encouraging because they indicate an interest of Arabic instructors to learn the NSFLL, they show that a significant number of Arabic instructors have not received formal training in the NSFLL.

To sum up, the findings illustrate that overall, Arabic instructors felt positively about the NSFLL; they valued the guidance that they offer to improve and better focus the course curricula. The findings also demonstrate that instructors are eager for more training in the NSFLL and that as a result, more work to educate teachers is needed. Furthermore, research in the effectiveness of the standards as they relate to the teaching of Arabic in the United States is also needed.

6.2 Brief description of main findings regarding the incorporation of CALL in the teaching of Arabic

An important area of inquiry of this study examined how Arabic instructors incorporated CALL in the teaching of Arabic. Five main findings regarding the utilization of CALL emerged from this study. First, a significant proportion (about three-quarters of the sample) of instructors in this study incorporated CALL in the teaching of Arabic. This result suggests the openness of Arabic instructor to new pedagogical approaches. As Kumari (2001) and Lomicka and Lord (2007) argued, Arabic instructors

are open to expand their classrooms to include a virtual space, where their students can meet experts or other learners.

Arabic instructors in this study, in contrast to previous teachers with graduate or doctoral degrees in Arabic literature (Al-Batal and Belnap, 2006), had training in FL pedagogy and were knowledgeable of current teaching practices, including the use of CALL. The Arabic instructors participating in this study, professionals between 35 and 44 years old with at least master's degrees in education, FL teaching or linguistics, reported higher use of technology. This result suggests a beginning shift in the methodology of Arabic instructors. The lack of expertise in applied linguistics and language pedagogy of Arabic instructors, which was one of Al-Batal and Belnap's (2006) main concern regarding the Arabic teaching force, seems less relevant today and could be resolved in the near future.

Second, Arabic instructors in this study shared positive attitudes towards the use of CALL in the teaching of Arabic. Overall, despite the fact that teachers have had to revise their classroom teaching to include CALL as part of their coursework, instructors shared highly positive views of CALL. As noted in the previous chapter, the respondents recognized the benefits of CALL as a pedagogical/learning and assessment tool for instruction, and as a motivational tool for learning. For example, through the use of CALL and its various online platforms and programs (e.g., Blackboard, VoiceThread, and Skype), the instructors considered that they were able to include instructional activities such as listening to Arabic text along with spelling activities, reading texts aloud, and submitting texts as voice files.

As suggested by Madhany (2006), the majority of the Arabic instructors affirmed that these type of online activities enhanced face-to-face learning and textbook instruction. As a result, the instructors felt that CALL was effective in maintaining students' interest in the learning process. The young generation of learners using technology from a very early age expects that their courses will contain a component in which computers or other electronic media are used for assignments. If not, their interest in the courses will be likely to diminish greatly.

The instructors in this study found that learners thoroughly enjoyed using technology in their courses. Because of this, their interest in learning Arabic was positive. Arnold and Ducate (2011) affirm that learners of this generation, from elementary age to university levels, find technology and multimedia used in learning valuable and an important part of their educational experiences, social networking, and entertainment. Hence, these authors' affirmations support the current Arabic instructors' views that technology in the classroom should be an integral component and one that must be utilized for future learning.

Most of the participants who used technology strongly agreed that technology enhanced students' vocabulary, speaking, writing, listening, reading, and cultural knowledge. As other studies have found, Arabic instructors acknowledged and supported the use of technological tools, given that they provided many opportunities to enhance their Arabic skills, in teaching and learning in the 21st Century (Dubreil et al., 2011; Diaz, 2010; Egbert et al., 2009). Similarly, studies on the utilization of CALL in instruction of other foreign languages (e.g., French, German, Korean, Japanese, Spanish) have also discovered the positive impact of the incorporation of innovative technological

tools to enhance learners' skills in these languages (see for example Kern, Ware, & Warschauer, 2004; Liu, et al., 2002; and Ma & Liberman, 1999). These studies found that the use of technology in the classroom greatly increased students' abilities in listening, speaking, reading, and writing, and their cultural knowledge because of the many and diverse learning opportunities that technology provided. The previous studies' findings were echoed by the participating Arabic instructors in this study, who affirmed that technology enhanced their students' language skills in all linguistic and cultural areas.

The qualitative results of this study also corroborate the positive attitudes of 10 out 11 interviewees who incorporated CALL in their teaching of Arabic. This number of the Arabic participating instructors cannot be representative of the prevailing attitudes of Arabic instructors. These 10 interviewees felt that by using CALL, and the different online programs associated with it, they were able to incorporate pedagogical activities to supplement and enhance the course textbook. Students, for instance, could utilize Skype to communicate with other speakers of Arabic around the world the use Internet to visit websites where they could listen to and read about current events in other Middle Eastern countries. They could also utilize Blackboard and VoiceThread for posting questions and discussing them in Arabic.

