Evaluating and Addressing the Information Needs and Habits of Turkish English Majors

Leanna C Fry
Brigham Young University

Follow this and additional works at: https://scholarsarchive.byu.edu/etd

Part of the Education Commons

BYU ScholarsArchive Citation
https://scholarsarchive.byu.edu/etd/9056

This Dissertation is brought to you for free and open access by BYU ScholarsArchive. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of BYU ScholarsArchive. For more information, please contact ellen_amatangelo@byu.edu.
Evaluating and Addressing the Information Needs and Habits of

Turkish English Majors

Leanna Fry Balci

A dissertation submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

Peter J. Rich, Chair
Teresa Reber Bell
Randall Spencer Davies
Richard Edward West

Department of Instructional Psychology and Technology
Brigham Young University

Copyright © 2019 Leanna Fry Balci
All Rights Reserved
ABSTRACT

Evaluating and Addressing the Information Needs and Habits of Turkish English Majors

Leanna Fry Balci
Department of Instructional Psychology and Technology, BYU
Doctor of Philosophy

Information literacy is a relatively new concept in Turkey and is most accessible to English Language Learners. This article-format dissertation identifies the information needs and habits of English Language and Literature majors at a major Turkish university, discusses the development of an online intervention to teach information literacy to these students, and tests the efficacy of using Turkish subtitles to teach information literacy skills to these English majors. Article 1 surveyed students majoring in English Language and Literature about their attitudes towards library usage and sources. Student attitudes revealed a preference for internet sources over library sources and a belief that internet sources are more likely than library sources to provide students with the information they need. In response to the need for increased information literacy instruction, an online tutorial was developed to teach information literacy skills that focus on the Framework for Information Literacy for Higher Education. Article 2 discusses the design and development of this tutorial. Article 3 tests the most effective language configuration for students to learn these information literacy skills, finding that students that completed the tutorial with an English-language soundtrack and Turkish subtitles finished tasks at a statistically significant faster pace than other groups and with statistically significant more success. Overall, Turkish English majors showed a need for increased information literacy skills. A subtitled tutorial is one way to provide this information literacy training.

Keywords: information literacy, library instruction, subtitles, captions, online tutorials, interactive tutorials.
ACKNOWLEDGEMENTS

Thanks to my committee chair, Peter Rich, for collaborating with me on these articles and giving me encouragement and guidance along the way. Also, thanks to my committee, Teresa Bell, Randy Davies, and Rick West, for their support and feedback. That support made this dissertation possible, and that feedback made it stronger and better.

Thanks, also, to my department chairs and colleagues at the Harold B. Lee Library for supporting my work on this degree. I want to acknowledge Judy Weeks for her research and editing support. I also want to thank Tuncer Yılmaz for the time and effort he took on my behalf to connect me with students to gather data. He has always been an incredible colleague and friend.

Finally, endless thanks to my family. My husband, Eser, believed in me more than I believed in myself and never let quitting be an option. My four beautiful sons, two who were born during the program, have sacrificed more than anyone for me to accomplish this goal. I hope the sacrifice will be worthwhile for us all. My parents and siblings, especially my sister Kristen Furner, helped with my children during hours of classes and writing. I could not have finished this program without them. I appreciate the love and example of my father, Earl Fry, who paved the way for scholarship in our family. I wish my mother, Elaine Fry, were here to see me achieve this goal.
# TABLE OF CONTENTS

**TITLE PAGE** ................................................................................................................................... i  
**ABSTRACT** .................................................................................................................................... ii  
**ACKNOWLEDGEMENTS** ........................................................................................................... iii  
**TABLE OF CONTENTS** ............................................................................................................... iv  
**LIST OF TABLES** ....................................................................................................................... vi  
**LIST OF FIGURES** ...................................................................................................................... vii  
**DESCRIPTION OF RESEARCH AGENDA AND STRUCTURE OF DISSERTATION** ...... viii  
  Extended Literature Review ................................................................................................... ix  
  Article 1 .................................................................................................................................. ix  
  Article 2 ................................................................................................................................... x  
  Article 3 .................................................................................................................................. xi  
**EXTENDED LITERATURE REVIEW** ............................................................................................ 1  
Information Literacy ....................................................................................................................... 2  
  Teaching Information Literacy Through the *Framework* ......................................................... 4  
  Information Literacy in Turkey .................................................................................................... 5  
  Information Literacy and English Language Learners ............................................................ 13  
Using Titles ................................................................................................................................... 15  
  Listening Comprehension ........................................................................................................ 16  
  Vocabulary Acquisition ............................................................................................................ 18  
  Titles and Language Proficiency ............................................................................................... 19  
  Turkish Titling ........................................................................................................................... 21  
Titling and Information Literacy .................................................................................................. 22  
Conclusion .................................................................................................................................... 24  
References ..................................................................................................................................... 26  
**ARTICLE 1: Student Attitudes Towards Library Usage and Sources at a Turkish University** ... 36  
Abstract ........................................................................................................................................ 37  
Introduction ................................................................................................................................... 38  
Literature Review ....................................................................................................................... 38  
Methodology ................................................................................................................................. 42  
Results ........................................................................................................................................ 43  
Discussion and Conclusions ......................................................................................................... 47
LIST OF TABLES

Extended Literature Review

Table 1  *Titling Configurations* ...........................................................................................................25

Article 1

Table 1  *ANOVA Analysis of Resource Use* ..........................................................................................44
Table 2  *Effects of Library Instruction* ..................................................................................................46

Article 2

Table 1  *Threshold Concept Modules* ..................................................................................................65
Table 2  *Phases of Module Development* ...........................................................................................69

Article 3

Table 1  *2 x 4 ANOVA* ..........................................................................................................................90
Table 2  *Summary Statistics* ...............................................................................................................91
LIST OF FIGURES

Extended Literature Review

Figure 1. PowerPoint presentation plagiarized from Wikipedia................................................11

Figure 2. Iterative nature of the Information Literacy Framework............................................24

Article 1

Figure 1. How often do you use the library? ...............................................................................44

Figure 2. How often do you use the internet, university library, and instructor to research? ....44

Figure 3. The library and internet have the information you need..............................................45

Figure 4. How often do you use different types of sources?.......................................................45

Article 2

Figure 1. Merrill’s “First Principles of Instruction” Design Model .............................................63

Figure 2. Information Has Value module in terms of Merrill’s “First Principles of Instruction” Design Model...........................................................................................................................................66

Figure 3. Script for Information Has Value module. .................................................................66

Figure 4. Video instruction of the Information Has Value module.............................................68

Figure 5. Interactive element of the Information Has Value module.........................................68

Figure 6. Framework tutorial authored using Articulate Storyline 2.........................................70

Figure 7. Immediate feedback on student responses.................................................................72

Article 3

Figure 1. Time to complete a task by task for each title configuration....................................92

Figure 2. Task success by task for each title configuration.......................................................93

Figure 3. Time to complete a task for each year.......................................................................94
DESCRIPTION OF RESEARCH AGENDA AND STRUCTURE OF DISSERTATION

The purpose of this dissertation was to identify the information literacy skills of Turkish English Language Learners (ELL) and to propose and test a technology-based approach to teaching these skills. Information literacy is described by the Association of College and Research Libraries Board (ACRL, 2015) as “the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning” (p. 8). Learning information literacy can be particularly challenging for non-native English speakers as the concept was developed in English-language countries and “the great majority of non-English speaking populations around the world have not been able to fully benefit from the knowledge of how to learn and to practice effective and efficient information literacy attitudes and behaviors” (Horton, 2014, p. 25). A recent study showed that student information literacy skills and perceptions of libraries can be impacted through interventions (Chen, 2011). One common type of intervention for teaching information literacy skills has been through online tutorials.

This journal-ready dissertation combines traditional requirements, including preliminary pages for the university, with formatting requirements for specific journal publications. The Extended Literature Review that precedes the articles brings all the articles’ literature reviews together into one literature review and provides additional information and context for the dissertation as a whole. Article 1 identifies the information literacy skills of Turkish ELLs by evaluating a current program of information literacy at a Turkish university. Article 2 is a design article describing the process of creating this online tutorial. Article 3 builds upon the survey results from Article 1 by proposing a technology-based intervention in the form of an interactive
online tutorial (Article 2) and testing the efficacy of providing the tutorial with both English and Turkish language titles. Research for Article 3 was conducted with English students at a Turkish university. All articles contain original literature reviews. Article 3 includes an appendix about titling in language acquisition.

**Extended Literature Review**

Context is important to understand the trajectory of the articles written for this dissertation. The Extended Literature Review refers to the literature reviews in Articles 1, 2, and 3 to explain the discipline of information literacy, the state of information literacy in Turkey, the development of a tutorial to teach information literacy, and the usage of titles to support this tutorial. In addition to the existing literature reviews, the Extended Literature Review provides a cultural context for the need for information literacy education in Turkey. The Extended Literature Review appears first in the dissertation as this context helps explain why the studies in Articles 1 and 3 were conducted and the need for the product developed in Article 2.

**Article 1**

In order to understand the information literacy skills of Turkish ELLs, the first article in this dissertation, “Student Attitudes Towards Library Usage and Sources at a Turkish University,” explores English Language and Literature majors’ perceptions of libraries and library resources (Fry, 2016). Using a survey instrument available on the English Language and Literature Department’s webpage, 91 majors identified their preferred sources of information and evaluated the effectiveness of different types of sources.

Respondents overwhelmingly preferred and trusted non-library resources, specifically Google and Wikipedia, over resources provided by their library. These results were consistent with previous studies of other learner groups. However, respondents also identified these non-
library resources as better sources of information than those provided by their library. This discrepancy is associated with a lack of information literacy skills and signals a need to reevaluate the university’s information literacy program.

Because of its emphasis on international library use, this article was submitted to *IFLA Journal*, the official publication of the International Federation of Library Associations and Institutions, the global association of libraries and librarians. It was accepted for publication in 2016 and published that same year.

**Article 2**

In order to address the information literacy needs of English Language and Literature students at a Turkish university, a product was developed that teaches information literacy skills based on ACRL’s *Framework for Information Literacy for Higher Education*, which was used as the intervention for the study reported in Article 3. Article 2 is a design article describing the process of creating this product. The design model for the tutorial was Merrill’s (2002) “First Principles of Instruction.” This model was a good fit with the *Framework* as both models invite learners to be active participants in the learning process.

The product is a six-module tutorial authored in Articulate Storyline 2. A style guide ensured a consistent theme throughout all the modules. Each module contains an instructive video and an embedded interactive element that allows students to demonstrate their proficiency in the instructed competency. Each of the modules is housed in a single player and available online. A chapter on the design of this tutorial, entitled “Teaching the Framework Using an Online Tutorial,” was accepted for publication in the book *The Information Literacy Framework: Case-Studies of Successful Implementation* to be published in 2020.
Article 3

Based on the results of Article 1, the third article, “The Effects of Subtitles and Captioning on an Interactive Information Literacy Tutorial for English Majors at a Turkish University,” tested a proposed model for teaching information literacy skills to ELLs. Conducting this study required building an online tutorial to teach information literacy skills, followed by testing the module in different language formats (English soundtrack only, English soundtrack with English captions, English soundtrack with Turkish subtitles).

The module was based on ACRL’s *Framework for Information Literacy for Higher Education*. This document, adopted in 2016, focuses on six core concepts for information literate students. The tutorial teaches students these core frames and provides them with opportunities to practice these concepts through interactive elements embedded in the tutorial.

In order to research the best way of providing online instruction to ELLs, 97 participants were invited to watch the tutorial and complete the embedded interactive elements. All participants were Turkish English Language and Literature majors at a Turkish university. Participants were randomly divided into three groups. One group completed the tutorial with instruction and directions exclusively in an English soundtrack. A second group completed the tutorial with both English soundtrack and English captions. The final group completed the tutorial with English soundtrack and Turkish subtitles. Morae software recorded both time on task as the participants completed the interactive elements of the tutorial as well as the accuracy of their answers.

The goal of this study was to understand if ELLs would be able to perform information literacy activities in English more accurately if they received instruction in English or combined with their native language. The results of the study found that students that completed the
tutorial with an English soundtrack and Turkish subtitles were able to complete assigned tasks more quickly and accurately than other language configurations. The article has been accepted for publication in the top-tier librarianship journal, *Journal of Academic Librarianship*.
EXTENDED LITERATURE REVIEW
Information Literacy

History is often divided into “ages” that reflect major societal and technological changes that characterize humankind’s advances (or lack thereof) during that period. The stone age, the iron age, the dark ages, the middle ages, the industrial age; and now, the information age. In an age where information proliferates at a rate never been seen, it is increasingly important to develop information literacy. Information literacy (IL) has been described as “a set of abilities” that include such tasks as knowing “when information is needed and [having] the ability to locate, evaluate, and use effectively the needed information” (American Library Association, 2000, p. 2). Wiebe (2016) described IL as a “repertoire of critical inquiry skills” (p. 54). These skills include understanding types of information, navigating different “information environments,” “evaluating, questioning, and verifying” information, and ethically using sources (Wiebe, 2016, pp. 54-55). Foster (2004) described the work of IL as “nonlinear, dynamic, holistic, and flowing” (p. 228). In other words, IL is an iterative process.

The terms information literacy and critical thinking are often used synonymously. Albitz (2007) explored the definitions of, and differences between, IL and critical thinking in her article “The What and Who of Information Literacy and Critical Thinking in Higher Education.” Albitz (2007) ultimately concluded that “[l]ibrarians define the skill set needed to become a life-long learner as information literacy[;] teaching faculty members are more likely to define a similar set as critical thinking skills” (p. 107). In other words, “information literacy is a large component of critical thinking—in order to think critically, a student needs to be able to gather and assess information” (Albitz, 2007, p. 107). It is impossible to separate information literacy from critical thinking as it is an essential component of the skill. Because IL aids in cognitive processing, it is
often used to determine college students’ readiness to graduate (American Library Association, 2000).

IL, like critical thinking, is not just an academic skill but one associated with lifelong learning. Lin (2007) suggested that “an independent learner understands the value of information literacy. An information literate individual has the ability to access, evaluate, organize, and use information for their lifelong needs” (p. 6). With an emphasis on evaluation, IL “is a key component of, and contributor to, lifelong learning” (American Library Association, 2000, p. 4). Kurbanoğlu, Akkoyunlu, and Umay (2006) argued that “societies of [the] information age need confident, and independent learners equipped with lifelong learning skills” (p. 730). Khan and Shafique (2011) suggested that as the volume of available information increases, IL is necessary to dissect material for the most relevant and significant data. Inan and Temur (2012) agreed, explaining that individuals are “heavily exposed to message overload” and that those messages are rarely “impartial or objective” (p. 269). IL is key to navigating information in daily life, and individuals must be prepared to process and evaluate that information.

IL is not merely a personal necessity but also a requirement for those in “information-based professions” (Konan, 2010, p. 2567). Employers have identified IL as a critical skill in the workforce, stating that they “expected prospective hires to be patient and persistent researchers and to be able to retrieve information in a variety of formats, identify patterns within an array of sources, and dive deeply into source material” (Wiebe, 2016, p. 56). A 2013 survey of employers found that 93% wanted employees that can “think critically, communicate clearly, and solve complex programs,” all skills associated with IL (Hart Research Associates, p. 4). In addition, employers expressed a desire for universities to place a bigger emphasis on “the
location, organization, and evaluation of information from multiple sources” (Hart Research Associates, 2013, p. 8). IL is a key component, then, of education, lifelong learning, and employability.

**Teaching Information Literacy Through the Framework**

More recently, the focus on IL has shifted away from a set of abilities to “a richer, more complex set of core ideas” (Association of College and Research Libraries Board, 2015, p. 7). The introduction of the Association of College and Research Library’s (ACRL) *Framework for Information Literacy for Higher Education (Framework)* in 2015 was an opportunity for librarians to reassess, reflect on, and rework the concept of IL. The Framework focuses on higher levels of learning, including creation and analysis, and invites a different type of instructional experience than what was previously offered. According to the Framework, students have more accountability in the learning process: “Students have a greater role and responsibility in creating new knowledge, in understanding the contours and the changing dynamics of the world of information, and in using information, data, and scholarship ethically” (ACRL Board, 2015, p.7). Librarians are also tasked with “creating a new cohesive curriculum for information literacy, and in collaborating more extensively with faculty” (ACRL Board, 2015, p. 7). The recommendation to collaborate with other campus entities encourages libraries and librarians to partner more extensively with campus departments “to redesign instruction sessions, assignments, courses, and even curricula” (ACRL Board, 2015, p. 8). IL curricula, then, needs to focus on “threshold concepts, which are those ideas in any discipline that are passageways or portals to enlarged understanding or ways of thinking and practicing within that discipline” (ACRL Board, 2015, p. 7). The Framework invites students to cross the threshold between novice and expert learners to become participants in the information process,
developing “a renewed vision of information literacy as an overarching set of abilities in which students are consumers and creators of information” (ACRL Board, 2015, p. 8). This new approach to IL recognizes the importance of activating higher levels of learning as identified by Bloom’s Revised Taxonomy (Krathwohl & Anderson, 2009).

The Framework is organized around six core concepts that students should be able to address: (a) Authority Is Constructed and Contextual, (b) Information as a Process, (c) Information Has Value, (d) Research as Inquiry, (e) Scholarship as Conversation, and (f) Searching as Strategic Exploration (ACRL Board, 2015, p. 8). ACRL has offered extensive training for the library community on the Framework, including presentations and webinars on implementing it. These webinars can be found on ALA and ACRL’s YouTube channel (ALAACRL). However, the Framework was deliberately developed not to be prescriptive. Indeed, it states that “[n]either the knowledge practices nor the dispositions that support each concept are intended to prescribe what local institutions should do in using the Framework; each library and its partners on campus will need to deploy these frames to best fit their own situation” (ACRL Board, 2015, p. 8). The Framework, then, brings flexibility to IL instruction. This flexibility has been cited as one of the main reasons for the Framework’s success (Beilin, 2015).

Information Literacy in Turkey

As IL and the Framework progress and evolve in the United States, the same cannot be said of IL in all countries. Before discussing the state of IL in Turkey, it is helpful to have some information about the Turkish university student population in general that effects the perception and reception of IL.
Turkey is demographically young; nearly a quarter of the population is under 15 years of age, and approximately 40% is under age 25 (Central Intelligence Agency, 2019). New universities are being built at a rapid pace in order to serve this young population. The number of universities in Turkey, both private and public, increased from 54 in 1992 (Columbia University, n.d.) to 186 in 2017 (Anadolu Agency, 2018). In 1991, 682,029 students were enrolled at Turkish universities (Columbia University, n.d.). In 2017, that number reached 7.56 million (Anadolu Agency, 2018). Not surprisingly, a large number of university students are first generation university attendees, particularly from the traditionally underserved populations of females and the Kurdish minority.