Interviewees also reported, as benefits of utilizing CALL in the classroom, that students were happier and more engaged when they used technology in their learning. Instructors also associated CALL with improved student vocabulary, reading, aural, and

auditory skills as also found in a study by Sidman-Taveau and Milner-Bolotin (2001) with Spanish learners.[6]

Third, although higher levels of utilization and positive attitudes were found, the amount and diversity of technological tools utilized by Arabic instructors were somewhat limited. Most Arabic instructors who used technology in the classroom utilized learning management systems and online tools, and fewer utilized Arabic tutorials. Blackboard was the most utilized learning management system. This system was the most familiar and the most commonly available in their universities. Blackboard facilitated the incorporation of some technological tools to create an engaging and effective asynchronous environment by adding a voice-authoring component. Additionally, Blackboard also provided content management and sharing of learning materials, online assessments, student tracking, assignment management, and virtual collaboration. Yet, this system can be limited in generating or being compatible with some specific tools for learning, such as the production of different styles for typing Arabic.

In addition, fewer than half of the Arabic instructors who used technology in the classroom utilized online tools such as blogs (40%), voice (30%), and written chat (30%). These tools are very useful for having to create a dynamic learning environment because they facilitate the creation of synchronous lessons and students' active participation.

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[6] These authors examined whether the exploration of a virtual authentic cultural experience enhanced Spanish learners' language learning. Seven hundred university–level students, majoring in different disciplines, who were mostly American with no previous knowledge of Spanish, completed a lesson using ELMUNDO, (The Hispanic World Webquest) over three semesters. While engaged in this virtual authentic experiential learning, the students used grammatical and lexical topics from the course for their tasks. At the end of the lesson, students' reactions regarding their learning experiences, similar to the Arabic language learners as confirmed by instructors in this study, were positive. Therefore, despite focusing on another language (Spanish), these instructors' opinions support the Arabic instructors' beliefs that current technological tools enhance the study of Arabic and improve learners' skills in the language.

Through blogs, students can write online about their personal experiences or express their feelings about learning Arabic and then share those writings with the class to receive feedback. Hence, blogs sustained learners' language skills, as well as their participation and opportunities for invention and expression of thought (Thorne, 2008; Wang, 2007). Other online tools (i.e. voice/written chat) allowed Arabic learners to access online dictionaries and translators while conversing and interacting with native speakers of their target language. Allowing communication between learners and native Arabic speakers supports the learning process and the learning environment (Stevens, 2006).

Only one-third of Arabic instructors participating in this study utilized Arabic tutorials; Arab academy and SCOLA were the most used Arabic tutorials by the participants (15% and 12%, respectively). Arabic academy offers a variety of online support, including assignments, vocabulary exercises, and an online dictionary. It also provides speaking language activities to increase students' learning retention and speaking confidence. SCOLA reports Arabic news and content from Arabic speaking countries. Students are able to download and burn MP3 files and learn autonomous cultural and language skills through repeated listening of the downloaded information, while following along with the written text.

These tutorials are useful for Arabic students because they enable students to become independent learners. At the same time that they help them improve their confidence, fluency, and accuracy, these tutorials provide students with opportunities for language learning in natural contexts such as listening to Arabic music and reading Arabic newspapers. Hence, tutorials are far better learning tools than the textbook alone.

In spite of the importance of these tools for the learning Arabic, it was surprising to see a limited utilization of these resources by the surveyed Arabic instructors in this study.

Four, Arabic instructors recognized that several challenges have come into play as a result of the introduction of CALL into FL teaching. Many Arabic language instructors recognized their limited expertise in the use of technology. Some instructors in this study have received their certification and degrees through programs with little or no formal training in the use of modern technologies in the teaching of foreign languages (Hubbard, 2008). As Thorne (2008) suggested, technology requires on-going maintenance to adapt to the needs of their digital native students. Thus, it is important for departments to invest in training their Arabic language instructors to teach students the Arabic language skills using technology.

The participants in this study also identified other key challenges as reported by Kessler & Robb (2006). These authors point out several elements that hinder the lack of expertise by FL instructors. The first element is *inertia*, which many of the interviewees in this study illustrated in their discussion of following past teaching methods. The instructors were teaching students through the textbook and through memorization of vocabulary. The second element is *ignorance*, meaning that some Arabic participants affirmed they were not aware of, nor did they understand, all the capabilities of CALL. Thus, they were not using it extensively in their classrooms. The third element concerns issues of insufficient *time restraints.* Some participants stated that using CALL was time consuming but they managed the workload in spite of the time it took to prepare handouts and PowerPoint slides. The fourth element refers to *insufficient infrastructure*. Some participants noted a lack of infrastructure by affirming that due to budgetary constraints

in their university departments, computer language programs and electronic devices, such as Ipads, were not available to students. There were deficiencies of some features in their use of learning management systems (i.e. Wimba). A fifth element is *insufficient standards*. Some participants who did not fully understand the benefits of CALL did not enforce its use in their classroom. A sixth element is that there is a *lack of established methodology*. Many participants expressed their unfamiliarity with the U.S. educational system and the methodologies of language teaching. Lastly, there is a *lack of experienced, knowledgeable educators*. Most participants who hold a Master's and/or PhD degree and are voluntarily using CALL stated that they were self-taught and self-guided learners. Hence, to ensure the future of CALL, improved teacher training and constant revision of classroom curricula in teacher training and ongoing teacher development programs will be essential. To maintain and attract students to learn Arabic, university program developers will hopefully take all the research findings into account and consider the importance of further enhancing the training of instructors in CALL and providing their departments with the most current technologies for teaching in the 21st Century.

As can be seen, the previously reported findings demonstrated that Arabic instructors in American universities felt a great need for more quality training and greater funding for the use of CALL inside and outside of the classroom. With greater support to learn to use technological tools, Arabic instructors believed that they would become more comfortable with technology in their classes and students would become more engaged in the learning process. As a result, universities will need to provide improved training in CALL and more funding to better equip classrooms with computers and other electronic

devices, such as IPads, as well as to ensure that more rooms have media stations. Universities will also need to dedicate more funding to subscribe to Arabic language computer programs that offer the most comprehensive features that are favored by instructors and students alike for the wide range of activities that they offer.

Arabic instructors also reported challenges of being e-moderators, even while they recognized positive and rewarding experiences. E-moderating can be defined as teaching in an online virtual environment or networked environment where teachers and students are separated by time and space (Salmon, 2000). Overall, the participants of this study reported that students benefited from their roles as e-moderators. Instructors considered that it was important to provide constant feedback, verify their comprehension, and revise their understanding to improve their learning of Arabic. At the same time, participants shared that being an e-moderator was demanding, requiring considerable time and effort.

The Arabic instructors also noted that to be successful with technology as an e-moderator, thorough knowledge for locating materials online, assisting learners in the use of technology, and continued training in it was essential, as suggested by Rohfeld and Hiemstra, (1995) and Berge (1995). The results of this study support Salmon's (2000) work, which found that instructors perceived their roles as e-moderators to be demanding. Salmon also stated that educators should acknowledge the importance of understanding students' learning styles and personalities to provide them with valuable and productive feedback, since the e-moderator designs, develops and introduces topics for discussion, in addition to leading, moderating, maintaining focus, and summarizing the discussions. As Dewar and Whittington (2000), Salmon (2004) and Ellis & Hafner (2003) suggested,

participating instructors in this study also mentioned that they had the crucial responsibility of constantly updating their knowledge of technology.

Fifth, Arabic instructors' perceptions of the usefulness of CALL and their attitudes toward CALL were positively correlated. In other words, those instructors who perceived CALL as an important tool for improving the learning outcomes of Arabic students also tended to have more positive attitudes towards the utilization of CALL. Results from this study support Sidman-Taveau and Milner-Bolotin's (2001) findings; they also found that there were statistically significant associations between participants' use of CALL for learning vocabulary, speaking, writing, listening, reading, and culture skills and Arabic instructors' attitudes toward CALL (see Models 3 to 9, Table 5.7). These results are encouraging given that there is a strong correlation between CALL and students' improvement in vocabulary, reading, aural, and auditory skills due to the opportunities available to learners for repetitive drills and practice with new activities, as demonstrated in the University of Michigan's AC program (Sidman-Taveau & Milner-Bolotin, 2001).

6.3 Brief description of main findings regarding the incorporation of CALL in the teaching of Arabic while adhering to the NSFLL

Arabic instructors participating in this study reported positive perceptions of the utilization of CALL and agreed that CALL is relevant to promoting the NSFLL in the teaching of Arabic in the U.S. To the best of my knowledge, there are no other studies in the field of Arabic learning/instruction that examined the relationship between CALL and the NSFLL in higher education; this is an important contribution of this research.

Alosh et al. (2006), who acted as head of the governmental task force that

developed the national standards for learning Arabic in grades K-16 in the United States, encouraged, in general, the use of technology to reinforce the standards to stay in line with the rapidly advancing technologies in the 21st Century (Alosh et al., 2006).

From the participants' perceptions in this study, they first reported that CALL enhanced students' knowledge and understanding of other *cultures*. In an attempt to provide Arabic language learners with first-hand exposure to Arabic culture(s), the Department of State has made funds and grants available to send learners of Arabic to the Middle East and North Africa for study abroad (Marcus, 2011). Yet, because these funds are limited to competitive scholarships, it is difficult for Arabic instructors and learners to be in contact with the target cultures. One way to accomplish this contact is through the innovative use of digital technology to foster intercultural learning experiences that also promote global competency. The participating Arabic instructors in this study promoted students' cultural competence by involving them in the Arabic speaking community and in the Culture with Native Speakers Program, where they could stay with an Arabic-speaking family for a week. They also used technology to connect learners with other native Arabic speakers around the world.

Second, an important number of Arabic instructors felt that CALL enhanced students' sense of *community* and encouraged contribution to multilingual communities at home and around the world. One of the three core beliefs developed by the task force (Alosh and Arab linguists team) who drafted the Arabic standards is to maintain and enhance Arabic language proficiency by integrating students into the Arab community. Yet, not all students can find or successfully integrate into an Arab community, due to differences in community size and location in the U.S. As a result, students are

encouraged to participate in Arab community services such as tutoring online or assisting beginners to join the Arab community, such as in Arabic events, holidays, and religious ceremonies online. Additionally, students are capable of building websites and blogs in Arabic that promote conversation and discussion about language and culture of the Arab world in order to interact with the Arab community locally or overseas. Some participating instructors in this study engaged students in the community by using technology to connect students to other Arabic speakers, visiting the local mosque to observe Friday prayers, and eating in an Arab restaurant. Some instructors also engaged students in the Arab community by asking learners to read about current events in the Middle East then discuss the events with them and with their classmates online.