Despite the rapid pace of university building and enrollment, the university system continues to be exam-based. Following secondary school, students wishing to attend a university must take a series of placement exams. Based on these scores, students are assigned by the Ministry of Education (YÖK) at both a university and in a major. In 2003, only 21.5 percent of students taking the placement exams were placed in universities (Tansel & Bircan, 2005). That number increased to 50.7 percent in 2018 (Hürriyet, 2019). Because university acceptance is highly competitive, large numbers of test-takers attend afterschool private tutoring sessions (known as dersane) to prepare for the exams. These sessions, however, can be prohibitively expensive. According to a study by Tansel and Bircan (2006), the annual “per-capita income in Turkey was 2,500 US dollars in 2002. The average fee charged by private tutoring centers for preparing to the university entrance examination was approximately 1,300 US dollars in 2002” (p. 305). Yet, attending dersane has almost become a requirement for university acceptance because “private tutoring significantly increases the test scores in the university entrance examination and the probability of getting placed in a tertiary education program” (Tansel &
Bircan, 2005, p. 14). Not surprising, “parental education levels and household income significantly increase the probability of an applicant receiving private tutoring” (Tansel & Bircan, 2005, p. 13). In other words, students who attend dersane are more likely to pass the university entrance exams and those students able to attend dersane generally come from more affluent homes. For these reasons, university students tend to be a homogenous group in terms of their educational training and socio-economic situation.

Turkey’s traditional education model is a major challenge for teaching university students IL and critical thinking skills. “[M]ost teachers use the transmission model of teacher-centered methods and have not been trained in a constructivist way of teaching” (Aksit, 2007, p. 134). In an exam-based system, students are accustomed to being told by their instructors what to think and then expected to regurgitate this information on their exams, or visa. They are not encouraged by instructors or the educational system to analyze or interpret information for themselves. IL and critical thinking skills are simply not a part of the overall curriculum.

In addition, Turkey, like many other neighboring nations, has an ingrained culture of cheating, often referred to as a “Kinship Culture” (Kuehn, Stanwyck, & Holland, 1990, p. 313). Students’ attitudes towards cheating are much different from those in the West (Kuehn et al., 1990; McCabe, Feghali, & Abdallah, 2008). They do not cheat to benefit only themselves but to benefit their classmates as well. In fact, the Turkish word for “classmate,” arkadaş, is the same word used for “friend.” Often, students cheat because they have a “compelling desire to help a friend” (Bagnole, 1977, p. 39). In addition, most classes are graded on a curve system. For this reason, students are encouraged to neither excel nor to fail because doing either will “throw off the curve.” To prevent their classmates, their friends, from failing, Turkish students often cheat
in order to “help level the playing field” (McCabe et al., 2008, p. 451). Indeed, anyone who excels in academia, and thus throws off the curve, is known in Turkish as *inek*—a “cow.”

**Libraries in Turkey.** The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2013) reported an adult literacy rate of over 94% in Turkey, yet the country has a small number of libraries and low rates of reading. In a 2013 speech promoting libraries, then first lady Hayrünnisa Gül reported that Turkey, with a population of almost 75 million people had 1,434 libraries as compared to Finland’s 1,202 libraries that served a population 1/15 the size of Turkey’s (Presidency of the Republic of Turkey, 2013). In addition, she noted international standards recommend public libraries in Turkey should have approximately 123 million books. In reality, Turkey’s public libraries only housed 13 million books (Presidency of the Republic of Turkey, 2013). A 2013 UNESCO report also suggested a lack of interest in reading in Turkey. According to the study, in European countries 21 people out of 100 read books regularly, while in Turkey that same statistic is one person out of 10,000. Turkey ranks 86th in the world for the amount of time a country’s residents read [. . . .] Turks watch an average of six hours of TV a day and surf the Internet three hours a day but only dedicate six hours a year to reading a book. The UNESCO report also reveals that reading books is in 235th place on a list of things most valued in life by Turks. (Üzüm, 2013)

İcimsoy and Erünsal (2008) suggested “there is little awareness of what a modern library should offer and therefore little demand for its services” (p. 50). Libraries are underused in both public and academic settings.

Public libraries in Turkey are mostly funded by the federal government with some assistance from local authorities. They are often included in city development plans, but those
plans are rarely implemented. In addition, public libraries often function as school libraries since “only ten percent of schools have their own libraries” (Yılmaz, 2010, p. 305). Önal (2005) disagreed, explaining that every school has a library; however, “although they are generally called school libraries, they do not necessarily meet the standards required of a modern school library” (p. 143). These libraries consist of a few shelves of books found in a teachers’ lounge, principal’s office, classroom, or possibly in a corridor (Önal, 2005). According to Yılmaz and Cevher (2015), “As the school library system is very poor in Turkey, public libraries function more as school libraries. The majority of public library users consist of students, children, and adolescents” (p. 340). In addition, public libraries are used almost entirely by high school students to do homework, utilizing the library not for the reference materials but for the desk space (İcimsoy & Erünsal, 2008).

University library usage is similar to those of public libraries. Balanlı, Öztürk, Vural, and Küçükan (2007) presented a report on the state of university libraries in Turkey. The study found approximately 90 percent of the students and staff at Yıldız Technical University, one of the largest and most prominent universities in Istanbul, reported never or rarely using the library, and students “experienced difficulties in getting access to the resources they need” (Balanlı et al., 2007, p.717). In order to combat low interest and usage of their libraries, Turkish universities have increasingly established IL programs.

**Teaching Information Literacy.** A lack of library and reading culture and lax attitudes towards cheating can be especially challenging for any librarian and/or professor hoping to teach IL skills. IL focuses not only on finding information but on using information accurately, and plagiarism is a rampant form of cheating found in the Turkish educational system. Trying to teach IL and critical thinking skills is particularly difficult because of the prevalence and
acceptance of plagiarism by both students and faculty (Eret & Gökmenoğlu, 2010; Eret & Ok, 2014; Şahin, Duman, & Gürses, 2015; Ural & Sulak, 2012; Yazıcı, Yazıcı, & Erdem, 2011). For example, an assignment for first-year English Language and Literature students to write a personal essay about the students’ own experiences produced mixed results (Fry, 2019). Several students, rather than write about their own histories, chose instead to copy a personal essay from the internet. One student wrote about a journey through the woods, explaining: “I jumped into the river. The water was seven feet deep.” His use of “feet” in a metric-based culture immediately waved a red flag. A quick search of the internet produced the plagiarized original essay. Another first-year student’s essay started with the statement: “There was an earthquake during my freshman year at university.” Since there had not actually been an earthquake during that academic year, it was once again easy to trace the plagiarized paper (Fry, 2019).

Other acts of plagiarism cited by Fry (2019) are not so blatant and illustrate the need for IL instruction. Second-year English Language and Literature majors in an American History and Culture class were assigned to make presentations for their classmates on American authors. Figure 1 is a screenshot of a PowerPoint slide from one such presentation on the author Amy Tan. Clearly, the students simply copied and pasted information from Wikipedia, complete with hyperlinks and footnotes. This example raises the question of whether students are deliberately plagiarizing or simply have a lack of IL skills. In other words, the students may not have known how to properly use and cite information.
Figure 1. PowerPoint presentation plagiarized from Wikipedia.

Few studies on IL in any form have been conducted in Turkey. According to Kurbanoğlu (2004), a major advocate for IL in the country, the concept of IL was not introduced in Turkey until 1998. Kurbanoğlu (2004) found that few IL programs existed in Turkey and those were usually found in private schools and universities. Çakmak and Önal (2013) also found a lack of IL curriculum in school libraries, particularly public schools, and Baysen, Çakmak, and Baysen (2017) reviewed IL training of teachers in Turkey and concluded there was not sufficient awareness of IL in Turkey nor IL training of teachers in the country. This lack of curriculum and teacher training reflects on student IL performance. Ceylan and Abacı (2013) compared Turkish and Finnish high school students’ performance on the Programme for International Student Assessment (PISA) 2006. PISA evaluates “eight competences necessary in a knowledge society” (Biagi & Loi, 2012, p. 3). The study specifically compared the Information Communication Technology (ICT) competency (Ceylan & Abacı, 2013). ICT was “defined as the confident and critical use of Information and Communication Technologies (ICT) for work,
leisure and communication” (Biagi & Loi, 2012, p. 3). Ceylan and Abacı (2013) found that Turkish students performed ICT tasks more often than Finnish students, but they performed at a statistically significant lower level and capability.

According to Kurbanoğlu (2004), IL training has been insufficient at Turkish universities as well. Bayır, Keser, and Numanoğlu (2010) found that the number of instructors in IL was fairly low, and, in general, the quality of teaching was also low. A study by Bayrak and Yurdugül (2013) found that students’ IL skills were underdeveloped. IL training has also been insufficient (Kurbanoğlu, 2004). Efforts to train more and better teachers within Turkey in the field of IL included a “Training the Trainers in Information Literacy” workshop held in 2008 (Kurbanoğlu, 2009). The participants noted that “information literacy is a learning issue and not a library issue and that it does not happen by itself, but it is a process that demands concerted efforts of all related parties” (Kurbanoğlu, 2009, p. 255). Demiralay and Karadeniz (2010) found that increased computer usage increased perceived self-efficacy in terms of IL, concluding that “information literacy skills should be integrated into the courses or an information literacy course should be [taught] which use project based learning […] to enrich […] information literacy competencies” (p. 848). However, “[d]irect applications of information literacy have been few and far between” and have been concentrated in a small number of private schools and well-funded universities (Kurbanoğlu, 2004, p. 26). The literature showed a need for Turkish students to receive increased and improved IL training in their native language and did not specifically take into consideration students that must also learn IL in a foreign language. However, IL resources are readily available in English for students functional in the language.
Information Literacy and English Language Learners

Learning IL can be particularly challenging for non-native English speakers as the concept was developed in English-language countries and “the great majority of non-English speaking populations around the world have not been able to fully benefit from the knowledge of how to learn and to practice effective and efficient information literacy attitudes and behaviors” (Horton, 2014, p. 25). English Language Learners (ELLs) in both English as a Second Language (ESL) contexts and those studying English as a Foreign Language (EFL) have the additional need to learn how to research and navigate sources that are in English, a foreign language to them.

For those students who have learned English as a foreign or second language, IL can be a struggle (Martin, Reaume, Reeves, & Wright, 2009). Martin et al. (2009) found a gap between the skills of ESL students and native English speakers in terms of IL. That gap, they suggested, is the result of many factors, including “language proficiency, cultural differences, learning style differences, and lack of knowledge of libraries” (Martin et al., 2009, p. 356). Conteh-Morgan (2001) found that EFL students “tend to shy away from library use because of language and cultural barriers” (p. 36), and Govan (2003) concluded that EFL students “are more likely to have poor to very poor information literacy.” The literature recommended several ways of bridging the IL gap, including embedding a librarian in ESL classrooms and building relationships between librarians, ESL students, and ESL instructors (Martin et al., 2009). These solutions, though, do not address the language gap, which has been identified as one of the factors affecting ELLs’ IL skills.

As English has become the lingua franca in online information dissemination, IL skills in English are even more essential to student success (Yang & Gamble, 2013). Self-reliance and
directing one’s own learning also require IL, especially in English (Lin, 2007). Leistman and Wu (1990), focused on the language gap, argued for library instruction in an ELL’s native tongue. Such personalized instruction, though perhaps ideal, can be prohibitive and impractical in a face-to-face ESL setting. Therefore, a solution is needed to respond to the language gap in IL instruction.

One possible solution is offering IL instruction digitally. A study by Anderson and May (2010) found “that method of instruction (online vs. FTF [face-to-face] vs. blended) does not influence students’ retention of IL skills. All methods of instruction can be equally as effective” (p. 499). In a literature review of online library tutorials, Obradovich, Canuel, and Duffy (2015) argued that a flipped model in the library setting is a “more effective use of classroom time” (p. 752). “A Meta-analysis of Experimental Research of Teacher Questioning Behavior” by Redfield and Rousseau (1981) found that “gains in achievement can be expected when more higher cognitive than lower cognitive questions are used during instruction” (p. 244). Thus, online tutorials teaching IL could get students actively involved in applying and creating information as encouraged by the Framework. Obradovich et al. (2015) also wrote that “research has consistently shown that active learning techniques applied within information literacy workshops positively impact student engagement and learning outcome” (p. 751). The ability to include active learning, then, within an online tutorial on IL could increase the effective use of time even more. Gibbs (1988) described active learning as “learning by doing.” Active learning is very much a learner-, rather than instructor-, centered approach to education, as encouraged by the Framework. At a basic level, the theory suggested that learners will understand concepts and remember them more easily if they have been actively involved in the learning process rather than passively waiting to receive the wisdom of their instructors.
Walsh and Inala (2010) explored the importance of and advocated for active learning in their book *Active Learning Techniques for Librarians: A Practical Guide*. They wrote that active learning leads to four important outcomes:

Less emphasis is placed on transmitting information and more on developing students’ skills. Students are involved in higher order thinking (analysis, synthesis and evaluation). Students are engaged in activities (e.g. reading, discussing and writing). Greater expectation is placed on the students’ exploration of their attitudes and values. (p.6)

Thus, one way of delivering IL instruction, particularly in terms of the *Framework*, to ELLs is through interactive tutorials. A question remains, though, about what modality better enables ELLs—specifically Turkish ELLs—to interact with an online IL tutorial: an English-language soundtrack only, an English-language soundtrack with English-language captions, or an English-language soundtrack with Turkish-language subtitles.

**Using Titles**

Three different styles are generally used for showing words on a screen at the same time audio and/or video is being played. As not all literature used the same definitions, this discussion will use the following terms regardless of whether the authors used the same terminology. *Subtitles* “refer to on-screen text in the [viewers’] native language combined with a second language soundtrack” (Markham, Peter, & McCarthy, 2001, p. 440). *Captions*, on the other hand, “refer to on-screen text in a given language combined with a soundtrack in the same language” (Markham et al., 2001, p. 440). *Titles* will refer to all or any of the categories when the particular style used is irrelevant.
Listening Comprehension

The literature has explored the benefits and drawbacks of using titles to accompany audiovisuals in foreign-language learning. Early literature in second language acquisition posited that multiple channel learning, or simultaneously learning through visual and aural channels, would not have a positive effect on the learner (Hwang, 2003); however, Hwang’s (2003) study argued against that, claiming that titled videos do, in fact, increase content comprehension. Vandergrift (2004) argued that, “when students are provided with visual or written supports that are not authentic to the listening context… [they] will not learn how to listen” (p. 18). He suggested that these supports are not available in authentic listening contexts, and if they are not used, language learners are better able to rely on other contextual clues to comprehend what is being said (Vandergrift, 2004). Matielo, de Oliveira, and Baretta (2018) and Kruger, Doherty, Fox, and de Lissa (2018) both found no statistically significant effect of using titles in second language acquisition. d’Ydewalle and De Bruycker (2007) concluded that learners are able to divide and shift attention fairly easily, that the presence of subtitles is not detrimental, and that moving between listening and reading happens automatically. Garza (1991) also found that titles allowed “the student to use multiple language processing strategies” (p. 246). This may be referred to as the modality principle, or learning from two modalities (i.e., audio and visual), which has been shown to increase understanding in novice learners (Clark & Mayer, 2011).

Several studies have shown that titles increased listening comprehension because language learners were able to use reading comprehension skills to assist in developing and strengthening listening comprehension. Based on a study of Iranian EFL learners, Hayati and Mohmedi (2010) suggested that the presence of subtitles increased listening comprehension
because participants who used titles performed better on a listening comprehension exercise than those that did not use titles. An eye-tracking study conducted by Kruger and Steyn (2013) found a significant positive correlation between the reading of subtitles and comprehension, which was supported by another eye-tracking study conducted by Winke, Gass, and Sydorenko (2013). Perez, Van den Noortgate, and Desmet’s (2013) meta-analysis of journal articles dealing with the effectiveness of titles for improving listening comprehension found that overall, titles have a significant positive effect on listening comprehension. Chen (2011), in implementing a course that included titles for videos, received survey responses that included comments on improved listening comprehension, suggesting that participants felt titles positively affected their listening skills. Markham et al.’s (2001) study found that native English speakers watching a Spanish-language film performed best on a listening comprehension test when provided with English subtitles, followed by Spanish captions. However, their results may have reflected the participants’ reading comprehension rather than their listening comprehension.

Captioning has also been found to have a positive effect on second language learning. Kruger and Steyn (2013) discovered a high correlation between academic performance and captioning in their study of captioned academic lectures. Hwang’s (2003) study found that captioned videos improved the listening comprehension of EFL students because they received input through multiple channels and significantly affected the content comprehension of participants. Garza (1991) found that captioning allowed learners’ reading comprehension to strengthen their listening comprehension by enabling learners’ use of multiple processing channels. Learners were provided “with a familiar graphic representation of an utterance” and were thus able to interpret better an unintelligible utterance (Garza, 1991, p. 246). Hayati and Mohmedi’s (2010) study of Persian EFL students argued that captions helped the participants to
“associate the aural and written forms of words more easily and quickly” than subtitled videos (p. 310).

A variant option in captioning is the use of keywords rather than full-text captions, but the literature is mixed on the benefits of keyword captioning. Guillory (1997) described keyword captioning as featuring select vocabulary, approximately 14% of the complete transcript, rather than word-for-word captioning. Perez, Peters, and Desmet’s (2014) analysis concluded that full captioning “helps to improve global comprehension,” while keyword captions “do not lead to better comprehension than no captions” (p. 38). However, a later study by Perez, Peters, and Desmet (2015) found that keywords were an effective tool in their study of Dutch students learning French. Yang and Chang (2014) found that annotated keyword captions increased comprehension more than simple keyword captions and full captions, and Guillory’s (1997) study of adult beginning French students investigated the optimal amount of captioning support. This study found that keyword captions were just as effective, or even more so, than full captions because they decreased the cognitive load on the learners. Additionally, keyword captions “helped identify word boundaries” and called attention to important information (Guillory, 1997, pp. 173-174). In contrast, Bensalem (2018) argued that keywords were an ineffective tool for adult ELLs. Other studies (Abobaker, 2017; Danan, 2016) found the effectiveness of titles differed based on learners’ proficiency levels.

**Vocabulary Acquisition**

Additional research has discussed the benefit of titles in vocabulary acquisition. Koolstra and Beentjes (1999) found that Dutch children were able to learn English words from watching a titled English video. Hwang’s (2003) study of EFL students in Taiwan concluded that those who used titled videos had more vocabulary acquisition than those who used videos without titles.
However, Bisson, Van Heuven, Conklin, and Tunney’s (2014) eye-tracking study of adult language learners argued that vocabulary acquisition does not occur regardless of the types of titles used, though they added that “because the vocabulary test measured knowledge at the recognition level only, it is possible that the participants did acquire some vocabulary knowledge, but that it did not reach the recognition level. Future studies should use a more sensitive measure of vocabulary acquisition” (p. 415).

Perez et al.’s (2013) meta-analysis found that captioning, in particular, “helps learners to improve comprehension and fosters vocabulary learning” (p. 733). Hwang’s (2003) study found multiple advantages of using captions, including a positive impact on vocabulary learning, as participants could link the newly-heard word with the printed word, as well as the visual context. Clark and Paivio’s (1991) work on dual coding theory also supported these findings, suggesting that cognition is a function of both verbal representations and mental images.