Third, a considerable number of Arabic instructors felt that CALL enhanced students' *communication* in a language other than English. The goal in this standard is to improve students' speaking and enhance their fluency by promoting interactivity to enable them to converse effectively in various settings. Liu et al., (2002) and Walz, (1998) support this finding by affirming that the communication goal could be met through the integration of technology, which creates online social networks. Hence, the participating Arabic instructors in this study enhanced students' communication skill by utilizing technology to have students read, write, speak, and listen in Arabic. One participating instructor used Facebook to have students type basic greetings to native Arabic speakers abroad. Other instructors used VoiceThread to have students speak in Arabic and YouTube to have them listen to videos in Arabic.

Fourth, a moderate number of Arabic instructors felt that CALL enhanced students' *connection* to other disciplines and helped them to acquire information. They

accomplished this by encouraging students to use various disciplines as a vehicle to supplement the target language. Alosh et al. (2006) suggested that the connection goal promotes students' learning processes by acquiring information in Arabic in accordance with their specific interests or content areas. For instance, students majoring in history may be skilled enough to analyze passages in Arabic history and produce summaries. The participating instructors in this study promoted students' connection of Arabic to other disciplines by using mathematics to teach the Arabic numbers, by referring history and political science majors to sites such as Al-Jazeera for watching historical documentaries relating to the Middle East in Arabic, and by listening to music in Arabic to learn new vocabulary.

Fifth, to some degree, Arabic instructors felt that CALL enhanced students' *comparisons* in order to develop insight into the nature of language and culture. This is because students can broaden their knowledge of other cultures and label important prospects, practices, and products while comparing and contrasting them to various cultural experiences of their own. For instance, through the use of YouTube, videos, or the Internet, students achieve increased language competency while contrasting relevant comparable Arabic and American films. Alosh et al. (2006) discussed the case where students were competent to compare the degree to which poetry and musical lyrics exposed social controversy. For instance, students identified and distinguished the poetry of Nizar Qabbani and Mahmoud Darwish that are affiliated with popular music, and compared it to modern western art and the music industry. The participating instructors in this study promoted students' comparison skills by having learners watch and compare pictures of scenes between American and Arab culture, such as watching people

socializing at a café in the United States and in a country in the Middle East. One participating instructor used trivia games and the Hooked on Phonics website to have students compare Arabic vowels and consonants to those of English.

To sum up, making instructors and administrators aware of learners' interests and desires to include technology in the FL class is relevant. To address this need, some participating Arabic instructors in this study are searching for ways of becoming more knowledgeable and more proficient in the use of technology, regardless of whether they receive training by their departments. To enable more instructors to effectively use technology in the teaching of Arabic, administrators are encouraged to allocate more funding towards instructor training in CALL and towards equipping classrooms with smart boards, computers, and other software to enhance to the teaching and learning of Arabic. Implementing technology in the Arabic classroom will not only contribute to Arabic learners' language proficiency, it will also encourage stronger cooperation between instructors and administrators to allow for curricula in language learning suited for the student of the 21st Century.

6.4 Implications for policy and practice

The findings of this study show that the NSFLL and CALL are in the process of becoming an integral part of the teaching and learning of Arabic in the United States in the 21st Century. Through the utilization of the NSFLL and CALL in the classroom, instructors can provide diverse learning opportunities by utilizing a multitude of online tools and technologically-mediated activities to focus on the 5C's of the standards. Based on the results of this study I now delineate implications for the teaching and learning of Arabic in higher education.

First, the dissemination of NSFLL needs to be improved. Although the standards for Arabic language learning were developed in 2006 to improve the effectiveness of Arabic (and other foreign languages) teaching and to establish a uniform approach to instruction, results from this study show that more dissemination is required to achieve these goals. Compounding the problem of utilization of the standards is also the fact that approximately a quarter of the participants in this study (22%) had lived in the U.S. less than 3 years. Hence, these instructors were not familiar with the U.S. educational system, as stated by Al-Batal (2006); nor had they been introduced to the NSFLL. For further dissemination of the NSFLL, Arabic teachers need to be encouraged to attend conferences, training seminars, and to continuously expand their knowledge as they pertain to the NSFLL through their own research. In addition, language departments in institutions of higher learning, where Arabic is offered, need to provide in-service training regarding the implementation of the standards. While the standards offer a wide range of teaching advantages to the instruction of Arabic, understanding those benefits and knowing which of the 5C's can best help students at the various levels of Arabic can maximize learning and make course materials engaging. Learners at the intermediate and advanced levels, for instance, are more likely to find the community aspect of the 5C's more beneficial and less overwhelming than elementary Arabic learners. Students in advanced levels have mastered the skills needed to converse comfortably with native speakers in the community, to listen and understand instructions given to them, and to read menus in Arabic if taken to a Middle Eastern restaurant. Therefore, for these learners, the community component of the 5C's would enable them to enhance their

learning experiences in meaningful ways. Without knowledge of the NSFLL, instructors will likely continue to rely on older and less effective ways of instruction.

Second, it is important for Arabic instructors to supplement the teaching of Arabic with technologically-mediated activities and the use of technological tools, as Levy & Stockwell (2006) and Knoche & McCarthy (2004) have asserted. Arabic instructors should incorporate the NSFLL (5C's) and technological tools to foster the learning of Arabic in this new digital era. Additionally, by utilizing diverse technology in the classroom, instructors could create authentic activities to accommodate different learners and learning styles while congregating all 5C's and therefore improve their interest and engagement (Lever-Duffy et al., 2005).