**Titles and Language Proficiency**

The benefit of titles in general is dependent on a learner’s level of language proficiency. Lwo and Lin (2012) examined junior high EFL students in Taiwan, finding that “students of different proficiency levels show different responses to different caption types” (p. 204). Leveridge and Yang (2013) found that learners of different proficiencies perceived the usefulness of titles differently, concluding that “captioning can be a valuable support tool if it is not removed too early, causing frustration, or it is not employed for too long, causing interference; as such, captioning is simultaneously beneficial to some and a hindrance to others” (p. 204). Taylor’s (2005) study of Spanish-language learners found that titles “might not be as effective for enhancing beginning learners’ comprehension as it is for more experienced learners” (p. 426). Dealing with audio, visual, and written channels was overwhelming for
beginning learners, but after two years of language study, they were better able to process the multiple channels (Taylor, 2005). Vulchanova, Aurstad, Kvitnes, and Eshuis (2015) found that titles were most effective for advanced learners in their study of Norwegian high school EFL students. Hayati and Mohmedi (2010), however, concluded that subtitles were better for beginners’ listening comprehension, due to their limited vocabulary, while captions were best for intermediate learners and unnecessary for advanced learners. Lavaur and Bairstow (2011) suggested that beginning learners rely on titles more than visual or audio input for comprehension, whereas advanced learners found the titles distracting, and that titles had little effect on intermediate learners. This finding was supported as well by Mayer’s (1997) observation that the modality principle is unnecessary for advanced learners because they already have the schemes to understand the topic. Based on a study of eye-fixation rates, Hsu, Hwang, and Chang (2014) found that low-achievement EFL students in Taiwan tended to fixate more on the titles than did high-achievement students. Although exactly who benefitted from titles was disputed in the literature, the consensus was that titles can help increase listening comprehension as well as vocabulary acquisition, especially for novice learners.

In 2013, Perez et al. published a meta-analysis of literature related to titling. A review of the literature “identified over 150 studies on the use of captioning or subtitling” that spanned approximately thirty years and found that “the bulk of literature […] revealed two main linguistic benefits”: improved listening comprehension and vocabulary acquisition (Perez et al., 2013, pp. 724, 722). Perez et al. (2013) selected eighteen of those studies for a meta-analysis. Their meta-analysis “revealed a large superiority of captioning in that captioning groups significantly outperformed the control group on both listening and vocabulary posttests” (p. 733). However, the meta-analysis also found that “more research is necessary in order to draw more robust
conclusions” (p. 733). Since Perez et al. (2013) published their meta-analysis, more than 50 studies have been published on the effects of titling on listening comprehension and vocabulary acquisition (see Article 3 Appendix). A majority of those studies also found titling to be effective with most of the remaining studies finding mixed results, identifying at least some benefits to titling.

Overall, research on titling for second-language learning is mixed. Although many studies found that titling aids in comprehension, the research is unclear as to whether titling increased listening comprehension versus simply benefitting reading comprehension (Markham et al., 2001). In addition, it appears that captions are most effective for novice learners (Hayati & Mohmedi, 2010). However, when these are coupled with too many processing channels (e.g., audio and competing video), novice learners can be overwhelmed (Taylor, 2005). With time, though, these learners may learn to deal with multiple information channels and benefit from captioning. Advanced learners do not seem to profit as much from titling and often find it to be more of a distraction than a benefit (Lavaur & Barstow, 2011; Leveridge & Yang, 2013; Mayer, 1997). Overall, though, the literature supports the use of some sort of titling to increase comprehension for language learners.

**Turkish Titling**

An anomaly in this vast literature is the effect of titling on English Language Learners in Turkey. Başaran and Köşė (2012) studied the effects of captioning on beginning- and intermediate-level EFL junior high students’ listening comprehension by comparing a group of students that watched a video with captions with a control group with no captions. The results showed no significant differences between the scores of the students on a comprehension test, and the authors contended that neither captioning nor subtitling was beneficial (Başaran & Köşė,
Yuksel and Tanriverdi (2009) looked at captions in terms of vocabulary acquisition for intermediate-level EFL students at a Turkish university. Although students using captions performed better on a vocabulary post-test, the results were not at a significant level. Ozdemir, Izmirli, and Sahin-Izmirli (2016) also studied the effects of captions on EFL students at a Turkish university. Their study focused on captions and motivation and found that “the motivation and achievement scores of the caption and non-caption groups showed no significant difference” (Ozdemir et al., 2016, p. 5). Another study of Turkish EFL students by Incceay and Kocoglu (2017) explored the effects of different “delivery modes” on listening comprehension. Participants in this study reported detrimental effects to using subtitles, citing increased confusion and anxiety. The discrepancies between the Turkish studies and other studies cited in this literature review may be explained by a review of articles published in Turkey on EFL learning and technology (Aydın, 2010). Aydin (2010) argued that “the number of studies [in Turkey] needs to be increased quantitatively. That is, it is obvious that the research activities conducted in our country seem too limited quantitatively when compared to those carried out on a global scale” (p. 22).

**Titling and Information Literacy**

The use of subtitles in relation to ELLs has implications beyond traditional second language acquisition literature. In IL training, subtitles can be an effective tool for reaching ELLs as the development of online materials is a common strategy for teaching IL generally. Obradovich et al. (2015) searched 140 research libraries (both Canadian and American) and found that “107 (76%) libraries provide online instructional library videos on their library website” (p. 753). The library discipline traditionally creates its own online training materials with 80 of 140 libraries providing content “exclusively made by the home institution”
(Obradovich et al., 2015, p. 754). These online materials, or “digital learning objects,” are generally based on accepted standards for IL with a goal of user engagement (Blummer & Kritskaya, 2009). Blummer and Kristkaya’s (2009) review of library online tutorials found that these digital learning objects could offer “flexibility for use,” and, “as Rachel Viggiano suggested, tutorials offer avenues to serve . . . the library’s ‘hidden users’ (2004, 50). The expansion of online courses and academic degrees enhances online tutorials’ role in library instruction to this community” (pp. 199-200). ELLs are part of this hidden community; including titling on instructional materials provides scaffolding for these learner’s IL training. This scaffolding may help to level the playing field for ELLs and addresses laws governing ELL’s fair access to educational opportunities (Office for Civil Rights, 2018). Without titles, ELLs may appear not to understand or may miss the point of a text when, in reality, it is the language that is getting in the way. This interference can be mitigated by the deliberate and intentional use of titling. The more quickly ELLs comprehend and develop IL, the more quickly they can succeed in college and compete in a global community that expects students to demonstrate IL.

The literature also has implications for designing effective instruction at the many international institutions where English is the medium of instruction for all students but not their native language. For example, the library at Bilkent University in Ankara, Turkey, developed a series of instructional videos. Bilkent chose to have Turkish audio for their videos and English subtitles. Thornton and Kaya (2013) explained this decision as one to reach beyond the student body to community patrons. Based on their case study, they contended the titled videos were “likely” to “make a contribution to the overall perception and usage of a library and its resources” (Thornton & Kaya, 2013, p. 85). However, that conclusion included a major caveat
with the authors conceding that “changing attitudes among students especially is difficult to measure” (Thornton & Kaya, 2013, p. 85). In other words, more evidence-based, quantitative work needs to be done to understand the most effective delivery of IL materials to a second-language audience.

**Conclusion**

Information Literacy is a discipline focused on not only the retrieval of information but also the evaluation, synthesis, and ethical use of information. Recently, that focus has shifted not only to the use but the production of information as well under the *Framework*. IL, according to the *Framework*, is an iterative process with threshold concepts that both align and overlap (see Figure 2).

*Figure 2. Iterative nature of the Information Literacy Framework. From “Information Literacy Guide to Faculty: Framework for Information Literacy in Higher Education,” by Northwest Arkansas Community College, https://library.nwacc.edu/infolitforfaculty/framework*
English-language countries and universities have been well-equipped to provide IL instruction, which is essential for not only university-level study but lifelong learning and employment as well. However, countries where English is not the native language have often been left behind in terms of IL. Turkey, for example, continues to have an exam-based, teacher-centered education system. Academic honesty is also framed differently in the country. These factors make IL training both difficult but also necessary.

English Language Learners, in general, are a population that can benefit from IL practices already in place, in particular instruction incorporating the Framework. How most effectively to present IL instruction to ELLs is one area that is ripe for research. Table 1 shows an overview of different titling configurations that can be used to support IL instruction and have been effective for listening comprehension and vocabulary acquisition in a majority of second language acquisition literature on the subject.

Table 1

*Titling Configurations*

<table>
<thead>
<tr>
<th>Titling Type</th>
<th>Audio</th>
<th>Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subtitles</td>
<td>L2</td>
<td>L1</td>
</tr>
<tr>
<td>Captions</td>
<td>L2</td>
<td>L2</td>
</tr>
<tr>
<td>Reversed Subtitles</td>
<td>L1</td>
<td>L2</td>
</tr>
<tr>
<td>Keyword Captions</td>
<td>L2</td>
<td>L2</td>
</tr>
</tbody>
</table>

Applying these tools to IL and the library discipline can open new opportunities for both teaching IL to ELLs and also expanded research. One potential method, then, recommended for further study is the use of digital objects to teach IL to ELLs and the application of titling to support their learning of IL practices.
References


ARTICLE 1

Student Attitudes Towards Library Usage and Sources at a Turkish University

Leanna Fry Balci

Brigham Young University

Abstract
Library instruction programs for students are still in developmental stages at many Turkish universities. English-language resources are available to teach information literacy skills to students majoring in English Language and Literature. This study surveyed students majoring in English Language and Literature about their attitudes towards library usage and sources. Approximately two-thirds of students had received online information literacy training in English. Student attitudes revealed a distinct preference for internet sources over library sources and a belief that internet sources are more likely than library sources to provide them with the information they need for their major classes. However, students that had received information literacy training showed a statistically significant increase in preference for library usage and sources over students that did not receive this training.

Keywords
Information literacy and instruction, library usage, library resources, student attitudes
Introduction

Despite having a long history of libraries—the Library of Celsus in Efes (Ephesus) was established in 135 AD and Atatürk Library in İstanbul became the first public library in Turkey open 24 hours a day, 7 days a week in January 2015—library usage has generally not been integrated into Turkish culture.

With a desire to increase students’ library usage, the English Language and Literature Department of a major Turkish university piloted an integrated library instruction program into some of its writing courses. The goal of this program was to increase students’ awareness of library resources for their research assignments. The library instruction program was administered virtually by a leading vendor of library databases and other library resources. Students completed online library training in English and received a certificate of completion issued by the vendor. This study will evaluate to what degree the piloted library instruction program met its goal of increasing students’ awareness of library resources.

Literature Review

The United Nations Educational, Scientific and Cultural Organization (UNESCO, 2013) reported an adult literacy rate of over 94% in Turkey, yet the country has a small number of libraries and low rates of reading. In a 2013 speech promoting libraries, then first lady Hayrünnisa Gül reported that Turkey, with a population of almost 75 million people had 1,434 libraries as compared to Finland’s 1,202 libraries that served a population 1/15 the size of Turkey’s (Presidency of the Republic of Turkey, 2013). In addition, she noted international standards recommend public libraries in Turkey should have approximately 123 million books. In reality, Turkey’s public libraries only housed 13 million books (Presidency of the Republic of
Turkey, 2013). A 2013 UNESCO report also suggested a lack of interest in reading in Turkey. According to the study,

in European countries 21 people out of 100 read books regularly, while in Turkey that same statistic is one person out of 10,000. Turkey ranks 86th in the world for the amount of time a country’s residents read [. . .] Turks watch an average of six hours of TV a day and surf the Internet three hours a day but only dedicate six hours a year to reading a book. The UNESCO report also reveals that reading books is in 235th place on a list of things most valued in life by Turks. (Üzüm, 2013)

İçimsoy and Erünsal (2008) suggested “there is little awareness of what a modern library should offer and therefore little demand for its services” (p. 50). Libraries are underused in both public and academic settings.

Public libraries in Turkey are mostly funded by the federal government with some assistance from local authorities. They are often included in city development plans, but those plans are rarely implemented. In addition, public libraries often function as school libraries since “only ten percent of schools have their own libraries” (Yılmaz, 2010, p. 305). Önal (2005) disagreed, explaining that every school has a library; however, “although they are generally called school libraries, they do not necessarily meet the standards required of a modern school library” (p. 143). These libraries consist of a few shelves of books found in a teachers’ lounge, principal’s office, classroom, or possibly in a corridor (Önal, 2005). According to Yılmaz and Cevher (2015), “As the school library system is very poor in Turkey, public libraries function more as school libraries. The majority of public library users consist of students, children, and adolescents” (p. 340). In addition, public libraries are used almost entirely by high school
students to do homework, utilizing the library not for the reference materials but for the desk space (İcimsoy and Erünsal, 2008).

University library usage is similar to those of public libraries. Balanlı, Öztürk, Vural, and Küçükan (2007) presented a report on the state of university libraries in Turkey. The study found approximately 90 percent of the students and staff at Yıldız Technical University, one of the largest and most prominent universities in İstanbul, reported never or rarely using the library, and students “experienced difficulties in getting access to the resources they need” (Balanlı et al., 2007, p. 717). In order to combat low interest and usage of their libraries, Turkish universities have increasingly established library instruction programs.

Information Literacy (IL) is a key component of library instruction. IL has been described as “a set of abilities” that include such tasks as knowing “when information is needed and [having] the ability to locate, evaluate, and use effectively the needed information” (American Library Association, 2000, p. 2). Lin (2007) suggested that “an independent learner understands the value of information literacy. An information literate individual has the ability to access, evaluate, organize, and use information for their lifelong needs” (p. 6). With an emphasis on evaluation, IL “is a key component of, and contributor to, lifelong learning” (American Library Association, 2000, p. 4). IL aids in cognitive processing and is often used to determine college students’ readiness to graduate (American Library Association, 2000). As the volume of available information increases, Khan and Shafique (2011) suggested that IL is also necessary to dissect material for the most relevant and significant data. Kurbanoğlu, Akkoyunlu, and Umay (2006) argued that “societies of [the] information age need confident, and independent learners equipped with lifelong learning skills” (p. 730). Inan and Temur (2012) agreed, explaining that individuals are “heavily exposed to message overload” and that those messages are rarely
“impartial or objective” (p. 269). Individuals must be prepared to process and evaluate the information. IL is not merely a personal necessity but also a requirement for those in “information-based professions” (Konan, 2010, p. 2567).

According to Kurbanoğlu (2004), a lead proponent for IL in Turkey, IL training has been insufficient at Turkish universities. Bayır, Keser, and Numanoğlu (2010) found that the number of instructors in IL was fairly low, and, in general, the quality of teaching was also low. A study by Bayrak and Yurdugül (2013) showed that students’ IL skills were underdeveloped.

Information literacy training has also been insufficient (Kurbanoğlu, 2004). Efforts to train more and better teachers within Turkey in the field of information literacy included a “Training the Trainers in Information Literacy” workshop held in 2008 (Kurbanoğlu, 2009). The participants noted that “information literacy is a learning issue and not a library issue and that it does not happen by itself, but it is a process that demands concerted efforts of all related parties” (Kurbanoğlu, 2009, 255). Demiralay and Karadeniz (2010) found that increased computer usage increased perceived self-efficacy in terms of information literacy, concluding that “information literacy skills should be integrated into the courses or an information literacy course should be [taught] which use project based learning […] to enrich […] information literacy competencies” (p. 848). However, “[d]irect applications of information literacy have been few and far between” and have been concentrated in a small number of private schools and well-funded universities (Kurbanoğlu, 2004, p. 26). IL resources are readily available in English for students functional in the language. With the desire of incorporating IL into their curriculum, the English Language and Literature department of a major Turkish university worked with a library vendor to integrate English-language IL training into their writing courses. This study looks at the effect of IL on student attitudes towards the library and its resources.
Methodology

The traditional method within the library community for evaluating IL programs has been through surveys. In reviewing the methodology of 127 articles assessing IL programs, Walsh (2009) discovered questionnaires were “by far the most popular method” (p. 21). Surveys have been used to measure library user’s self-efficacy, perceptions, and attitudes (Kurbanoğlu et al., 2006; Taylor and Atwong, 2008; Oakleaf, 2009; Ivanitskaya et al., 2004). For this study, a survey to measure student attitudes was also used. Ivanitskaya et al. (2004) defined an attitude “as a state of mind or feeling with regard to the use of the general Internet or a disposition to seek librarians’ assistance” (p. 172). Survey questions were developed after a review of library evaluation literature and with reference to the American Library Association’s (2000) Information Literacy Competency Standards for Higher Education.

After receiving Institutional Review Board approval, the survey instrument was used to collect data on the English majors’ perceptions and attitudes towards library usage and library resources. The survey (see Appendix 1) included questions collecting demographic information and used a five-point ordered-response scale (1=always, 2=frequently, 3=sometime, 4=rarely, 5=never) for students to self-assess their library and resource use. An ordered-response scale was used in order to quantify students’ use of distinct information sources. Data was analyzed for central tendency, variability, and associations.

The survey was distributed via a Qualtrics link on the department’s Facebook page. In class, department faculty informed students about the survey, and students self-selected participation. Approximately 500 students are enrolled in the English Language and Literature Department, distributed in five different classes: preparatory, first-year, second-year, third-year, and fourth-year. One hundred sixteen students responded to the survey. Of those, 91 students
fully completed the survey, and only those 91 responses were used to tabulate results. Fifty-nine (65%) had received library instruction, and 32 (35%) had not. Seven (8%) preparatory (hazırlık), 16 (18%) first-year, 53 (58%) second-year, 9 (10%) third-year, and 6 (7%) fourth-year students completed the survey. Sixty-seven females (74%) responded to the survey and 24 males (26%). Approximately 75% of the students enrolled in the department are female.

Results

Overall, 12% of respondents reported using the university library always or most of the time, while 44% reported rarely or never using the library (see Figure 1). In terms of researching for their university classes, 1% of respondents reported always using the university library to find required information for their major classes, with 34% rarely and 13% never (totaling 47% of respondents) using the library for their research. Seventy-five percent of respondents reported always using the internet to find information for their classes, and the remaining 25% use the internet most of the time. Forty-seven percent of respondents sometimes use their instructor to find information, and 34% rarely or never use their instructor. Figure 2 compares students’ reported use of the internet, the library, and their instructor to research for their major classes. An ANOVA analysis found that students were significantly (p < .0001) more likely to use the internet than the library or their instructor and more likely to use their instructor than the library for their research needs (see Table 1).
Figure 1. How often do you use the library?

Figure 2. How often do you use the internet, university library, and instructor to research?

Table 1. ANOVA Analysis of Resource Use

<table>
<thead>
<tr>
<th></th>
<th>Internet</th>
<th>Library</th>
<th>Instructor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>91</td>
<td>91</td>
<td>91</td>
<td>273</td>
</tr>
<tr>
<td>Σx</td>
<td>432</td>
<td>225</td>
<td>259</td>
<td>916</td>
</tr>
<tr>
<td>Mean</td>
<td>4.7473</td>
<td>2.4725</td>
<td>2.8462</td>
<td>3.3553</td>
</tr>
<tr>
<td>Σx²</td>
<td>2068</td>
<td>619</td>
<td>807</td>
<td>3494</td>
</tr>
<tr>
<td>Variance</td>
<td>0.1910</td>
<td>0.6965</td>
<td>0.7761</td>
<td>1.5461</td>
</tr>
<tr>
<td>Std.Dev.</td>
<td>0.4370</td>
<td>0.8345</td>
<td>0.8809</td>
<td>1.2434</td>
</tr>
<tr>
<td>Std.Err.</td>
<td>0.0458</td>
<td>0.0875</td>
<td>0.0923</td>
<td>0.0753</td>
</tr>
</tbody>
</table>
When it comes to the reliability of information, 4% of respondents strongly agreed and 42% agreed (totaling 46%) that the university library has the information they need to research for their lessons; 65% strongly agreed and 31% agreed (totaling 96% of respondents) that the internet has the information they need (see Figure 3). A t-test analysis showed a significant difference between attitudes towards library resources and internet resources, $t = 10.86, p < .00001$, with a stronger preference for the internet.

Figure 3. The library and internet have the information you need.

When finding information, 89% reported using Google always or most of the time, with 70% using Wikipedia, 41% reference books (e.g., encyclopedias, dictionaries), 40% academic journal articles, 33% books, and 32% textbooks always or most of the time (see Figure 4).

Figure 4. How often do you use different types of sources?
When asked in what language respondents preferred their information to be, 67% answered English, and 33% answered Turkish. Eighty-nine percent of all respondents reported using English sources always or most of the time, and 33% reported using Turkish sources always or most of the time. Ninety-two percent of male respondents preferred information in English as compared to 58% of females. A Chi-squared test revealed a significant effect for gender, $\chi^2(1, N = 91) = 8.95, p = .0028$.

When the data was analyzed for the effect of library instruction on student attitudes, three questions showed statistically significant differences at $p < .01$ and three questions at $p < .05$ between students that had received library instruction and those that had not (see Table 2).

Table 2. Effects of Library Instruction

<table>
<thead>
<tr>
<th>Variable</th>
<th>Yes (n=59)</th>
<th>No (n=32)</th>
<th>t-value</th>
<th>prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library Use</td>
<td>M 2.7966</td>
<td>2.1250</td>
<td>3.7553</td>
<td>0.0002</td>
</tr>
<tr>
<td>Academic Article Use</td>
<td>M 3.5593</td>
<td>2.8438</td>
<td>3.1587</td>
<td>0.0011</td>
</tr>
<tr>
<td>Citation of Source</td>
<td>M 3.0678</td>
<td>3.0625</td>
<td>2.8659</td>
<td>0.0026</td>
</tr>
<tr>
<td>Need for Information</td>
<td>M 4.0508</td>
<td>3.6875</td>
<td>2.2142</td>
<td>0.0147</td>
</tr>
<tr>
<td>Library as a Resource</td>
<td>M 2.6610</td>
<td>2.2188</td>
<td>2.1805</td>
<td>0.0159</td>
</tr>
<tr>
<td>Google as a Source</td>
<td>M 4.3898</td>
<td>4.6875</td>
<td>1.8290</td>
<td>0.0354</td>
</tr>
</tbody>
</table>
Respondents that had received library instruction reported higher library use than those that did not, reported higher use of academic articles as sources, and were more likely to cite their sources in their academic papers. Students that received instruction were also more likely to recognize a need for research, were more likely to consider the library a good source of information, and were less likely to consider Google as a good source of information.

**Discussion and Conclusions**

Students expressed a strong preference for internet resources, specifically Google and Wikipedia, over library resources. This preference for the internet is not exclusive to this student population. According to Jones et al. (2002), “Nearly three-quarters (73%) of [U.S.] college students say they use the Internet more than the library, while only 9% said they use the library more than the Internet for information searching” (p. 3). Over 93% of Australian college students surveyed by Oliver and Goerke (2007) “use online resources to help [their] learning” (p. 177). These results are consistent with a study of IL conducted by Boger, Dybvik, Eng, and Norheim (2015) that concluded “students prefer Google for their information searching to the library databases” (p. 44). Although the results were consistent with other studies, they do raise concern for those invested in IL because students also reported a belief that the internet was more likely to have the information they needed for their university assignments than the library.

The survey, however, did reveal positive effects of library instruction. Although reported library use was low for both students that received library instruction and those that did not, those students that did receive library instruction showed statistically significant differences in areas key to IL, specifically accessing, evaluating, and using information. According to the Association of College and Research Libraries (ACRL) Board (2015) *Framework for Information Literacy for Higher Education*, information literate students understand how to
access credible information (p. 9). Students that had received library instruction reported higher library use (p < .001) than their peers that had not received library instruction. Information literate students also develop evaluation skills, specifically the ability to evaluate the credibility (e.g., authority, currency, reliability) of sources (ACRL Board, 2015, p. 4), and students that had received library instruction reported higher use of academic articles in their research (p < .001). Finally, a key component to IL is understanding the value of information and the need to acknowledge and give credit for the ideas of other (ACRL Board, 2015, p. 6). Students that received library instruction reported higher rates of source citation (p < .01) than students that had not received library instruction. Furthermore, students that had received library instruction reported a higher recognition (p < .05) of the need for information sources in their research, a higher use (p < .05) of the library as an information resource, and lower use (p < .05) of Google for their research.

Because the evaluation revealed significant differences in attitudes towards library use and library resources between students that had received library instruction and students that had not, continuing a library instruction program in the English Language and Literature Department is recommended. However, because overall attitudes towards the library and its resources remained low despite instruction, the current method of delivering library instruction should be reevaluated. This study recommends exploring alternative options for delivery, including involving library professionals employed at the university, and requiring all students within the department to receive library instruction. In addition, the evaluation revealed a significant difference (p < .01) in language preference by gender. Male students reported significantly higher preference for sources in English than female students. Further research is recommended
to understand the difference in preference for English- versus Turkish-language resources for use in research assignments for the English Language and Literature Department.
Reference List


Appendix 1: Survey questions

1. What is your gender?
   a. Male
   b. Female

2. What class are you in?
   a. Preparatory/Hazırlık
   b. First
   c. Second
   d. Third
   e. Fourth

3. How often do you write papers/essays for your university courses?
   a. Always
   b. Frequently
   c. Sometimes
   d. Seldom
   e. Never

4. How often must you find information (research) for your papers/essays?
   a. Always
   b. Frequently
   c. Sometimes
   d. Seldom
   e. Never

5. When you find information for your papers/essays, how often do you cite (MLA, APA) that information?
   a. Always
   b. Frequently
   c. Sometimes
   d. Seldom
   e. Never

6. When you need information for your university courses, how often do you use the:
   Internet
   a. Always
   b. Frequently
   c. Sometimes
   d. Seldom
   e. Never
   Library
   a. Always
   b. Frequently
   c. Sometimes
d. Seldom
e. Never

Instructor
a. Always
b. Frequently
c. Sometimes
d. Seldom
e. Never

7. When you use the Internet to find information for your university courses, how often do you use

Google
a. Always
b. Frequently
c. Sometimes
d. Seldom
e. Never

Wikipedia
a. Always
b. Frequently
c. Sometimes
d. Seldom
e. Never

8. When you need information for your university courses, how often do you use

Books
a. Always
b. Frequently
c. Sometimes
d. Seldom
e. Never

Articles
a. Always
b. Frequently
c. Sometimes
d. Seldom
e. Never

Textbooks
a. Always
b. Frequently
c. Sometimes
d. Seldom
e. Never
Reference Books (dictionaries, encyclopedias)
   a. Always
   b. Frequently
   c. Sometimes
   d. Seldom
   e. Never

9. When you need information for your university courses, do you prefer information in
   a. English
   b. Turkish

10. How often do you use information for your university courses that is in

       English
   a. Always
   b. Frequently
   c. Sometimes
   d. Seldom
   e. Never

       Turkish
   a. Always
   b. Frequently
   c. Sometimes
   d. Seldom
   e. Never

11. What form of information do you prefer
   a. Electronic
   b. Paper

12. When you need information for your university courses, how often do you use

       Electronic resources (internet, library databases)
   a. Always
   b. Frequently
   c. Sometimes
   d. Seldom
   e. Never

       Paper resources (books)
   a. Always
   b. Frequently
   c. Sometimes
   d. Seldom
   e. Never

13. How often do you use the university library?
   a. Always
   b. Frequently
c. Sometimes  
d. Seldom  
e. Never

14. Did you receive formal training about how to use the university library?  
a. Yes  
b. No
ARTICLE 2

Teaching the Framework Using an Online Tutorial

Leanna Fry Balci

Peter J. Rich

Brigham Young University

Two common information literacy problems that librarians face are: (a) how to effectively train a large number of students in very little time and (b) keeping information literacy instruction consistent across different instructors. This chapter presents a case study in which using the Framework helped to address these challenges at a large, private university in the western United States.

Every year, approximately 4,700 upper-division students enroll in the university writing program’s required advanced writing course. Each of these students visits the university library for only one 50-minute session during the semester. Originally, students were required to watch an online tutorial created using SMART technologies before attending their library sessions. This tutorial was non-interactive and Flash-based, so it was only available on certain devices. Learners were then asked to complete a 25-point multiple-choice quiz, assessing only lower levels of learning like recall and recognition. Library sessions are taught by over 20 different subject-liaison librarians, so achieving consistent learning outcomes has been problematic. Furthermore, the advanced writing requirement is taught by dozens of adjunct faculty. Each faculty member had different assignments, different learning outcomes, and different due dates. This inconsistency made it challenging for the library to meet students’ information needs at the actual point of need.

In addition, advanced writing students are at varying points in their academic careers. These learners come from all majors on campus and have diverse educational interests and backgrounds. Although students are generally in their junior and senior years, many have delayed taking their advanced writing course until their final semester at the university and see little use for the class or library instruction. Approximately half of the students previously completed a research unit through their first-year writing class. Other students tested out of first-
year writing or transferred to the university after completing this requirement elsewhere and have had no previous formal writing or information literacy instruction from the university. Thus, learners have diverse experiences with both writing and the library and come with a range of skills.

In order to save precious instruction time, the library has offered a series of out-of-class, online tutorials. The introduction of the Association of College and Research Library’s (ACRL) *Framework for Information Literacy for Higher Education (Framework)* in 2015 was a perfect opportunity to reassess, reflect on, and rework the entire advanced writing curriculum and library session. As a result, the library has re-designed its information literacy course. The Framework’s focus on higher levels of learning, including creation and analysis, invites a different type of instructional experience than what was previously offered. According to the Framework, students, faculty, and librarians have more accountability in the learning process:

Students have a greater role and responsibility in creating new knowledge, in understanding the contours and the changing dynamics of the world of information, and in using information, data, and scholarship ethically. Teaching faculty have a greater responsibility in designing curricula and assignments that foster enhanced engagement with the core ideas about information and scholarship within their disciplines. Librarians have a greater responsibility in identifying core ideas within their own knowledge domain that can extend learning for students, in creating a new cohesive curriculum for information literacy, and in collaborating more extensively with faculty.

The recommendation to collaborate with other campus entities encouraged the library to partner more extensively with the university writing program “to redesign instruction sessions, assignments, courses, and even curricula.”
In order to make the library session more consistent for students, and to address an actual information need, the library collaborated with the university writing program before redesigning the library experience. The first step in this collaboration was an introduction to and conversation about the Framework with the university writing program. This discussion resulted in a recognition that both the library and university writing are working towards the same goals for students’ learning and accountability. Both parties acknowledged the need to develop a consistent curriculum across the approximately 300 sections of advanced writing offered each year. This curriculum needed to focus on “threshold concepts, which are those ideas in any discipline that are passageways or portals to enlarged understanding or ways of thinking and practicing within that discipline.” After many discussions and through a review of composition literature, the university writing program’s curriculum for the advanced writing course changed to be more discipline focused. The curriculum of the library sessions changed as well to support the new program. Advanced writing students are now required to write a literature review as their culminating assignment in their advanced writing course. This literature review is in their major discipline and gives students an information need when visiting the library.

Although the assignment changed, the time students spend in the physical library did not. During their 50-minute sessions, students meet face-to-face with subject-liaison librarians. Each of these librarians must have both advanced degrees in library science as well as their disciplines. Students are matched with librarians based on their major subjects. In their face-to-face meetings, students discuss their literature reviews with their subject-specialist librarians.

In order to make the best use of this limited face-to-face time, and to provide consistent instruction on the Framework, the library continues to use an online tutorial to flip the traditional classroom model. This decision was based on best practices according to library literature. In a
literature review of online library tutorials, Obradovich, Canuel, and Duffy argue that a flipped model in the library setting is a “more effective use of classroom time.” Of 107 libraries researched in the study, they “were surprised to find only two examples that explicitly asked students to watch videos before attending a library workshop.” Because so few libraries were requiring outside learning modules to be completed by students and thus few appropriate third-party learning tools were available, the library decided to develop its own tutorial based on the new Framework. This tutorial gives students a solid background on the Framework’s core concepts before ever meeting with their librarians. Consequently, students are more prepared and can use their face-to-face time in the library for hands-on research and collaboration with librarians rather than point-and-click instruction.

**Redesigning the Instructional Model by Using the Framework**

Instruction at the library had often fallen into a lecture-based model, which treats students as passive receivers of information. The Framework, however, invites students to become participants in the information process, developing “a renewed vision of information literacy as an overarching set of abilities in which students are consumers and creators of information.” The Framework recognizes the importance of activating these higher levels of learning. “A Meta-analysis of Experimental Research of Teacher Questioning Behavior” by Redfield and Rousseau found that “gains in achievement can be expected when more higher cognitive than lower cognitive questions are used during instruction.” So instead of simply providing information through the new library out-of-class modules, as had been done in the past, it was important also to get students actively involved in applying and creating information as encouraged by the Framework. Obradovich, Canuel, and Duffy suggest that “research has consistently shown that active learning techniques applied within information literacy workshops
positively impact student engagement and learning outcome.”viii The ability to include active learning, then, within the online tutorials would increase the effective use of time even more. Gibbs describes active learning as “learning by doing.”ix Active learning is very much a learner-, rather than instructor-, centered approach to education. At a basic level, the theory suggests that learners will understand concepts and remember them more easily if they have been actively involved in the learning process rather than passively waiting to receive the wisdom of their instructors.

Walsh and Inala explore the importance of and advocate for active learning in their book *Active Learning Techniques for Librarians: A Practical Guide*. They write that active learning leads to four important outcomes:

- Less emphasis is placed on transmitting information and more on developing students’ skills. Students are involved in higher order thinking (analysis, synthesis and evaluation).
- Students are engaged in activities (e.g. reading, discussing and writing). Greater expectation is placed on the students’ exploration of their attitudes and values.x

These outcomes are consistent with the aims of ACRL’s *Framework*. The *Framework* is a set of core skills that learners should develop. It focuses on higher levels of thinking and requires student engagement and implementation. The frames are active, rather than passive, requirements. Ultimately, “learners take more responsibility for their learning” in such an active learning environment.xi

**Designing a Framework-based Model Using an Instructional Design Model**

Using the *Framework* as a guide, the library applied Merrill’s “First Principles of Instruction” to the design of the new online tutorials. Merrill’s design model is centered on solving a real-world problem or task.xii Similarly, the *Framework* is organized around six core
concepts, or six core tasks or problems, that students should be able to address: (a) Authority Is Constructed and Contextual, (b) Information as a Process, (c) Information Has Value, (d) Research as Inquiry, (e) Scholarship as Conversation, and (f) Searching as Strategic Exploration. The problem or task is the center of the First Principles of Instruction, and in order to complete the task or solve the problem, a learning environment should encourage four additional phases: activation, demonstration, application, and integration (see Figure 1). In other words, any learning process must *activate*, or provide scaffolding to, previous knowledge that the learner might have; the experience will *demonstrate* to, or show, the learner new knowledge; provide the learner opportunities to *apply* that new knowledge; and finally offer ways to *integrate* that knowledge into the learner’s real-life environment.

![Figure 1. Merrill’s “First Principles of Instruction” Design Model](image)

A tutorial on the *Framework* designed using the First Principles of Instruction, then, would need to include six modules with each module centering around one of the *Framework’s* core concepts, or tasks. Part of the module should activate the students’ previous knowledge of the concept and demonstrate how that concept can be applied. Students should then apply the concept themselves through an interactive activity integrated into the module. Finally, in the
literature review assignment for their advanced writing course, students should integrate what they had learned in the library into their university life outside the library.

Based on discussions with university writing, the implementation of a new advanced writing curriculum, and a review of the literature, the library knew what it wanted to produce and why. The next step was deciding what actual content to include in the learning modules and how to build them.

ACRL has offered extensive training for the library community on the Framework, including presentations and webinars on implementing it. These webinars can be found on ALA and ACRL’s YouTube channel (ALAACRL). However, the Framework was deliberately developed not to be prescriptive. Indeed, it says that “[n]either the knowledge practices nor the dispositions that support each concept are intended to prescribe what local institutions should do in using the Framework; each library and its partners on campus will need to deploy these frames to best fit their own situation.”xvi The library needed to develop content that would specifically support the new curriculum created with the university writing program. Within each frame, the library chose a specific concept to focus on. For example, the frame Scholarship as Conversation was narrowed to a discussion of following a source’s citation trail. The frame Research as Inquiry focused on finding the research gap. See Table 1 for a complete breakdown of how the frames were narrowed for the online tutorial.
Table 1. Threshold Concept Modules

<table>
<thead>
<tr>
<th>Unit</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Authority is Constructed and Contextual</td>
<td>Assess Authority video; interaction identifying different levels of credibility</td>
</tr>
<tr>
<td>2 Information Creation as a Process</td>
<td>Evaluate Sources video; interaction evaluating different sources of information</td>
</tr>
<tr>
<td>3 Information has Value</td>
<td>Synthesize Sources video; interaction identifying levels of synthesis</td>
</tr>
<tr>
<td>4 Research as Inquiry</td>
<td>Find the Gap video; interaction identifying different gaps in academic research</td>
</tr>
<tr>
<td>5 Scholarship as Conversation</td>
<td>Enter the Conversation video; interaction following a citation trail using Google Scholar</td>
</tr>
<tr>
<td>6 Searching as Strategic Exploration</td>
<td>Search Databases video; interaction developing keywords for searching</td>
</tr>
</tbody>
</table>

Developing the Instructional Modules

Once the frames were narrowed down, the library was able to start developing the actual learning modules. Each of the six frames was its own module. The process was organized into three phases: (1) scripts, (2) prototyping, and (3) building. The first phase, script writing, took one frame and developed a narrative to teach it based on Merrill’s First Principles of Instruction design model. The narrative activated the students’ previous knowledge related to the frame, demonstrated it, and made recommendations for interactive modules that allowed the students to apply what they had learned. For example, Figure 2 shows the frame Information Has Value in terms of the First Principles of Instruction. The script for this frame (see Figure 3) is based around the first three stages of the design model, with the literature review assignment as the final integration stage. All scripts were distributed to librarians in the instruction unit of the library for feedback on content, style, and usability. Revisions were made to the scripts based on this feedback before moving to phase 2.
Figure 2. Information Has Value module in terms of Merrill’s “First Principles of Instruction” Design Model

<table>
<thead>
<tr>
<th>Narrative</th>
<th>Visual</th>
</tr>
</thead>
</table>
| Once you have found information, you need to make connections between your sources. The goal is to synthesize your sources to find common themes between them. | I want your team to be free to use your creativity, but maybe we could do something like three vague papers coming together to make one paper?
| Synthesizing does not mean just quoting, summarizing, or even comparing sources. | From the new paper, maybe words can pop out like quoting, summarizing, comparing. I don’t want to stymie your creativity, but this is an idea. |
| Synthesis requires you to think critically about your sources, to focus on ideas rather than quotations, and to use sources to support your own ideas. | Some visual that represents ideas? 4 light bulbs coming from the paper? |
| Once you have found connections, you can organize your paper in a meaningful way. Rather than organize your paper by source, synthesizing allows you to organize by idea and, most importantly, to add your own voice and ideas to the conversation. | Visual of rearranging a paper that says Source 1, Source 2, etc. into idea 1, idea 2. I am very open to creativity here. |

Figure 3. Script for Information Has Value module

Take a look at these four student papers. The highlighted areas show how students have integrated different sources into their papers. Click on the paper you believe most successfully synthesizes sources.