It is important to note that results of this study showed that above all, technology played a vital role in enhancing learners' listening skills. From my years of experience as an instructor of Arabic, I have seen this as especially true for students in elementary level. Beginner learners usually find it highly beneficial to repeatedly listen to the pronunciation of new vocabulary and to hear passages in Arabic. Hence, utilizing technology is easier with beginner students since they need it most to re-enforce and enhance their listening and other language skills. Yet, the use of technology could be beneficial as well for complex topics in more advanced Arabic learning, such as the in spoken presentations and writing essays in Arabic.

Third, Arabic instructors need to receive adequate mentoring and training to constantly update their teaching skills and knowledge required to be effective teachers. As Al-Batal (2006) reports, a significant proportion of Arabic instructors are lacking training in foreign-language teaching because few opportunities for training and/or

certification in Arabic teaching were available before the beginning of the 21st Century. A recently developed training program, STARTALK, is an example of in-service training program designed to expand the pedagogical tools and approaches of Arabic instructors. This program provides training that promotes the implementation of NSFLL, by providing productive and engaging experiences to gain an understanding of the NSFLL and enhance their teaching methodologies, including the creation of lesson plans and assessment of students' progress.

6.5 Limitations of the study and future research

This exploratory multi-methods research contributed to the body of knowledge on Arabic teaching, as it relates to the NSFLL and the incorporation of technology in instruction. However, this study also presented some challenges and limitations that are important to discuss.

Due to the fact that this research was based on a non-experimental design, the analysis and findings were primarily dependent on the perceptions, beliefs, experiences, and honesty of the participants. Causal effects or relations cannot be identified with this type of research design. Another limitation of the study is related to the voluntary nature of the sample. As in any survey research, participants were self-selected (they accepted an invitation to participate), and therefore the sample is neither random nor representative of the Arab instructors in the U.S. Only instructors who had an interest in the integration of technology in the classroom and/or the implementation of the NSFLL participated in the study. Because of the nature and the limit of the sample, some members of the overall Arabic instructors population may have been less likely to participate, and therefore not all the ranges of participants' perceptions and attitudes were represented in the study.

The small sample size in this study was another important limitation (106 out of 300 surveyed Arabic instructors responded). Although more than 100 participants accepted the invitation to participate in this study, the numbers of instructors who were not familiar with the standards and did not utilize technology in their classroom were significant (40.6% and 25.47% respectively). Sample size has important implications for the power (probability of detecting an association) of the study and the number of variables that could be included in regression models.

Another important limitation concerned the timing of data collection. The survey was conducted at the end of the Spring semester, 2013, which was the period of preparation for final examinations. As I stated previously in my research design, I had to remind the participants twice in order to guarantee a relevant sample of the subjects for the research. Then, I had to follow up with the participants, on numerous occasions, to set up appointments for the interviews. Due to summer vacation, considerable numbers of Arabic instructors traveled overseas. Thus, five of the interview appointments were cancelled at the last minute and the ratio of the number of the participants surveyed relatively dropped from 16 to 11 participants.

Future research should deal with these limitations and build from them. To corroborate the findings of this study, it would be important to develop an experimental design study. Currently, most of the research that has been conducted with CALL in Arabic as a second language has been non-experimental. In particular, most of the data that have been gathered are based primarily on the perceptions of instructors and students. Hence, by implementing an experimental study, a clear pattern of relations could be identified, at least for some of the research questions. It would also be helpful to

conduct focused research on the specific technological tools and the level of the hybridity in the classroom. The benefit of such research could focus particularly on why the Arabic instructors prefer to use certain technology (ies) rather than others and whether different students' learning outcomes are associated with their choices. Such data would help the Arabic teaching field in the U.S. to identify which technology (ies) are the most beneficial.

Another recommendation for further research is to conduct a similar study, but investigating students' perceptions and attitudes instead. The benefit of such research will allow Arabic linguists to hear students' voices concerning the utilization of technological tools and how they implicitly sense the implementation of the NSFLL.

A final consideration for a future study would be to explore the Arabic programs in high schools in order to examine whether graduating seniors are well prepared for college level study of Arabic with a background in CALL adhering to NSFLL.

6.6 Conclusions

Arabic, since the events of September 11th, 2001, has become a language of interest to students and many others who must know it for their professional work. The teaching of Arabic can no longer be taught through a discrete skills approach or through the textbook alone. The world today is much more connected than in previous times when technology and travel opportunities were limited. Listening, speaking, reading, and writing are interconnected, and the textbook by itself is often not enough for learning or using diverse skills.

This non-experimental research study has sought to examine how Arabic language instructors perceive the use of CALL in their teaching and to what extent they

believe the National Standards for Foreign Language Learning (NSFLL) enhance the teaching and learning of Arabic in the United States. Presently, a number of studies exist that investigate the use of CALL and the NSFLL in higher education in languages such as French and Spanish, but not in Arabic.

The results of this study were obtained through surveys and interviews of instructors teaching Arabic in institutions of higher learning in different regions of the United States. Findings of this study highlighted the NSFLL and CALL potential for improving the teaching experiences of Arabic learners. Teachers using NSFLL and CALL in their classrooms provide their learners with diverse learning opportunities. Through technology and the national standards, instructors and students have access to a multitude of online tools and activities for language instruction. However, data gathered in this study also illustrated that a significant proportion of Arabic instructors had limited knowledge of the standards and many were not using technology due to limited training and resources. For those instructors who were utilizing CALL, findings of this study showed a positive relationship between instructors' perceptions about the use of CALL and the implementation of the NSFLL in their teaching of Arabic. Thus, the finding that CALL and the NSFLL enhance students' Arabic language skills is highly encouraging and is grounds for further research following this study.