If the student clicks on A: Paper A is correct. This student has integrated multiple sources into the paper, but the majority of the paper is the student’s own voice and ideas; B: Paper B is incorrect. Although the majority of the paper is the student’s own voice and ideas, the student has only used one source for support; C: Paper C is incorrect. Although the student cites multiple sources in the paper, the student does not contribute enough original thought; D: Paper D is incorrect. The student uses only one source and does not include original ideas.

It would be nice if the student can click multiple times if they want, but I’m not sure how to move the tutorial forward if we do that.

Here is a visual from McGregor. Do you think we can use it? Or replicate something similar?
Phase 2 was the protoyping stage of the modules. The prototypes included developing a style guide to create a consistent look, feel, and flow throughout the entire tutorial. The script was transferred to a storyboard that mapped out both the narrative and potential images and animations related to it. The storyboard also broke down the interactive element into possible application activities. Phase 2 included evaluation as well. This time, both librarians and students were invited to give feedback on the content, appearance, and usability of the modules. The prototypes were revised based on this feedback before moving into Phase 3.

Phase 3 was the longest and most technically challenging phase as the modules were actually built. Choosing the authoring software was based on a need for the modules to be both interactive and usable on a variety of devices (e.g., computers, tablets, smartphones). Both Articulate Storyline 2 and Adobe Captivate have these capabilities. Articulate Storyline 2 was selected due to previous experience with the software, but Adobe Captivate had similar capabilities and could easily have been selected as well. The activation and demonstration of each frame were developed as videos using Adobe Illustrator and Adobe After Effects. Figure 4 illustrates the video element of the Information Has Value frame. This video moves seamlessly into the interactive element where students are asked to apply what they learned. Students interact with the information through typing, clicking, and moving content. For example, the interaction for the Information Has Value frame (see Figure 5) asks students to read several texts, develop their own ideas based on the texts, and then support their ideas using the texts. The embedded interactive element was built with Articulate Storyline 2. Phase 3 of the modules was tested by librarians, students, and advanced writing instructors. Their feedback was used to revise the modules. For example, the interactive element for the frame Scholarship as
Conversation asks students to perform a search in Google Scholar within the player. Some students found the directions to be confusing, so these were revised in the second iteration.

Figure 4. Video instruction of the Information Has Value module

Figure 5. Interactive element of the Information Has Value module

The building of these modules was not a linear process. The frames were in various phases throughout the project. For example, when the first two frames were in phase 3, building, the last two frames were in phase 1, scripting (see Table 2). Staggering the development of each
module allowed for the most effective use of time and resources. It also helped improve the quality of the project. For example, the formative assessments while developing frame 1 were applied to the development of subsequent frames. The style guide developed in phase 2 for frame 1 was used throughout the project; the template built in phase 3 for frame 1 was used to build the remaining modules. Each of the frames is housed in a single player (see Figure 6) that can be imported either as a Tin Can API or a SCORM into a Learning Management System.

Table 2. Phases of Module Development

<table>
<thead>
<tr>
<th>Frame</th>
<th>Phase 1 (scripting)</th>
<th>Phase 2 (prototyping)</th>
<th>Phase 3 (building)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Scholarship as Conversation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Research as Inquiry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Information Creation as a Process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Authority Is Constructed and Contextual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Searching as Strategic Exploration</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Information Has Value</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
When the production, formative assessments, and revisions were complete, the
Framework tutorial was implemented throughout the advanced writing program. Assessment
continued at this stage. The library asked for, and received, feedback on the modules during and
after their implementation from students, instructors, and librarians. This feedback informed
updates and revisions to the modules for subsequent semesters.

The entire design process took approximately six months to complete and required the
efforts and skills of a content expert, instructional designer, product manager, and several
talented student employees. Costs included purchase of the software as well as wages. Most of
the actual building of the product was completed by part-time student employees, who were
essential to the success of the project. The student employees brought technical expertise and
creative ideas to the product and kept costs down versus using full-time employees or
outsourcing the project.
Developing the new Framework-based curriculum and tutorial was an authentic but “messy” process, which is common to design processes.\textsuperscript{xvii} Technically, the biggest challenge was incorporating the reporting feature within the Learning Management System. Several tweaks at the code-level were necessary to receive full responses to the open-ended questions. These questions, though encouraging higher levels of thinking, also have to be scored manually and require additional time of the grader. In addition, the process of integration with the composition faculty has not been seamless with some choosing not to require the tutorials or being resistant or slow to adopt the literature review assignment.

**Evaluating the Framework-based Curriculum**

Students are evaluated during their interaction with the online tutorial, which takes approximately one hour to complete. Each frame’s interactive element allows students to apply what they have learned as well as show their proficiency with the targeted core competency. Immediate feedback is delivered after each interaction so students can evaluate the strength of their answers (see Figure 7). The interactions are recorded and reported through Storyline and can be incorporated into the university’s Learning Management System. Advanced writing instructors and the library receive results of these evaluations as a summative assessment. These results inform changes that need to be made to the tutorial as well as face-to-face instruction. In addition, the modules can be viewed independently and reviewed as point-of-need tutorials for the students.
Figure 7. Immediate feedback on student responses

As part of a study on teaching the Framework to English Language Learners, the module Scholarship as Conversation was tested with both native and non-native English speakers to evaluate the effectiveness of the instruction. Students’ navigation of the module was tracked for both time and accuracy using specialized software. After the module’s video instruction on following a source’s citation trail, students were asked to find an article, discover another article based on that source’s references, and then locate a third article that cited the original source. The results of this study found that 46 native English speakers were able to accurately follow a citation trail after receiving instruction through the online module; 95 non-native English speakers followed the citation trail with an accuracy of 67.37%. A possible solution to this discrepancy is including language subtitles in the tutorial.

The library has also gathered empirical evidence of the tutorial’s effectiveness. Librarians report a marked difference in student preparation and understanding of the Framework between those students that have completed the tutorial and those that have not. Overall, subject-liaison
librarians describe more productive face-to-face sessions that focus on students’ specific research needs. Students come to sessions with higher-order questions rather than procedural. Students report higher satisfaction with their library sessions because rather than point-and-click instruction they experience more one-on-one interactions with subject-liaison librarians that focus specifically on their individual writing assignments and information needs. Advanced writing instructors have responded positively to the modules and their content. They report receiving more academic and research-based writing assignments. Based on this feedback, incorporating the modules has helped standardize the experience students have with the Framework and the library and has made the limited time in face-to-face sessions more focused and effective.

The most rigorous evaluation of the curriculum is scheduled for next year. Every four years, the university assesses the advanced writing general education requirement. This assessment is done through an analysis of student research papers. The upcoming assessment will compare research papers written using the previous curriculum with those written using the new Framework-based literature review curriculum. The results of this evaluation will help the library and university writing program to improve their integration of the Framework into the curriculum.

**Conclusion**

Incorporating an online tutorial about the Framework has not changed the constraints the library faces in terms of its information literacy instruction. The library still teaches large numbers of students in a limited amount of time. The out-of-class tutorial, however, has made it possible to introduce the Framework to these students in a consistent manner while more
effectively using face-to-face instruction time to integrate the *Framework* into the students’ writing assignments.

The *Framework* invites critical thinking and creative problem solving. Its focus on core competencies is a natural fit with Merrill’s First Principles of Instruction design model. Using this model allowed the library to take a problem-based approach to learning, applying, and integrating the *Framework* into student library sessions and academic work. The model calls for the activation, demonstration, application, and integration of each frame. The tutorial gives students background information on each frame, a demonstration of how that frame can be implemented, and the opportunity to apply the frame and receive feedback. However, as discussed previously, a standalone tutorial is not enough. Learners must see a need for the information delivered in the tutorial and have the opportunity to integrate the *Framework* into their school work. For the tutorial to be successful, the library had to collaborate with the university writing program and advanced writing instructors to time the delivery of the tutorial and subsequent face-to-face library sessions to the required literature review paper. Because the advanced writing students must write a literature review in their fields, they have a specific, real-life, information need. The tutorial and library session are timed to fill that need. This case study has found that using an online tutorial to teach the *Framework* is one way a library can successfully incorporate it into their instruction.

---

ii Ibid., 3.

iii Ibid., 2.


v Ibid., 755.


xi Ibid., 7.


xiv Merrill, “First Principles.”

xv Ibid.


Leanna Fry Balci, Peter Rich, and Brian Roberts, “The Effects of Subtitles and Captioning on the Navigation of an Information Literacy Tutorial by English Majors at a Turkish University” (PhD diss., Brigham Young University, 2019).

Ibid.
ARTICLE 3

The Effects of Subtitles and Captions on an Interactive Information Literacy Tutorial for English Majors at a Turkish University

Leanna Fry Balci

Peter J. Rich

Brian Roberts

Brigham Young University

Abstract

Subtitles and captions have been used to aid L2 language learning. This study focuses on the effects of subtitles and captions on English Language Learners’ ability to learn information literacy skills and apply those skills using an interactive tutorial. Three groups of Turkish university students majoring in English Language and Literature completed a tutorial on ACRL’s Framework Scholarship as Conversation. One group completed the tutorial with an English soundtrack and no titling; the second group completed the tutorial with an English soundtrack and English captions; and the third group completed the tutorial with an English soundtrack and Turkish subtitles. Using Morae software, the students were recorded and evaluated for time on task and correct completion of the interactive practice elements. The group that viewed the tutorial with an English soundtrack and Turkish subtitles completed tasks at a statistically significant faster pace than other groups and with statistically significant more success.

Keywords: subtitles; captions; online tutorials; interactive tutorials; library instruction; information literacy; English language learners; framework
Information Literacy (IL) is a key component of library instruction. In many instruction sessions, students learn how to find, evaluate, and use information. English Language Learners (ELLs) in both English as a Second Language (ESL) contexts and those studying English as a Foreign Language (EFL) have the additional need to learn how to research and navigate sources that are in English, a foreign language to them. One way of delivering IL instruction to ELLs is through tutorials. The purpose of the interactive, online tutorial evaluated in this article is to teach ELLs IL. This study investigates which modality better enable ELLs—specifically ELLs majoring in English Language and Literature at a Turkish university—to interact with an online IL tutorial: an English-language soundtrack only, an English-language soundtrack with English-language captions, or an English-language soundtrack with Turkish-language subtitles.

**Literature Review**

**Information Literacy**

For many years, the American Library Association (2000) focused on IL as a “set of abilities” that included “the ability to locate, evaluate, and use effectively [. . .] needed information” (p. 2). More recently, the focus has shifted to “a richer, more complex set of core ideas” (Association of College and Research Libraries, 2015, p. 1). Few studies on IL in any form have been conducted in Turkey. According to Kurbanoğlu (2004), a major advocate for IL in the country, the concept of IL was not introduced in Turkey until 1998. Kurbanoğlu (2004) found that few IL programs existed in Turkey and those were usually found in private schools and universities. Çakmak and Önal (2013) also found a lack of IL curriculum in school libraries, particularly public schools, and Baysen, Çakmak, and Baysen (2017) reviewed IL training of teachers in Turkey and concluded there was not sufficient awareness of IL in Turkey nor IL training of teachers in the country. This lack of curriculum and teacher training reflects on
student IL performance. Ceylan and Abacı (2013) compared Turkish and Finnish high school students’ performance on the Programme for International Student Assessment (PISA) 2006. PISA evaluates “eight competences necessary in a knowledge society” (Biagi & Loi, 2012, p. 3). The study specifically compared the Information Communication Technology (ICT) competency (Ceylan & Abacı, 2013). ICT was “defined as the confident and critical use of Information and Communication Technologies (ICT) for work, leisure and communication” (Biagi & Loi, 2012, p. 3). Ceylan and Abacı (2013) found that Turkish students performed ICT tasks more often than Finnish students, but they performed at a statistically significant lower level and capability. The literature showed a need for Turkish students to receive increased and improved IL training in their native language and did not specifically take into consideration students that must also learn IL in a foreign language.

For those students who have learned English as a foreign or second language, IL can be a struggle (Martin, Reaume, Reeves, & Wright, 2009). Martin et al. (2009) found a gap between the skills of ESL students and native English speakers in terms of IL. That gap, they suggested, is the result of many factors, including “language proficiency, cultural differences, learning style differences, and lack of knowledge of libraries” (Martin et al., 2009, p. 356). Conteh-Morgan (2001) found that EFL students “tend to shy away from library use because of language and cultural barriers” (p. 36), and Govan (2003) concluded that EFL students “are more likely to have poor to very poor information literacy.” The literature recommended several ways of bridging the IL gap, including embedding a librarian in ESL classrooms and building relationships between librarians, ESL students, and ESL instructors (Martin et al., 2009). These solutions, though, do not address the language gap, which has been identified as one of the factors affecting ELLs’ IL skills. As English has become the lingua franca in online information
dissemination, IL skills in English are even more essential to student success (Yang & Gamble, 2013). Self-reliance and directing one’s own learning also require IL, especially in English (Lin, 2007). Leistman and Wu (1990), focused on the language gap, argued for library instruction in an ELL’s native tongue. Such personalized instruction, though perhaps ideal, can be prohibitive and impractical in a face-to-face ESL setting. Therefore, a solution is needed to respond to the language gap in IL instruction. This study suggests that a scalable alternative to face-to-face instruction in ELLs’ native languages is providing online tutorials in English with subtitles in students’ native languages.

**Titles**

Three different styles are generally used for showing words on a screen at the same time audio and/or video is being played. As not all literature used the same definitions, this discussion will use the following terms regardless of whether the authors used the same terminology. *Subtitles* “refer to on-screen text in the [viewers’] native language combined with a second language soundtrack” (Markham, Peter, & McCarthy, 2001, p. 440). *Captions*, on the other hand, “refer to on-screen text in a given language combined with a soundtrack in the same language” (Markham et al., 2001, p. 440). *Titles* will refer to all or any of the categories when the particular style used is irrelevant.

**Listening comprehension.** The literature has explored the benefits and drawbacks of using titles to accompany audiovisuals in foreign-language learning. Vandergrift (2004) argued that, “when students are provided with visual or written supports that are not authentic to the listening context… [they] will not learn how to listen” (p. 18). He suggested that these supports are not available in authentic listening contexts, and if they are not used, language learners are better able to rely on other contextual clues to comprehend what is being said (Vandergrift,
Matielo, de Oliveira, and Baretta (2018) and Kruger, Doherty, Fox, and de Lissa (2018) both found no statistically significant effect of using titles in second language acquisition. Early literature in second language acquisition posited that multiple channel learning, or simultaneously learning through visual and aural channels, would not have a positive effect on the learner (Hwang, 2003); however, Hwang’s (2003) study argued against that, claiming that titled videos do, in fact, increase content comprehension. d’Ydewalle and De Bruycker (2007) concluded that learners are able to divide and shift attention fairly easily, that the presence of subtitles is not detrimental, and that moving between listening and reading happens automatically. Garza (1991) also found that titles allowed “the student to use multiple language processing strategies” (p. 246). This may be referred to as the modality principle, or learning from two modalities (i.e., audio and visual), which has been shown to increase understanding in novice learners (Clark & Mayer, 2011).

Several studies have shown that titles increased listening comprehension because language learners were able to use reading comprehension skills to assist in developing and strengthening listening comprehension. Based on a study of Iranian EFL learners, Hayati and Mohmedi (2010) suggested that the presence of subtitles increased listening comprehension because participants who used titles performed better on a listening comprehension exercise than those that did not use titles. An eye-tracking study conducted by Kruger and Steyn (2013) found a significant positive correlation between the reading of subtitles and comprehension, which was supported by another eye-tracking study conducted by Winke, Gass, and Sydorenko (2013). Perez, Van den Noortgate, and Desmet’s (2013) meta-analysis of journal articles dealing with the effectiveness of titles for improving listening comprehension found that overall, titles have a significant positive effect on listening comprehension. Chen (2011), in implementing a course
that included titles for videos, received survey responses that included comments on improved listening comprehension, suggesting that participants felt titles positively affected their listening skills. Markham et al.’s (2001) study found that native English speakers watching a Spanish-language film performed best on a listening comprehension test when provided with English subtitles, followed by Spanish captions. However, their results may have reflected the participants’ reading comprehension rather than their listening comprehension.

Captioning has also been found to have a positive effect on second language learning. Kruger and Steyn (2013) discovered a high correlation between academic performance and captioning in their study of captioned academic lectures. Hwang’s (2003) study found that captioned videos improved the listening comprehension of EFL students because they received input through multiple channels and significantly affected the content comprehension of participants. Garza (1991) found that captioning allowed learners’ reading comprehension to strengthen their listening comprehension by enabling learners’ use of multiple processing channels. Learners were provided “with a familiar graphic representation of an utterance” and were thus able to interpret better an unintelligible utterance (Garza, 1991, p. 246). Hayati and Mohmedi’s (2010) study of Persian EFL students argued that captions helped the participants to “associate the aural and written forms of words more easily and quickly” than subtitled videos (p. 310).

A variant option in captioning is the use of keywords rather than full-text captions, but the literature is mixed on the benefits of keyword captioning. Guillory (1997) described keyword captioning as featuring select vocabulary, approximately 14% of the complete transcript, rather than word-for-word captioning. Perez, Peters, and Desmet’s (2014) analysis concluded that full captioning “helps to improve global comprehension,” while keyword captions
“do not lead to better comprehension than no captions” (p. 38). However, a later study by Perez, Peters, and Desmet (2015) found that keywords were an effective tool in their study of Dutch students learning French. Yang and Chang (2014) found that annotated keyword captions increased comprehension more than simple keyword captions and full captions, and Guillory’s (1997) study of adult beginning French students investigated the optimal amount of captioning support. This study found that keyword captions were just as effective, or even more so, than full captions because they decreased the cognitive load on the learners. Additionally, keyword captions “helped identify word boundaries” and called attention to important information (Guillory, 1997, pp. 173-174). In contrast, Bensalem (2018) argued that keywords were an ineffective tool for adult ELLs. Other studies (Abobaker, 2017; Danan, 2016) found the effectiveness of titles differed based on learners’ proficiency levels.

**Vocabulary acquisition.** Additional research has discussed the benefit of titles in vocabulary acquisition. Koolstra and Beentjes (1999) found that Dutch children were able to learn English words from watching a titled English video. Hwang’s (2003) study of EFL students in Taiwan concluded that those who used titled videos had more vocabulary acquisition than those who used videos without titles. However, Bisson, Van Heuven, Conklin, and Tunney’s (2014) eye-tracking study of adult language learners argued that vocabulary acquisition does not occur regardless of the types of titles used, though they added that “because the vocabulary test measured knowledge at the recognition level only, it is possible that the participants did acquire some vocabulary knowledge, but that it did not reach the recognition level. Future studies should use a more sensitive measure of vocabulary acquisition” (p. 415).

Perez et al.’s (2013) meta-analysis found that captioning, in particular, “helps learners to improve comprehension and fosters vocabulary learning” (p. 733). Hwang’s (2003) study found
multiple advantages of using captions, including a positive impact on vocabulary learning, as participants could link the newly-heard word with the printed word, as well as the visual context. Clark and Paivio’s (1991) work on dual coding theory also supported these findings, suggesting that cognition is a function of both verbal representations and mental images.

**Titles and language proficiency.** The benefit of titles in general is dependent on a learner’s level of language proficiency. Lwo and Lin (2012) examined junior-high EFL students in Taiwan, finding that “students of different proficiency levels show different responses to different caption types” (p. 204). Leveridge and Yang (2013) found that learners of different proficiencies perceived the usefulness of titles differently, concluding that “captioning can be a valuable support tool if it is not removed too early, causing frustration, or it is not employed for too long, causing interference; as such, captioning is simultaneously beneficial to some and a hindrance to others” (p. 204). Taylor’s (2005) study of Spanish-language learners found that titles “might not be as effective for enhancing beginning learners’ comprehension as it is for more experienced learners” (p. 426). Dealing with audio, visual, and written channels was overwhelming for beginning learners, but after two years of language study, they were better able to process the multiple channels (Taylor, 2005). Vulchanova, Aurstad, Kvitnes, and Eshuis (2015) found that titles were most effective for advanced learners in their study of Norwegian high school EFL students. Hayati and Mohmedi (2010), however, concluded that subtitles were better for beginners’ listening comprehension, due to their limited vocabulary, while captions were best for intermediate learners and unnecessary for advanced learners. Lavaur and Bairstow (2011) suggested that beginning learners rely on titles more than visual or audio input for comprehension, whereas advanced learners found the titles distracting, and that titles had little effect on intermediate learners. This finding was supported as well by Mayer’s (1997)
observation that the modality principle is unnecessary for advanced learners because they already have the schemes to understand the topic. Based on a study of eye-fixation rates, Hsu, Hwang, and Chang (2014) found that low-achievement EFL students in Taiwan tended to fixate more on the titles than did high-achievement students. Although exactly who benefits from titles was disputed in the literature, the overall consensus was that titles can help increase listening comprehension as well as vocabulary acquisition, especially for novice learners.

**Turkish titling.** Several studies have looked specifically at the effect of titling on Turkish EFL learners. Başaran and Köşe (2012) studied the effects of captioning on beginning- and intermediate-level EFL junior high students’ listening comprehension by comparing a group of students that watched a video with captions with a control group with no captions. The results showed no significant differences between the scores of the students on a comprehension test, and the authors contended that neither captioning nor subtitling was beneficial (Başaran & Köşe, 2012). Yüksel and Tanriverdi (2009) looked at captions in terms of vocabulary acquisition for intermediate-level EFL students at a Turkish university. Although students using captions performed better on a vocabulary post-test, the results were not at a significant level. Özdemir, İzmirli, and Şahin-İzmirli (2016) also studied the effects of captions on EFL students at a Turkish university. Their study focused on captions and motivation and found that “the motivation and achievement scores of the caption and non-caption groups showed no significant difference” (Özdemir et al., 2016, p. 5). Another study of Turkish EFL students by İnceçay and Koçoğlu (2017) explored the effects of different “delivery modes” on listening comprehension. Participants in this study actually reported detrimental effects to using subtitles, citing increased confusion and anxiety. The discrepancies between the Turkish studies and other studies cited in this literature review may be explained by a review of articles published in Turkey on EFL
learning and technology (Aydın, 2010). Aydı̇n (2010) argued that “the number of studies [in Turkey] needs to be increased quantitatively. That is, it is obvious that the research activities conducted in our country seem too limited quantitatively when compared to those carried out on a global scale” (p. 22).

In summary, research on titling for second-language learning is mixed. Although many studies found that titling aids in comprehension, the research was unclear as to whether titling actually increased listening comprehension versus simply benefitting reading comprehension (Markham et al., 2001). In addition, it appears that captions are most effective for novice learners (Hayati & Mohmedi, 2010). However, when these are coupled with too many processing channels (e.g., audio and competing video), novice learners can be overwhelmed (Taylor, 2005). With time, though, these learners may learn to deal with multiple information channels and benefit from captioning. Advanced learners do not seem to profit as much from titling and often find it to be more of a distraction than a benefit (Lavau̇r & Barstow, 2011; Mayer, 1997; Yang, 2013). Overall, though, the literature supported the use of some sort of titling to increase comprehension for language learners.

Heeding Aydı̇n’s (2010) call for more quantitative research, the current study also considers the benefits of titles on Turkish EFL students. The purpose of this study was to evaluate the effects of subtitles and captions on Turkish students majoring in English Language and Literature as they complete an English-soundtrack, interactive, online tutorial on Information Literacy.

**Methodology**

In order to explore the effects of titling on Turkish ELLs’ IL skills, a tutorial was created and administered to students enrolled in the English Language and Literature program at a major
Turkish university (Fry, 2016; Fry Balcı & Rich, in press). A previous study by Fry (2016) identified a need for more robust information literacy training in this department. In order to address this identified need, an online tutorial was developed based on the Association of College and Research Libraries’ *Framework for Information Literacy for Higher Education (Framework)* (Fry Balcı & Rich, in press). The *Framework*, adopted in 2015, envisioned IL as a “set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning” (Association of College and Research Libraries, 2015). The *Framework* identified six core concepts, and the tutorial addressed each of these concepts in separate modules (Fry Balcı & Rich, in press).

This study used the module based on the threshold concept of “Scholarship as Conversation” (Association of College and Research Libraries, 2015). This concept focused on discovering and investigating the academic conversation on a topic, including following a “citation trail” to discover publications both referenced and cited by a particular publication on a topic. The tutorial was built using Articulate Storyline 2 software and included a brief pre-training video on the concept followed by five tasks integrated into the tutorial to evaluate learners’ understanding of this key concept (Fry Balcı & Rich, in press). These tasks included typing answers or clicking on responses. Task 1 asked participants to perform an online search for a specific topic using Google Scholar. Based on the results of this search, Task 2 asked participants to identify which publication had been cited most. In Task 3, participants opened the most-cited article and reviewed its reference list to identify an article on the specified topic. Participants then returned to the original results list for Task 4 and were asked to open the “cited by” link attached to the most-cited article. Finally, Task 5 asked participants to identify a book that had cited the original article. The aim of these
tasks was to identify how quickly and accurately participants could understand the process of navigating a citation trail of English-language academic articles. The auditory aspects of the tutorial were entirely in English. However, participants viewed it in one of three configurations: English captions, Turkish subtitles, neither captions nor subtitles.

Students from all classes (i.e., first, second, third, and fourth) were invited to participate in the study. Students were randomly selected to complete the tutorial in one of the three language configurations (i.e., English soundtrack only, English soundtrack with English captions, English soundtrack with Turkish captions). Each language group consisted of at least 30 students.

After a brief introduction from the researcher, the test subjects were placed before a laptop that was loaded with Morae Recorder, software that is used to record screen movement, keystrokes and mouse clicks. An in-person evaluation ensured that all participants were students in the English Language and Literature department and that they completed the tutorials on their own. The recorded videos were uploaded into the Morae Manager utility to analyze. This analysis considered time-on-task and whether or not the task was successfully completed. Descriptive statistics were used to report time and success based on participants’ gender, year in school, tutorial language configuration, and individual tasks. ANOVA compared these different groups in terms of demographics but also focused on comparing groups based on tutorial language configuration. A 2x4 ANOVA (see Table 1) was used with two response variables (time and success) and four independent variables/factors (year in school, title type, task, and gender). The factors were analyzed to observe differences between the levels of each: year in school (1st vs 2nd vs 3rd vs 4th), title type (none vs English vs Turkish), task (1 vs 2 vs 3 vs 4 vs 5), and gender (male vs female). For example, did 4th-year students perform faster than any of the other years and were they more successful as well and so on for all the other factors in the study. SAS was used to
analyze the data. Based on the output from that analysis, a general linear models procedure was run (PROC GLM with the Bonferroni correction to differentiate variables) with year in school, title type, task, and gender in the statistical model. This procedure allowed observations of differences in the levels of each factor, as noted above, and significant interactions between the factors. The ANOVA was run on an assumption of normality after testing this assumption using Lavene’s test.

Table 1

2 x 4 ANOVA

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Response Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year in School</td>
<td>Time Success</td>
</tr>
<tr>
<td>Title Type</td>
<td>Time Success</td>
</tr>
<tr>
<td>Task</td>
<td>Time Success</td>
</tr>
<tr>
<td>Gender</td>
<td>Time Success</td>
</tr>
</tbody>
</table>

Results

The tutorial was administered to 97 students enrolled in the English Language and Literature program at a major Turkish university. The 97 test subjects represented five years of student classes. Thirty-eight first year, 3 second-year, 31 third-year, and 20 fourth-year English Language and Literature majors completed the study as well as 5 first-year English Language Teaching (ELT) majors. All but two of the third-year test subjects were native Turkish speakers (those two exceptions were dropped from the analysis to avoid any bias), with a mix of genders within each year (preliminary tests showed no gender differences and hence were not included in final analyses), with each year having at least one of each of the subtitle configurations. The recorded videos were uploaded into the Morae Manager utility to analyze. This analysis was completed with times to
complete tasks determined in seconds and whether or not the task was successfully completed noted as 0=fail, 1=success.

Summary figures for the 97 test subjects that were included in the statistical analysis are shown in Table 2 where times are in seconds and the average test score is bounded between 0 and 1 where 0 reflects a failure to successfully complete the task and 1 is a successful completion of a task.

Table 2

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Avg Time</th>
<th>Avg Success Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>33</td>
<td>12.711</td>
<td>0.5879</td>
</tr>
<tr>
<td>Female</td>
<td>64</td>
<td>12.102</td>
<td>0.5178</td>
</tr>
<tr>
<td>Year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>38</td>
<td>11.662</td>
<td>0.5474</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>11.780</td>
<td>0.4000</td>
</tr>
<tr>
<td>3</td>
<td>31</td>
<td>11.994</td>
<td>0.5556</td>
</tr>
<tr>
<td>4</td>
<td>20</td>
<td>12.865</td>
<td>0.5800</td>
</tr>
<tr>
<td>ELT</td>
<td>5</td>
<td>17.232</td>
<td>0.3600</td>
</tr>
<tr>
<td>Titling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>32</td>
<td>13.270</td>
<td>0.4645</td>
</tr>
<tr>
<td>English</td>
<td>31</td>
<td>13.277</td>
<td>0.5067</td>
</tr>
<tr>
<td>Turkish</td>
<td>34</td>
<td>10.591</td>
<td>0.6450</td>
</tr>
<tr>
<td>Task</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>97</td>
<td>23.964</td>
<td>0.6737</td>
</tr>
<tr>
<td>2</td>
<td>97</td>
<td>6.928</td>
<td>0.6526</td>
</tr>
<tr>
<td>3</td>
<td>97</td>
<td>12.640</td>
<td>0.3723</td>
</tr>
<tr>
<td>4</td>
<td>97</td>
<td>6.766</td>
<td>0.7053</td>
</tr>
<tr>
<td>5</td>
<td>97</td>
<td>11.268</td>
<td>0.3053</td>
</tr>
</tbody>
</table>

From the summaries, several results stood out. There was virtually no difference between the genders in either the time it took on average to complete a task or their average success score. This held true regardless of their year, whether they had subtitles, or the task that was performed.
The other three groups did see differences and those differences are noted as follows. First-year ELT students took longer to complete a task than first-year English Language and Literature majors. Those first-year literature students were, on average, more successful in completing a task than the ELT students, but this difference was not significant. In fact, overall, there tended to be no significant differences between year in school in either time or success, although there was a very marginally significant difference in time between first-year literature and first-year ELT students as noted. Because initial analysis showed no statistical significance between year in school and success on tasks, only language configuration was ultimately compared in the study.

In contrast, there were very significant differences in both time and success for both subtitle and task. Students that saw the tutorial with subtitles in their native tongue on average performed tasks significantly faster with significantly more success. For the tasks, Task 1 saw significantly longer times to complete than any of the other tasks. However, its average success was the second highest and significantly greater than either Task 3 or Task 5 (but not greater than Task 2 or less than Task 4). This result could be because this item had to be typed into a search box while the others were simply selected with a click of the mouse. Hence, the typing skills of the test subjects may have affected their overall performance.

The more important question is if there were significant relationships evident within the various interactions of the groups noted above. And there were, but in only two, for subtitle & task for both time and success, and year & task for time only. The test comparisons are noted in Figures 1 through 3.

As noted in Figure 1, the patterns for the times to complete a given task regardless of title mirrored each other very closely. Significant differences in titles, however, were only seen within
Task 1. Each title was significantly different than any other title with those test subjects that had no
titles taking the longest to complete the task. No other task within each title was significant.

![Figure 1. Time to complete a task by task for each title configuration.](image)

In Figure 2, the patterns for the average success value was somewhat different for each task
within a given title. And in this regard, “No titles” saw significantly lower success than the other two
for Task 1, while “Turkish” saw significantly higher success than the other two for Task 5. Task 5
asked participants to identify a book rather than an item in another format. This task, more than any
other, revealed the effect of having the support of directions in Turkish. Having these directions
given with Turkish subtitles may have given these participants a better understanding of what the
task required. No other comparisons saw significant differences. Although the “Turkish” group
performed Task 3 less successfully than the “English” group, the difference was not statistically
significant. The task asked participants to use an English-language article’s reference list to locate a
citation about a specific topic. Since the task was so dependent on English-reading ability, having the
instructions in Turkish may not have been a significant benefit to the participants.
Finally, in Figure 3, like Figure 1, the times to completion were fairly well mirrored across the year in school for the test subjects. However, for Task 1, first-year ELT students completed that task, on average, significantly longer than any other task. This result may primarily be due to one student that took nearly two minutes to complete this task, whereas no other student ever took more than one minute to complete any task. That specific student did view the tutorial without titles.
Discussion

Over the last three years, more than 50 academic articles have been published related to second language acquisition (SLA) and titling. In the ongoing and extensive conversation on this topic, the vast majority of the studies have observed ELLs and found titles to be beneficial in SLA. Studies of French and Spanish-language learners showed similar benefits (Perez, Peters, & Desmet, 2015; Danan, 2016; Rowell, 2016; Allen, 2017). The results of previous studies on Turkish EFL students, however, have been an anomaly in the field, with these studies showing no significant benefits or even negative results (İnceçay & Koçoğlu, 2016). The results of this current study, though, are consistent with the overall literature, finding that titles do have a statistically significant effect on Turkish EFL students’ ability to perform IL tasks. An in-progress study by Ergin, Ekinci, and Aygün (2016) backs this conclusion, finding that Turkish subtitles support the task of English vocabulary acquisition.
The use of subtitles in relation to ELLs has implications beyond traditional second language acquisition literature. In IL training, subtitles can be an effective tool for reaching ELLs as the development of online materials is a common strategy for teaching IL generally. Obradovich, Canuel, and Duffy’s (2015) search of 140 research libraries (both Canadian and American) found that “107 (76%) libraries provide online instructional library videos on their library website” (p. 753). The library discipline traditionally creates its own online training materials with 80 of 140 libraries providing content “exclusively made by the home institution” (Obradovich et al., 2015, p. 754). These online materials, or “digital learning objects,” are generally based on accepted standards for information literacy with a goal of user engagement (Blummer & Kristkaya, 2009). Blummer and Kristkaya’s (2009) review of library online tutorials found that these digital learning objects could offer “flexibility for use,” and, “as Rachel Viggiano suggested, tutorials offer avenues to serve . . . the library’s ‘hidden users’ (2004, 50). The expansion of online courses and academic degrees enhances online tutorials’ role in library instruction to this community” (pp. 199-200). ELLs are part of this hidden community; including titling on instructional materials provides scaffolding for these learner’s IL training. This scaffolding may help to level the playing field for ELLs and addresses laws governing ELL’s fair access to educational opportunities (Office for Civil Rights, 2018). Without titles, ELLs may appear not to understand or may miss the point of a text when in reality, it is the language that is getting in the way. This interference can be mitigated by the deliberate and intentional use of titling. This study reinforces and clarifies findings from prior research on titling that it does support learner comprehension. The more quickly ELLs comprehend and develop IL, the more quickly they can succeed in college.
This research also has implications for designing effective instruction at the many international institutions where English is the medium of instruction for all students but not their native language. For example, the library at Bilkent University in Ankara, Turkey developed a series of instructional videos. Bilkent chose to have Turkish audio for their videos and English subtitles. Thornton and Kaya (2013) explained this decision as one to reach beyond the student body to community patrons. Based on their case study, they contended the titled videos were “likely” to “make a contribution to the overall perception and usage of a library and its resources” (Thornton & Kaya, 2013, p. 85). However, that conclusion included a major caveat with the authors conceding that “changing attitudes among students especially is difficult to measure” (Thornton & Kaya, 2013, p. 85). In other words, more evidence-based, quantitative work needs to be done to understand the most effective delivery of IL materials to a second-language audience. The results of this current study, though, do support the idea that subtitles can be used to help ELLs learn IL skills.

**Conclusion**

From the data presented in this study, the use of titles, and the language of those titles, affected how well ELL students in Turkey comprehended IL instruction in terms of how quickly they performed an IL task and how successfully that task was completed. In most of the tasks carried out in the study, Turkish students who viewed the English instruction video with Turkish subtitles were consistently faster in completing a task in English, significantly so in the first task, and would generally do so more successfully than those that did not have titling or viewed captions in English. Time-on-task has been used in previous studies as an indicator of comprehension (Chen, 2016; Guillory, 1998; Huffman, 2014; Krejtz, Duchowski, Niedzielska, Biele, & Krejtz, 2018; Liou, 1997), and this measurement has been found to be “an indicator of intervention effects” (Proctor, et al.,
2013, p. 532). Year in school did not seem to affect whether or not students could quickly perform a task or whether or not they could successfully complete the task. These results all suggest that as Turkish ELL students receive IL instruction, they will demonstrate increased comprehension if that instruction is in their native tongue.