This study has filled a wide and significant gap in the field of Arabic language instruction. Findings of this study emphasize the importance of better training for instructors in the use of CALL and implementation of the NSFLL in the Arabic language classroom. This could enable administrators and Arabic language program coordinators to better provide for the needs of Arabic instructors in the classroom and for new

directions of Arabic language teaching in this new millennium. Additionally, the findings of this study could also encourage instructors to enhance their knowledge of CALL and the NSFLL to improve their teaching of Arabic.

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Appendix A: Distribution of Participants by their States

	Frequency	Percent	% of missing cases
			5.7%
1. Alabama	2	1.9	
2. Arizona	1	.9	
3. Arkansas	1	.9	
4. California	14	13.2	
5. Colorado	2	1.9	
6. Connecticut	1	.9	
7. Florida	2	1.9	
8. Georgia	1	.9	
9. Idaho	1	.9	
10. Illinois	4	3.8	
11. Indiana	2	1.9	
12. Iowa	2	1.9	
13. Kansas	3	2.8	
14. Kentucky	2	1.9	
15. Maine	1	.9	
16. Maryland	16	15.1	
17. Massachusetts	2	1.9	
18. Michigan	6	5.7	
19. Minnesota	2	1.9	
20. Nebraska	2	1.9	
21. New Jersey	5	4.7	
22. New Mexico	1	.9	
23. New York	5	4.7	
24. North Carolina	4	3.8	
25. Ohio	3	2.8	
26. Pennsylvania	3	2.8	
27. South Carolina	2	1.9	
28. Vermont	2	1.9	
29. Virginia	2	1.9	
30. Washington	3	2.8	
31. Wisconsin	3	2.8	
Total	106	100.0	

Appendix B: Arabic Instructors Native Speaker Origin (N= 76)

	Instructors %	% of missing cases
Origin:		1.88
Algeria	(1) 1.32	
Bahrain	(1) 1.32	
Egypt	(9) 11.84	
Iraq	(4) 5.26	
Jordan	(5) 6.59	
Kuwait	(1) 1.32	
Lebanon	(11) 14.47	
Libya	(4) 5.26	
Mauritania	(1) 1.32	
Morocco	(16) 21	
Oman	(1) 1.32	
Palestine	(12) 15.80	
Saudi Arabia	(2) 2.63	
Sudan	(2) 2.63	
Syria	(5) 6.59	
Tunisia	(1) 1.32	

Appendix C: Survey for Arabic instructors

The survey of The Impact of Computer Assisted Language Learning Adhering to the National Standards for Foreign Language Learning: Focus on Modern Standard Arabic at the University Level

Thank you for taking the time to complete this survey!

This study explores teaching practices of university level Arabic instructors in the United States. This study also aims to examine instructors' use of technologies as supplemental components in their teaching of Arabic. The ultimate goal of this research is to identify the best pedagogical methods to teach and learn Arabic in the 21st century.

As an Arabic lecturer and researcher, I am devoted to fulfilling my professional commitment and sharing the outcome of this research with Arabic teachers in higher education. My goal is to help us design better Arabic courses in order to improve the learning and educational outcomes of Arabic students. Your feedback is important to achieve the goals of this project. Your opinions and comments would be valued, and your participation in this project is extremely important.

Please note the following:

Your participation is completely voluntary.

The analysis and results of the survey are confidential.

The following acronyms will be used in this survey:

MSA: Modern Standard Arabic

NSFLL: National Standards for Foreign Language Learning

CALL: Computer-assisted Language Learning

LMS: Learning Management System

Please note that this survey consists of two types of questions:

Please answer Yes or No to open-ended questions and mark an "X" to all options that best fit your answers.

At the end of the survey, you will have the opportunity to enter into a drawing for a $20 prize.

This survey has been reviewed and approved by the UMBC Institutional Review Board (IRB). If you have any questions about this research or problems accessing the survey you can contact Samir El Omari at samir1@umbc.edu, or 443-465-1153, or his faculty advisors, Dr. Galindo at galindo@umbc.edu, or Dr. Oscoz at oscoz@umbc.edu

Completing this survey should not take longer than 15 minutes.

Thank you very much for your participation in this survey, it is very important to me!!

Samir El Omari

Part I: Biographical Data

1. What is your age? _____ years
2. What is your gender?
   a) Female
   b) Male

3. How do you identify your race / ethnicity?
   a) Middle Eastern or Arab
   b) Asian or Asian American
   c) Black or African-American
   d) Hispanic, Latino or Spanish origin
   e) White or European-American
   f) Some other race/ethnicity _____

4. Were you born in the United States?
   a) Yes
   b) No

   If not, how long have you lived in the United States?

   _____ years.

5. Please lists languages you speak besides Arabic?
   0. None _____
   1. _____
   2. _____
   3. _____
   4. _____
   5. _____

6. Are you a native speaker of Arabic?
   a) Yes _____
   b) No _____

7. If Yes, where originally are you from: _____

8. What dialects of Arabic do you speak? Mark all the options that apply.
   a) None, MSA only.
   b) Egyptian.
   c) Levantine (Middle Eastern).
   d) Maghreb (Northern African).
   e) Peninsular (Khaliji).
   f) Other _____.