This understanding could have implications on how library instruction is delivered to students whose native language is not English. As IL is very much an English-language discipline, training ELL students in their native languages could increase their ability to perform IL tasks successfully. For example, this study focused on a tutorial teaching students how to follow an academic conversation on a scholarly topic. One part of understanding this concept is learning how to follow the trail of a conversation using citations. Receiving instruction on this concept in an ELL’s native language can better prepare the learner to perform this task, even if the academic conversation and scholarly articles have mainly been conducted and published in English. Learning IL principles in the ELL’s native language can scaffold the learner’s ability to research and find information in the second language. Additional research on ELLs and IL would help broaden libraries understanding of ways to serve this population, and additional research on the use of subtitles in IL training is recommended as well.
References


## Appendix

### Literature Review Chart

<table>
<thead>
<tr>
<th>Citation</th>
<th>Titling type</th>
<th>Population</th>
<th>Original Language</th>
<th>Language acquired</th>
<th>What was studied</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abobaker (2017)</td>
<td>Captions, keyword captions, full transcript, and no titles</td>
<td>Adults</td>
<td>Arabic, Chinese, and Portuguese</td>
<td>English</td>
<td>Effectiveness of written scaffolds (captions, keyword captions, transcripts) for different proficiency levels</td>
<td>Effective: Beginning learners performed better with captions; advanced learners performed better with keyword captions.</td>
</tr>
<tr>
<td>Alamri (2016)*</td>
<td>Captions, subtitles, and no titles</td>
<td>Students at a language institute and university students</td>
<td>Arabic</td>
<td>English</td>
<td>Immediate and short term effect of captions, subtitles, or no titles on listening comprehension</td>
<td>Effective: Use of captions improved immediate listening comprehension and repeated exposure significantly improved listening comprehension on all proficiency levels.</td>
</tr>
<tr>
<td>Allen (2017)*</td>
<td>Captions and no titles</td>
<td>High school students</td>
<td>English</td>
<td>Spanish</td>
<td>Students’ comprehension with authentic video using captions</td>
<td>Effective: Comprehension increased with captions.</td>
</tr>
<tr>
<td>Arramany (2017)*</td>
<td>Captions and subtitles</td>
<td>Junior high students</td>
<td>Indonesian</td>
<td>English</td>
<td>Implicit and explicit learning using video with captions and subtitles</td>
<td>Effective: Subtitles were superior to captions in four learning conditions; explicit learning was superior to implicit learning.</td>
</tr>
<tr>
<td>Study Authors</td>
<td>条件</td>
<td>Participants</td>
<td>Source Language</td>
<td>Target Language</td>
<td>Description</td>
<td>Result</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>--------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Ashtiani (2017)*</td>
<td>Subtitles and customized subtitles</td>
<td>Adults at a language institute</td>
<td>Persian</td>
<td>English</td>
<td>Simple subtitling and customized subtitling with a music video on viewers’ retention and recall</td>
<td>Effective: Customized subtitle group performed remarkably better than simple subtitle group.</td>
</tr>
<tr>
<td>Başaran &amp; Köşe (2012)</td>
<td>Captions, subtitles, and no titles</td>
<td>Children (grade 8)</td>
<td>Turkish</td>
<td>English</td>
<td>Effect of captions, subtitles, and no captions on listening comprehension</td>
<td>Ineffective: No significant differences between captions, subtitles, or no titles.</td>
</tr>
<tr>
<td>Bensalem (2018)*</td>
<td>Captions, keyword captions, and no titles</td>
<td>Adults</td>
<td>Arabic</td>
<td>English</td>
<td>Captions, keyword captions, and no titles on vocabulary recognition and meaning recall</td>
<td>Effective: Captions significantly outperformed keyword captions and no title groups.</td>
</tr>
<tr>
<td>Birulés-Muntané &amp; Soto-Faraco (2016)*</td>
<td>Captions, subtitles, and no titles</td>
<td>University students</td>
<td>Spanish</td>
<td>English</td>
<td>Effect of captions, subtitles, and no titles on speech perception, vocabulary, and comprehension</td>
<td>Mixed: Significant improvement in listening skills with captions over subtitles or no titles; vocabulary test showed no reliable difference between captions or titles; comprehension was better with subtitles, as expected.</td>
</tr>
<tr>
<td>Bisson, van Heuven, Conklin, &amp; Tunney (2014)</td>
<td>Captions, subtitles, and reversed subtitles</td>
<td>Adults</td>
<td>English</td>
<td>Dutch</td>
<td>Captions, subtitles, and reversed subtitles for eye movement and vocabulary acquisition</td>
<td>Ineffective: Results found no vocabulary acquisition; subjects read titles regardless of type of title.</td>
</tr>
<tr>
<td>Authors</td>
<td>Design</td>
<td>Participants</td>
<td>Language(s)</td>
<td>Dependent Variable</td>
<td>Results</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------------------</td>
<td>----------------------</td>
<td>-----------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Cha &amp; Lee (2016)*</td>
<td>Captions and no titles</td>
<td>University students</td>
<td>Korean</td>
<td>Effect of captions on listening comprehension and vocabulary recognition</td>
<td>Ineffective: No significant differences between captions or no titles.</td>
<td></td>
</tr>
<tr>
<td>Chen (2011)</td>
<td>Learning with technology</td>
<td>University students</td>
<td>Chinese</td>
<td>Students’ perceptions in a “Motivation to Learn English with Technology” survey.</td>
<td>Effective: Students with a higher preference for learning with technology are more likely to become actively involved in class activities, have greater desire to learn English, and gain a higher degree of course satisfaction.</td>
<td></td>
</tr>
<tr>
<td>Chen, Liu, &amp; Todd (2018)*</td>
<td>Captions and no titles</td>
<td>Junior high students</td>
<td>Chinese</td>
<td>Effect of captioning on enhancing EFL learners’ spoken vocabulary</td>
<td>Effective: Captions significantly improved EFL eighth graders’ incidental vocabulary gains; students with a higher level of linguistic competence acquired substantially more word gains from captions than their counterparts of lower competence.</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Methodology</td>
<td>Participants</td>
<td>Language</td>
<td>Settings</td>
<td>Effectiveness</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------------</td>
<td>----------</td>
<td>----------</td>
<td>---------------</td>
<td></td>
</tr>
<tr>
<td>Culbertson, Shen, Andersen, &amp; Jung (2017)*</td>
<td>Accurate captions, imperfect captions with suggested-alternative word editing, and imperfect captions with free-response editing</td>
<td>University students</td>
<td>English</td>
<td>Spanish</td>
<td>Tested different types of captioning systems on second language acquisition</td>
<td>Effective: No significant difference in learning outcomes were found using accurate vs. imperfect captions.</td>
</tr>
<tr>
<td>d’Ydewalle &amp; De Bruycker (2007)</td>
<td>Subtitles and reversed subtitles</td>
<td>Adults and children (grade 5-6)</td>
<td>Dutch</td>
<td>Swedish</td>
<td>Eye-movements tracked while adults and children viewed subtitles or reversed subtitles</td>
<td>Mixed: Reversed subtitles were often skipped; standard subtitling showed that longer titles (two lines) were read more than short titles (one line).</td>
</tr>
<tr>
<td>d’Ydewalle &amp; Van de Poel (1999)</td>
<td>Subtitles, reversed subtitles, and soundtrack and titles in viewer's language</td>
<td>Children (grade 3-6)</td>
<td>Dutch</td>
<td>French and Danish</td>
<td>Children’s language acquisition after viewing subtitles, reversed subtitles, or soundtrack and titles in viewer’s language</td>
<td>Mixed: Learning of children was not superior to adults; children acquired more when foreign language was in soundtrack and not subtitles.</td>
</tr>
<tr>
<td>Danan (2016)</td>
<td>Captions, full transcript, and no titles</td>
<td>Adults</td>
<td>English</td>
<td>French</td>
<td>Transcripts and captions in helping learners decode aural input</td>
<td>Mixed: No statistically significant difference; however, weaker students performed better with captions, and stronger students performed better with transcripts.</td>
</tr>
<tr>
<td>Study, Year</td>
<td>Type of Media</td>
<td>Participants</td>
<td>Language(s)</td>
<td>Target Language</td>
<td>Mode</td>
<td>Findings</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------</td>
<td>---------------------------------------------------</td>
<td>--------------</td>
<td>-----------------</td>
<td>------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Dizon (2016)*</td>
<td>Captions, subtitles, and no titles</td>
<td>University students</td>
<td>Japanese</td>
<td>English</td>
<td>Mixed</td>
<td>Captions were favored over subtitles and no titles.</td>
</tr>
<tr>
<td>Ebrahimi &amp; Bazaee (2016)*</td>
<td>Captions and no titles</td>
<td>Students at a language institute</td>
<td>Persian</td>
<td>English</td>
<td>Mixed</td>
<td>Captions had a positive impact on content comprehension; captions had no effect of vocabulary comprehension.</td>
</tr>
<tr>
<td>Ergin, Ekinci, &amp; Aygün (2016)</td>
<td>Subtitles and no titles</td>
<td>University students (mostly)</td>
<td>Turkish</td>
<td>English</td>
<td>Effective</td>
<td>Participants who watched video with subtitles improved their vocabulary acquisition.</td>
</tr>
<tr>
<td>Eye (2016)*</td>
<td>Captions, subtitles, and no titles</td>
<td>Upper secondary school students</td>
<td>Norwegian</td>
<td>English</td>
<td>Mixed</td>
<td>Captions group performed considerably lower than other two groups in terms of grammar, vocabulary and word definition; however, captions benefitted students on word recall aptitude.</td>
</tr>
<tr>
<td>Feng (2017)*</td>
<td>Transcript, video with captions, silent video with captions, audio only, video without captions, and control group</td>
<td>University students</td>
<td>Chinese</td>
<td>English</td>
<td>Ineffective</td>
<td>L2 incidental vocabulary learning occurred in all modes with no significant difference between them.</td>
</tr>
<tr>
<td>Study Authors</td>
<td>Condition</td>
<td>Participants</td>
<td>Language(s)</td>
<td>Effect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------------</td>
<td>---------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frumuselu, De Maeyer, Donche, &amp; Colon Plana (2015)*</td>
<td>Captions and subtitles</td>
<td>University students</td>
<td>Spanish/Catalan (90%), German, Dutch, Russian, Romanian, Moldovian (other 10%)</td>
<td>Effect of captions or subtitles on informal vocabulary learning and film comprehension. With statistically significant results, students performed better with captions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garcia (2017)*</td>
<td>Bilingual subtitles (subtitles and captions shown at same time)</td>
<td>University students</td>
<td>Spanish</td>
<td>Effect of bilingual subtitles on incidental vocabulary acquisition and on deliberate learning. Bilingual subtitles perceived as useful in different dimensions of incidental learning process and also helpful when applied to deliberate learning.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garza (1991)</td>
<td>Captions</td>
<td>University students</td>
<td>Russian language learners spoke English; English language learners spoke nine different languages</td>
<td>Effect of captions and no captions on comprehension. Positive correlation between presence of captions and increased comprehension.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guillory (1997)</td>
<td>Keyword captions, captions, and no titles</td>
<td>Adults</td>
<td>English</td>
<td>Effect of keyword captioning compared to captions on comprehension. Captions significantly outperformed keyword captions and no title groups.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study Authors &amp; Year</td>
<td>Type of Text: Captions, Subtitles, or No Titles</td>
<td>Study Setting: University Students</td>
<td>Language: Persian, Japanese, Chinese</td>
<td>Language: English</td>
<td>Effect of Text on Listening Comprehension: Captions or Subtitles Recommended</td>
<td>Conclusion: Effective or Mixed</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------------------------------------------</td>
<td>-----------------------------------</td>
<td>-------------------------------------</td>
<td>-----------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Hayati &amp; Mohmedi (2011)</td>
<td>Captions, Subtitles, and No Titles</td>
<td>University Students</td>
<td>Persian</td>
<td>English</td>
<td>Effect of captions, subtitles, and no titles on listening comprehension of intermediate English L2 students</td>
<td>Effective: Captions effective for intermediate learners; subtitles recommended for beginning learners; no titles recommended for advanced learners.</td>
</tr>
<tr>
<td>Hosogoshi (2016)*</td>
<td>Captions, Subtitles, and No Titles</td>
<td>University Students</td>
<td>Japanese</td>
<td>English</td>
<td>Effect of captions and subtitles on process of listening comprehension in relation to learners’ listening strategy use</td>
<td>Mixed: Degree of use of imagery and summarization strategies was significantly higher in subtitle group; however, no-text or caption conditions facilitate most variety of combinational use of listening strategies.</td>
</tr>
<tr>
<td>Hsu, Hwang, &amp; Chang (2014)</td>
<td>Captions</td>
<td>University freshmen</td>
<td>Chinese</td>
<td>English</td>
<td>Effect of caption-filtering software and a partially-hidden mechanism on listening comprehension</td>
<td>Effective: Students who used caption-filtering showed significantly better learning achievements and auditory tests.</td>
</tr>
<tr>
<td>Authors &amp; Year</td>
<td>Type of Input</td>
<td>Participants</td>
<td>Language(s)</td>
<td>Effect of Captions/Subtitles/No Titles</td>
<td>Findings</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------------------------</td>
<td>--------------------------------------</td>
<td>-------------------</td>
<td>----------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Hwang (2003)</td>
<td>Captions and no captions</td>
<td>University students</td>
<td>Chinese and Japanese</td>
<td>English</td>
<td>Mixed: Learners’ listening comprehension, English proficiency in listening, vocabulary learning and content comprehension improved in caption group; however, mean reading scores showed no significant impact.</td>
<td></td>
</tr>
<tr>
<td>Iklimaini (2017)*</td>
<td>Captions and no captions</td>
<td>High school students</td>
<td>Bahasa Indonesia</td>
<td>English</td>
<td>Effective: Captions improved recall and vocabulary retention in short- and long-term period.</td>
<td></td>
</tr>
<tr>
<td>Inceçay &amp; Koçoğlu (2017)</td>
<td>Audio only, Audio-video, Audio-video w/ captions, Audio w/ PowerPoint Presentation</td>
<td>Students</td>
<td>Turkish</td>
<td>English</td>
<td>Ineffective: Of four groups, Audio-video with captions scored lowest in comprehension scores.</td>
<td></td>
</tr>
<tr>
<td>Khosh Ayand &amp; Shafiee (2016)*</td>
<td>Captions, subtitles, and no titles</td>
<td>Students at a language institute</td>
<td>Persian</td>
<td>English</td>
<td>Effective: Caption and subtitle groups outperformed no-title group in developing oral fluency and accuracy; no significant differences between captions and subtitles.</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Subtitle Type</td>
<td>Participants</td>
<td>Language</td>
<td>Subject</td>
<td>Findings</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------</td>
<td>----------------------------------------</td>
<td>---------------------------------------</td>
<td>-----------</td>
<td>---------------------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Koolstra &amp; Beentjes (1990)</td>
<td>Subtitles</td>
<td>Children (grade 4 and 6)</td>
<td>Dutch</td>
<td>English</td>
<td>Effect on children’s vocabulary acquisition through watching a television program with an English soundtrack and Dutch subtitles Effective: Students who viewed captioned videos outperformed no title group.</td>
<td></td>
</tr>
<tr>
<td>Kruger, Doherty, Fox, &amp; de Lissa (2018)</td>
<td>Captions and integrated captions (captions in strategic places instead of at bottom of screen)</td>
<td>University students</td>
<td>Mandarin Chinese</td>
<td>English</td>
<td>Effect of captions and integrated captions on cognitive load Mixed: Similar levels of immersion found for conventional captions and integrated captions, although the latter appears to facilitate deeper processing of subtitle contents.</td>
<td></td>
</tr>
<tr>
<td>Kruger, Doherty, &amp; Soto-Sanfiel (2017)*</td>
<td>Captions and no titles</td>
<td>University students</td>
<td>Mandarin Chinese, Korean, and Spanish</td>
<td>English</td>
<td>Role of subtitles in processes related to psychological immersion in film narratives Mixed: Captions did not result in significantly lower immersion; however, captions produced higher transportation, identification with characters, and perceived realism scores.</td>
<td></td>
</tr>
<tr>
<td>Kruger &amp; Steyn (2013)</td>
<td>Subtitles</td>
<td>University students</td>
<td>Nguni family of languages and Sotho family of languages</td>
<td>English</td>
<td>Impact of subtitle reading on academic performance Effective: Significant positive correlation between comprehension and subtitle reading.</td>
<td></td>
</tr>
<tr>
<td>Lavaur &amp; Bairstow (2011)</td>
<td>Captions, subtitles, and no titles</td>
<td>High school students</td>
<td>French</td>
<td>English</td>
<td>Role of subtitling on film comprehension Mixed: Effective for beginners; ineffective for advanced; no effect for intermediate.</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Condition</td>
<td>Participants</td>
<td>Language(s)</td>
<td>Description</td>
<td>Findings</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------------</td>
<td>-----------------------</td>
<td>--------------</td>
<td>----------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Lazareva (2017)*</td>
<td>Subtitles (with L1 and L2 subtitles), and no titles</td>
<td>University students</td>
<td>Dutch, Russian</td>
<td>Effect of subtitles, double subtitles, and no titles on incidental vocabulary learning</td>
<td>Effective: Group exposed to double subtitles significantly outperformed standard subtitle group on a written word recognition test.</td>
<td></td>
</tr>
<tr>
<td>Lee (2017)*</td>
<td>Subtitles</td>
<td>University students</td>
<td>Chinese, English</td>
<td>Effect of subtitle use on learners’ affective domain and productive vocabulary knowledge</td>
<td>Mixed: Only expectation of acquiring cultural knowledge is statistically significant; in spelling test, mean score from pre-test relatively/quite high, and in post-test, a slight improvement shown; in word association test, participants made considerable progress from 11.07 to 20.93; when correlation among three factors was analyzed, a significant relationship indicated between affective domain and word association test.</td>
<td></td>
</tr>
<tr>
<td>Leveridge &amp; Yang (2013)</td>
<td>Captions</td>
<td>High school students</td>
<td>Mandarin Chinese, English</td>
<td>Effect of new testing instrument, Caption Reliance Test (CRT), to access learners’ reliance on captions</td>
<td>Mixed: Effective for beginners; ineffective for advanced.</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Format Description</td>
<td>Participants</td>
<td>Language 1</td>
<td>Language 2</td>
<td>Language 3</td>
<td>Summary</td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------------------------------------------</td>
<td>--------------</td>
<td>------------</td>
<td>------------</td>
<td>------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Lin, Lee, Wang, &amp; Lin (2016)*</td>
<td>Subtitles, e-notes, and no titles</td>
<td>University students</td>
<td>Mandarin Chinese</td>
<td>English</td>
<td>Effect of subtitles and taking enotes on cognitive load and performance</td>
<td>Mixed: Animation with subtitles helped reduce cognitive load and increase performance; no significant difference found with taking or not taking enotes.</td>
</tr>
<tr>
<td>Lin (2016)*</td>
<td>Text; narration and text; and video, narration, and text</td>
<td>University students</td>
<td>Mandarin Chinese</td>
<td>English</td>
<td>Effect of viewing text only (T), narration and text (NT), and video, narration, and text (VNT) on comprehension at macrostructure and microstructure levels for second language learners</td>
<td>Effective: Video, narration, text (VNT) group performed significantly better on macrostructure comprehension than other groups; VNT group also outperformed other two groups in immediate microstructure test.</td>
</tr>
<tr>
<td>Mahdi (2017)*</td>
<td>Keyword captions and captions</td>
<td>University students</td>
<td>Arabic</td>
<td>English</td>
<td>Effect of keyword video captioning on L2 pronunciation using mobile devices</td>
<td>Mixed: No statistically significant difference between two modes of captioning; however, learners with keyword video captioning performed better than full video captioning.</td>
</tr>
<tr>
<td>Study</td>
<td>Conditions</td>
<td>Participants</td>
<td>Source</td>
<td>Effect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>--------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mardani &amp; Najmabada (2016)*</td>
<td>Captions, subtitles, and reversed subtitles</td>
<td>High school students</td>
<td>Persian</td>
<td>English</td>
<td>Effect of captions, subtitles, and reversed subtitles on vocabulary acquisition</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Effective: Reverse subtitling (Persian audio with English text) did better than any group, and subtitling (English audio Persian text) did better than caption group.</td>
<td></td>
</tr>
<tr>
<td>Markham, Peter, &amp; McCarthy (2001)</td>
<td>Captions, subtitles, and no titles</td>
<td>University students</td>
<td>English</td>
<td>Spanish</td>
<td>Effects of captions, subtitles, or no titles on Spanish-language learners' comprehension</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Effective: Subtitles most effective followed by captions.</td>
<td></td>
</tr>
<tr>
<td>Matielo (2016)*</td>
<td>Captions, subtitles, and no titles</td>
<td>University students</td>
<td>Portuguese</td>
<td>English</td>
<td>Effect of captions and subtitles on Brazilian EFL learners</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mixed: No statistically significant difference; however, captions group had more beneficial results than other two groups.</td>
<td></td>
</tr>
<tr>
<td>Matielo, Oliveira, &amp; Baretta (2018)</td>
<td>Captions, subtitles, and no titles</td>
<td>Adults</td>
<td>Portuguese</td>
<td>English</td>
<td>Working Memory (WM) as it correlates to captions and subtitles for EFL learners</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mixed: No significant results found, although caption group outperformed subtitle and no title groups in comprehension.</td>
<td></td>
</tr>
<tr>
<td>Mirzaei, Meshgi, Akita, &amp; Kawahara (2017)*</td>
<td>Partial and synchronized captions (PSC), captions, and no titles</td>
<td>University students</td>
<td>Japanese</td>
<td>English</td>
<td>Partial and synchronized captioning (PSC) compared to full captioning on comprehension</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Effective: PSC led to same level of comprehension as full captioning while presenting less than 30% of the transcript.</td>
<td></td>
</tr>
<tr>
<td>Source</td>
<td>Type of Mediation</td>
<td>Language 1</td>
<td>Language 2</td>
<td>Effect Description</td>
<td>Outcome</td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>----------------------------</td>
<td>-------------</td>
<td>-------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Mitterer &amp; McQueen (2009)</td>
<td>Captions and subtitles</td>
<td>University students</td>
<td>Dutch</td>
<td>Effect of subtitles, captions or no titles on allowing listeners to adapt to an unfamiliar foreign accent</td>
<td>Mixed: Captions helped adaptation and subtitles hindered adaptation.</td>
<td></td>
</tr>
<tr>
<td>Mohsen (2016)*</td>
<td>Annotations, captions, and animation (ACA) or annotations, transcripts, and animation (ATA)</td>
<td>Female Arab students (14-16)</td>
<td>Arabic</td>
<td>Annotated captioned animation versus annotated transcript animation on L2 vocabulary acquisition</td>
<td>Mixed: Both ACA and ATA improved L2 vocabulary acquisition; however, no statically significant difference between the two options.</td>
<td></td>
</tr>
<tr>
<td>Munoz (2017)*</td>
<td>Captions and subtitles</td>
<td>Children, adolescents, and adults</td>
<td>Spanish-Catalan</td>
<td>Effect of age and proficiency on reading behavior of foreign language learners when exposed to captions or subtitles</td>
<td>Mixed: Children spent more time looking at subtitles in other language than adults; subtitles may be more appropriate for children since they had more difficulty with captions; captions may be more appropriate with adults.</td>
<td></td>
</tr>
<tr>
<td>Ozdemir, Izmirli, &amp; Şahin-Izmirli (2016)</td>
<td>Captions and no titles</td>
<td>University sophomores</td>
<td>English</td>
<td>Effect of captioned and non-captioned instructional videos on motivation and achievement: specifically the “redundancy effect”</td>
<td>Ineffective: Motivation and achievement scores not significantly influenced by captioning or non-captioning; findings contradicted the “redundancy effect.”</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Type of captions</td>
<td>Participants</td>
<td>Language(s)</td>
<td>Description</td>
<td>Result</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>------------------</td>
<td>----------------------------------</td>
<td>-------------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Perez, Peters, &amp; Desmet (2014)</td>
<td>Captions, keyword captions, and no titles</td>
<td>University students</td>
<td>Dutch (majority) Bulgarian, Russian, and Albanian</td>
<td>Effect of captioned and keyword captioned titles on listening comprehension</td>
<td>Mixed: Captions effective; keyword captions and no titles ineffective.</td>
<td></td>
</tr>
<tr>
<td>Perez, Peters, &amp; Desmet (2015)</td>
<td>Captions and keyword captions</td>
<td>University students</td>
<td>Dutch</td>
<td>French</td>
<td>Two attention getting techniques: keyword captioning and test announcement on learning a set of 18 target words</td>
<td>Effective: Keyword caption learners performed better than other groups.</td>
</tr>
<tr>
<td>Peters, Heynen, &amp; Puimege (2016)*</td>
<td>Captions and subtitles</td>
<td>Students (17-18)</td>
<td>Dutch</td>
<td>English</td>
<td>Effect of captions and subtitles on word learning</td>
<td>Effective: Captions had potential to result in more word learning than subtitles.</td>
</tr>
<tr>
<td>Rędzioch-Korkuz (2017)*</td>
<td>Integrated subtitles and no titles</td>
<td>High school students</td>
<td>Polish</td>
<td>English</td>
<td>Effect of audiovisual material, specifically integrated subtitles in an EFL classroom</td>
<td>Mixed: No significant results; however, using film and subtitles may help with student motivation.</td>
</tr>
<tr>
<td>Rodgers &amp; Webb (2017)*</td>
<td>Captions and no titles</td>
<td>University students</td>
<td>Japanese</td>
<td>English</td>
<td>Effect of captions on comprehension</td>
<td>Effective: Captions increased comprehension near beginning of viewing process and with more difficult episodes.</td>
</tr>
<tr>
<td>Authors</td>
<td>Conditions</td>
<td>Participants</td>
<td>Source Language</td>
<td>Target Language</td>
<td>Method</td>
<td>Results</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------------------------------------------------------</td>
<td>---------------------------------------------------</td>
<td>------------------</td>
<td>-----------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Rostam Shirazi,</td>
<td>Captions (repeated or unreported)</td>
<td>Female students (12-16)</td>
<td>Persian</td>
<td>English</td>
<td>Effect of controlled (repeated) captions or uncontrolled (not repeated) captions on L2 vocabulary knowledge</td>
<td>Effective: Controlled (repeated) caption obtained a higher mean core on content-specific vocabulary test than uncontrolled (not repeated) captions.</td>
</tr>
<tr>
<td>Hesabi,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>uden (not repeated) captions.</td>
</tr>
<tr>
<td>Shahla (2016)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rowell (2016)*</td>
<td>Captions</td>
<td>High school students</td>
<td>English</td>
<td>French</td>
<td>Effect of instructional strategies of pre-, while-, and post-viewing of authentic Francophone film clips on language ability</td>
<td>Effective: Instructional strategies combined with captions resulted in gradual, clear development of students’ listening comprehension.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saed, Yazdani,</td>
<td>Captions and no titles</td>
<td>University students</td>
<td>Persian</td>
<td>English</td>
<td>Effect of captions or not captions on developing listening comprehension ability</td>
<td>Effective: Group with captions had a much higher score in posttest compared to group with no captions.</td>
</tr>
<tr>
<td>&amp; Askary (2016)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saeedi &amp; Biri (2016)*</td>
<td>Traditional teaching vs learning through media</td>
<td>Students (14-18)</td>
<td>Persian or Turkish</td>
<td>English</td>
<td>Effect of teaching grammar using an animated situation comedy; learners’ attitudes toward learning with animated sitcom</td>
<td>Effective: Experimental group outperformed control group with statistically significant results; learners had positive attitudes toward learning with animated sitcom.</td>
</tr>
<tr>
<td>Sanchez (2017)*</td>
<td>Captions, no titles, and English audio with Spanish subtitles</td>
<td>University students</td>
<td>Thai</td>
<td>Spanish</td>
<td>Methods of vocabulary acquisition in beginning stage of learning</td>
<td>Effective: Best method for Thai students learning Spanish was English audio with Spanish subtitles.</td>
</tr>
<tr>
<td>Author</td>
<td>Study Title</td>
<td>Participants</td>
<td>Language 1</td>
<td>Language 2</td>
<td>Study Outcome</td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------------------------------------------------------------------</td>
<td>---------------------------------------------------</td>
<td>------------</td>
<td>------------</td>
<td>---------------</td>
<td></td>
</tr>
<tr>
<td>Sikkema (2017)*</td>
<td>Will examine online viewing behavior of Japanese language learners (JLL) while watching a Japanese video with captions</td>
<td>University students</td>
<td>English</td>
<td>Japanese</td>
<td>Study not completed.</td>
<td></td>
</tr>
<tr>
<td>Sirmandi &amp; Sardareh (2016)*</td>
<td>Captions, no titles, and traditional paper-based instruction</td>
<td>Students (15-25)</td>
<td>Persian</td>
<td>English</td>
<td>Effective: Caption group performed significantly better than no-title group; no-title group performed better than traditional paper-based instruction.</td>
<td></td>
</tr>
<tr>
<td>Utomo (2016)*</td>
<td>Captions</td>
<td>Middle school students</td>
<td>Bahasa Indonesia</td>
<td>English</td>
<td>Effective: Use of captions in animation video and Vocabulary Self-Collection Strategy (VSS) improved students’ vocabulary mastery</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Methodology</td>
<td>Participants</td>
<td>Language(s)</td>
<td>Outcomes</td>
<td>Findings</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>--------------</td>
<td>-------------</td>
<td>----------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>Vanderplank (2016)*</td>
<td>Captions</td>
<td>University students</td>
<td>French, German, Italian, and Spanish</td>
<td>Value of prolonged watching of films and programs with captions, under choice and control of participants, on confidence, tuning in, correct perception/reception, speed of following/understanding/reading, transferability, and change in behavior</td>
<td>Effective: Watching with captions helped viewers build their confidence; tune in to dialogue of films, especially those with fast speech and complex plots; and use captions flexibly.</td>
<td></td>
</tr>
<tr>
<td>van der Zee, Admiraal, Paas, Saab, &amp; Giesbers*</td>
<td>Subtitles</td>
<td>Non-native English speakers recruited online</td>
<td>Non-native English</td>
<td>Effect of subtitles on learning related to language proficiency of student and visual-textual information complexity (VTIC) of video</td>
<td>Mixed: No main effect of subtitles was found on other learning, but students’ language proficiency and complexity of video had a substantial impact on learning.</td>
<td></td>
</tr>
<tr>
<td>Vulchanova, Aurstad, Kvitnes, &amp; Eshuis (2015)</td>
<td>Captions, subtitles, and no titles</td>
<td>High school students</td>
<td>Norwegian</td>
<td>Effect of captions and subtitles on comprehension with authentic materials</td>
<td>Effective: Both captions and subtitles aid L2 comprehension in both groups; in very advanced learners no difference between captions and subtitles; in younger, less-advanced group, captions worked better.</td>
<td></td>
</tr>
<tr>
<td>Study (Year)</td>
<td>Type of captions</td>
<td>Participants</td>
<td>Language(s)</td>
<td>Dependent Variable</td>
<td>Key Findings</td>
<td></td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------------------------</td>
<td>-------------------------------------------</td>
<td>----------------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Yang &amp; Chang (2014)</td>
<td>Captions, keyword captions, and annotated keyword captions</td>
<td>University students</td>
<td>Chinese, English</td>
<td>Effect of captions, keyword captions, and annotated captions on learning reduced forms and listening comprehension</td>
<td>Effective: Captions, keyword captions, and annotated keyword captions effective; annotated keyword captions most effective.</td>
<td></td>
</tr>
<tr>
<td>York (2016)*</td>
<td>Captions, subtitles, and no titles</td>
<td>High school students</td>
<td>Norwegian, English</td>
<td>Long-term effect of subtitles, captions, and no titles in second language vocabulary acquisition</td>
<td>Mixed: Only group that watched material with captions had long-term effects; however, other factors besides captioning such as vocabulary proficiency predicted participants performance.</td>
<td></td>
</tr>
<tr>
<td>Yüksel &amp; Tanriverdi (2009)</td>
<td>Captions and no titles</td>
<td>University students</td>
<td>Turkish, English</td>
<td>Vocabulary before and after watching a movie clip with and without captions</td>
<td>Ineffective: Both captions and no captions resulted in significant gains in vocabulary; no significant difference between captions and no captions.</td>
<td></td>
</tr>
<tr>
<td>Zareian, Adel, &amp; Alizadeh (2015)*</td>
<td>Captions</td>
<td>University students</td>
<td>Persian, English</td>
<td>Listening comprehension and self-efficacy by watching captioned movies</td>
<td>Mixed: Effective in improving listening comprehension; not effective in improving self-efficacy.</td>
<td></td>
</tr>
</tbody>
</table>
*References Consulted but not Cited in Article 3*