9. Please indicate all the settings in which you have taught or are currently teaching Arabic. Please include any part-time or full-time classroom teaching experience, whether voluntary or paid, but do not include tutoring experience. Mark all the options that apply.
   a) Community college
   b) University
   c) Defense Language Institute Foreign Language Center (DLIFLC)
   d) U.S. Military Academy
   e) National Security Agency (NSA)
   f) Other _____

10. Please write in the state in which you are currently teaching
    _____

11. How many years TOTAL have you taught Arabic as a foreign language? Please include any part-time or full-time classroom teaching experience and all the experiences from other institutions in the U.S. and abroad:
    _____ years

12. What is your highest degree earned?
    a) Bachelors

    b) Masters

    c) Ph.D.

13. Were any of your degrees related to the Arabic language?
    a. Yes _____
    b. No _____

14. Please list your major or program of study
    _____
    _____
    _____
    _____

Part II: The National Standards for Foreign Language Learning (NSFLL)

The National Standards for Foreign Language Learning (NSFLL) in the 21st century emphasize the importance of:

(1) Promoting *communication* in a language other than English
(2) Gaining knowledge and understanding of other *culture*
(3) Sustaining the *connection* to other disciplines and acquiring information
(4) Endorsing *comparisons* in order to develop insight into the nature of language and culture
(5) Establishing and building a sense of *community* and encouraging contribution in multilingual communities at home and around the world

15. How knowledgeable are you of the NSFLL for Arabic as a foreign language? Mark only one

a) Very knowledgeable

b) Somewhat knowledgeable

c) Minimally knowledgeable

d) Completely unknowledgeable

16. How did you learn about NSFLL? Mark all the ones that apply

a) I did not know about the NSFLL before taking this survey

b) From my colleagues at work

c) At a local or national conference

d) At a STARTALK workshop

e) Through my own reading and research

f) Other _____

17. According to what you know about the National Standards for Foreign Language Learning (5C's) for Arabic as foreign language, please express your beliefs towards each of the theses statements. If you did not know about the NSFLL before taking this survey, go to the next question

Please check the box that best fits your beliefs	Strongly disagree	Disagree	Somewhat disagree	Agree	Strongly agree
1. NSFLL promotes *communication* in a language other than English.					
2. NSFLL supports gaining knowledge and understanding of other *cultures*.					
3. NSFLL sustains the *connection* to other disciplines and acquires information.					
4. NSFLL endorses *comparisons* in order to develop insight into the nature of language and culture.					
5. NSFLL establishes and builds a sense of *community* and encourages contribution in multilingual communities at home and around the world.					
6. NSFLL is relevant to the teaching and learning of Arabic as foreign language.					

Add any additional comments regarding the NSFLL

Part III: Computer-assisted Language Learning (CALL)

Do you incorporate technology (web tools, including wikis, blogs, podcasts, forums, chat rooms) in your Arabic classes?

If yes, please complete the next questions
If no, you are done

a. Yes _____
b. No _____

18. Please indicate how useful you believe CALL is for the teaching and learning of Arabic? Mark only one

a) Extremely useful

b) Moderately useful

c) Slightly useful

d) Not at all

19. Please indicate how useful you believe CALL is for learning the following?

Please check the box that best fits your case	Not useful at all	Slightly useful	Useful	Moderately useful	Extremely useful
1. Grammar					
2. Vocabulary					
3. Speaking					
4. Writing					
5. Listening					
6. Reading					
7. Culture					

20. Do you use in your Arabic courses any of the following Learning Management Systems? Mark all the options that apply.

a) Blackboard

b) Moodle

c) PBworks

d) Desire2Learn (D2L)

e) Sakai

f) Other _____

21. Do you use in your Arabic courses any of the online Arabic tutorials? Mark all the options that apply.

a) Arab Academy

b) Arabic2000

c) Sakhr

d) SCOLA

e) Babel Arabic

f) Al Mu'tamid

j) Rosetta Stone

h) Other _____

22. How much online instruction time is incorporated in your Arabic course when teaching the following language skills

Please check the box that best fits your case	25%	50%	75%	100%
1. Listening				
2. Reading fluency (out loud)				
3. Reading comprehension				
4. Speaking fluency				
5. Hand writing				
6. Typing (using Arabic keyboard)				
7. Vocabulary				
8. Cultural knowledge				

23. According to your course design and inclusion of technology, please express your beliefs towards each of the theses statements about Computer-assisted Language Learning

Please check the box that best fits your beliefs	Strongly disagree	Disagree	Somewhat disagree	Agree	Strongly agree
1. CALL enhances students' listening					
2. CALL enhances students' reading fluency.					
3. CALL enhances students' speaking fluency					
4. CALL enhances students' hand writing					
5. CALL enhances students' typing ability (using Arabic keyboard)					
6. CALL enhances students' vocabulary retention					
7. CALL enhances students' cultural knowledge					

24. Please express your beliefs towards each of the these statements

Please check the box that best fits your beliefs	**Strongly disagree**	**Disagree**	**Somewhat disagree**	**Agree**	**Strongly agree**
1. CALL enhances students' *communication* in a language other than English.					
2. CALL enhances students' knowledge and understanding of other *cultures*.					
3. CALL enhances students' *connection* to other disciplines and acquires information.					
4. CALL enhances students' *comparisons* in order to develop insight into the nature of language and culture.					
5. CALL enhances students' sense of *community* and encourages contribution in multilingual communities at home and around the world.					
6. CALL is relevant in adhering to NSFLL to teach and learn MSA as a foreign language.					

Add any additional comments regarding the use of technology for the teaching and learning of Arabic

If you would like to be contacted to participate in an individual interview on these topics, please give your email address here. Your email address will not be associated with your answers on the survey but rather will be separated from the survey results before analysis to ensure survey confidentiality

Thank you very much for your time!

Appendix D: Interview Questions

Interview Questions:

Based on your feedback to the previous survey concerning the National Standards for Foreign Language Learning and the incorporation of technologies in the Arabic course.

1. What are the benefits of using CALL in your teaching?

2. What are the challenges of using CALL in your teaching?

3. What are the benefits of applying the National Standards for Foreign Language Learning in your teaching?

4. What are the challenges of applying the National Standards for Foreign Language Learning in your teaching?

5. Why is it important to use technological tools (MLS, Arabic tutorials) in your course? (i.e. does it support/supplement a F2F course)

6. What specific technological tools do you use to promote students' Arabic communication skills?

7. What specific technological tools do you use to promote students' cultural knowledge and skills?

8. What specific technological tools do you use to promote students' ability to connect Arabic to other disciplines and acquire information?

9. What specific technological tools do you use to promote students' ability to compare Arabic to the their first language?

10. What specific technological tools do you use to promote students' ability to build a sense of community and contribute in Arab communities at home and around the world?

11. Does the implementation of technological tools in your course affect how you give feedback to students? (i.e. F2F, LMS, VLE, synchronous /asynchronous…etc)

12. How effective is using technological tools at enhancing students' learning of Arabic?

13. How do you assess students' participation in the online component of the Arabic course? (Is there acceptance/rejection from students?)

14. What challenges have you faced while acting as an online Arabic facilitator?

15. What guidance or suggestions would you like to recommend or add to the role of a language e-moderator?

16. Is there anything you would like to add to or clarify in this interview?

Thank you very much for your time.

Appendix E: Interview Consent Form

Interview Consent Form

1. **Purpose of Interview:**

This interview explores teaching practices of university level of Arabic instructors in the United States. This interview also aims to examine instructors' use of technologies as supplemental components in their teaching of Arabic. The ultimate goal of this research is to improve students' learning skills and to identify the best pedagogical methods to teach and learn Arabic in the 21st century.

This interview also investigates the instructors' roles as online facilitators and their opinions about the importance of Computer Assisted Language Learning (CALL) as a teaching method that aids Arabic learners' foreign language skills.

As an Arabic lecturer and researcher, I am devoted to fulfilling my professional commitment and sharing the outcome of this research with Arabic teachers in higher education. My goal is to help them design better Arabic course in order to improve the learning and educational outcomes of Arabic students. I strongly believe your feedback is important to reach the goals of this project. Your opinions and comments would be valued, and your participation in this project is extremely important.

This interview is conducted for a research study. All of the findings will be used only for educational purposes.

2. **Interviewer Contact Information:**
   - Name and Job Title: Mr. Samir, El Omari, Lecturer
   - Address: University of Maryland Baltimore County, Modern Languages and Linguistics, UMBC. Office # 144, 1000 Hilltop Circle, Baltimore, Maryland, Zip Code: 21250
   - Phone Number: 410-455-0729
   - Email: samir1@umbc.edu

3. **Interviewee Contact Information:**
   - Name and Job Title: ……
   - Address: ……..
   - Phone Number: ……
   - Email: ……..

4. **Location, Date & Time:**

- Place of Interview: (colleges/universities in MD state, Phone, Skype if out of state)
- Date: .....
- Starting Time: ……
- Interview Length: estimated ½ hour

5. **Statement of Confidentiality:**
Any information learned and collected from this interview in which I might be identified will remain confidential and will be disclosed ONLY if I give permission, to the extent allowed by law. All records (interview questions, tapes, etc) will be stored in a locked file cabinet in a locked room. Only the investigator and members of the research team will have access to these records. If information learned from this study is published, I will not be identified by name. By signing this form, however, I allow the research study investigator to make my records available to the University of Maryland Baltimore County (UMBC) Institutional Review Board (IRB) and regulatory agencies as required by law.

Please, check the box appropriate regarding the use of recording instruments during this interview:

☐ Yes, I give permission to record my voice.

☐ No, I do not give permission to record my voice.

Interviewee Name: _____ Signature: _____

Appendix F: Interview Themes

Interview Themes

The benefits of using CALL in teaching Arabic	Challenges of CALL in teaching Arabic	Enhancement of NSFLL (5C's) using CALL
Themes: - Highly beneficial - Supports face-to-face teaching - Valuable outside classroom - Monitoring students' skills - Supplements textbooks	Themes: - Software upgrades - Lack of training - Lack of funding - Inexpensive tools - Limited software features - Technical glitches - Time consuming	Themes: - Provides authentic framework - Makes teaching effective - Improves communication - Promotes cultural understanding - Encourages motivation - Improves literacy skills - Wealth of tasks - Creates connection to other disciplines - Language comparison - Builds sense of community