DISsertation conclusion

The purpose of this dissertation was to support Information Literacy (IL) learning in Turkey. The first article of the dissertation identified the IL skills of English Language and Literature university students in Turkey (Fry, 2016). Information literacy is still a young discipline in the country. Despite strong proponents of IL (Kurbanoğlu, 2004), actual IL instruction remains underdeveloped and underutilized (Bayır, Keser, & Numanoğlu, 2010). Adding to the difficulty of teaching IL in Turkey is the fact that most IL materials are available only in the English language (Horton, 2014). The group of students in the first article study in English and have access to IL instruction in English. The article “Student Attitudes Towards Library Usage and Sources at a Turkish University” identified the effectiveness of these English-only IL instruction programs. The results of a survey on student attitudes toward library resources revealed a lack of IL skills as respondents showed a strong preference for non-academic, non-library resources. Student responses suggested a gap in understanding about how to evaluate the credibility of a source and where credible sources are available to them (Fry, 2016).

Based on the results of this survey, a series of modules were developed focusing on ACRL’s Framework for Information Literacy for Higher Education (the Framework) (Fry Balcı & Rich, in press). The development of this tutorial was discussed in detail in Fry Balcı and Rich’s (in press) chapter “Teaching the Framework Using an Online Tutorial.” The design process used to develop this tutorial may be helpful to other librarians who are dealing with how to teach the Framework. The Framework includes six emphases: (a) Authority Is Constructed and Contextual, (b) Information as a Process, (c) Information Has Value, (d) Research as Inquiry, (e) Scholarship as Conversation, and (f) Searching as Strategic Exploration (Association
of College and Research Libraries, 2015). The goal of the Framework is to invite students to participate in active and engaged learning, including the analysis and evaluation of information and information sources (ACRL Board, 2015) as was identified as a learning need in the first article in this dissertation (Fry, 2016). Using Merrill’s (2002) “First Principles of Instruction” as a design model, the Framework-based tutorial helped students to activate their previous knowledge, demonstrated the application of the IL concepts, gave students the opportunity to apply what they had learned through an interactive activity, and finally invited them to integrate their IL skills into their university writing and research (Fry Balcı & Rich, in press). The modules were well received with empirical evidence supporting the benefit of following this design model to teach IL skills.

These modules were initially developed in the predominant language of IL, English (Horton, 2014). IL instruction for English Language Learners (ELLs) has been primarily in that predominant language, though some have argued that ELLs should receive IL instruction in their primary language (Leistman & Wu, 1990). A consensus of second language acquisition (SLA) literature recommends the use of subtitles for SLA (Article 3 Appendix). To test these two assumptions—(1) ELLs should receive IL instruction in their primary language and (2) subtitles are beneficial for SLA—the tutorial developed in the second article (Fry Balcı & Rich, in press) was administered to students in the same English Language and Literature program at the same Turkish university as the first article (Fry, 2016). Three groups of students, each comprised of students from all years in the program (1-4) and each gender (male, female), completed the tutorial in different language configurations: English soundtrack only, English soundtrack with English captions, and English soundtrack with Turkish subtitles (Fry Balcı, Rich, & Roberts, in press). Participants that viewed the tutorial and completed the subsequent IL-based tasks with
Turkish subtitles did so at a faster rate and with more success, thus supporting much of the SLA literature about the benefits of subtitles but in an IL context (Fry Balcı, Rich, & Roberts, in press).

Ultimately, the surveyed Turkish university students struggled with the concept of IL (Fry, 2016). In order to help university students in general to build IL skills, a Framework tutorial was developed to encourage students to engage with IL activities (Fry Balcı & Rich, in press). An online tutorial is one way to introduce the Framework to students and invite them to apply IL principles in their information activities and university assignments. To support Turkish ELLs in the acquisition of these IL principles, using Turkish subtitles in conjunction with the online tutorial to scaffold their understanding of the English-language content is an effective tool (Fry Balcı, Rich, & Roberts, in press). The effectiveness of subtitles in IL instruction to ELLs is a topic that could benefit from continued research.


APPENDIX

Consent Forms
Implied Consent

This research study is being conducted by Leanna Fry Balcı, Assistant Librarian, at Brigham Young University in the United States, to determine the information needs of Turkish English Teaching majors. You are invited to complete this survey because you are an English Teaching Major at a Turkish university.

Your participation in this study will require the completion of an online survey. This should take approximately 15 minutes of your time. Your participation will be anonymous and you will not be contacted again in the future. You will not be paid for being in this study. This survey involves minimal risk to you. The benefits, however, may impact society by helping increase knowledge about information literacy.

Involvement in this survey is voluntary. You do not have to be in this study if you do not want to be. You do not have to answer any question that you do not want to answer for any reason. I would be happy to answer any questions you have about this study. Please contact me, Leanna Fry Balcı, at 001.801.422.8981 or leanna_balci@byu.edu or Professor Tuncer Yilmaz, at 462.377.37.81 or tyilmaz@ktu.edu.tr.

If you have any questions about your rights as a research participant you may contact the IRB Administrator at A-285 ASB, Brigham Young University, Provo, UT 84602, USA; irb@byu.edu; 001.801.422.1461. The IRB is a group of people who review research studies to protect the rights and welfare of research participants.

The completion of this survey implies your consent to participate. If you choose to participate, please complete the survey. Thank you.


İletişim bilgileri;

Leanna Fry BALCI, tel: 001.801.422.89.81, email: leanna_balci@byu.edu;
Profesor Tuncer YILMAZ, tel: 462.377.37.81, email: tyilmaz@ktu.edu.tr
IRB, tel: 001.801.422.14.61, email: irb@byu.edu; araştırma çalışmalarını kontrol eden ve alıştırma katılamanların haklarını koruyan bir guruptur. Bu ankete tamamlanması için senin iznini belirtmektedir. Eğer bu ankete katılmak isterdeniz, lütfen anketi tamamlayınız. Teşekkürler.
Informed Consent Statement: IRB 15049
This research study is being conducted by Leanna Fry Balcı, Assistant Professor at Brigham Young University, to determine the most effective way of teaching information literacy skills to English-language learners. You were invited to participate because you are an English-language learner.

You will complete an online tutorial about how to research. The tutorial will last approximately 10 minutes. It has an instruction section and then a section for you to answer questions either by clicking on an answer or typing an answer.

This study has minimal risks. It will take approximately 10 minutes of your time.

You may learn research skills from taking this tutorial. In addition, it is hoped that through your participation researchers may learn more about how libraries can better serve English-language learners.

The research data will be kept on a password-protected computer, and only the researcher will have access to the data. No identifying information will be collected about you from your participation in the study.

Although your participation in the study is appreciated, you will not be compensated.

Participation in this research study is voluntary. You have the right to withdraw at any time or refuse to participate entirely without jeopardy to your class status, grade, or standing with the university.

If you have questions regarding this study, you may contact Leanna Fry Balcı at leanna_balcı@byu.edu, 001.801.422.89.81, or Tuncer Yılmaz at tyilmaz@ktu.edu.tr, 0090.462.377.37.81, for further information.

IRB Administrator
A-285 ASB
Brigham Young University
Provo, UT 84602
(801) 422-1461
irb@byu.edu

Bu araştırma çalışması Profesör Leanna Fry Balcı (Brigham Young Üniversitesi, ABD) tarafından Türkçe İngilizce Öğretim bölümünün bilgi ihtiyaçları için yapılmaktadır.

Bu çalışmaya katılmınız için lütfen anketi tamamlayınız. Bu anket yaklaşık olarak ve gelecekte rahatsız edici mail veya reklam almayınız.
Bu çalışmaya katılım için ücret alımı veya verimi yoktur. Bu anket size herhangi bir konu hakkında risk oluşturmayacak, diğer taraftan toplum okur-yazarlık bilgisi hakkında bilgi artırmasına yardımcı olacaktır.

Bu ankete katılım gönüllü olarak yapılmaktadır. İstemediğiniz takdirde bu ankete katılmak zorunda değilsiniz. Herhangi bir soruya istemediğiniz takdirde cevap vermek zorunda değilsiniz. Bu anket hakkında sorularınız varsa cevaplamaktan mutluluk duyarım.


İletişim bilgileri;

Leanna Fry BALCI, tel: 001.801.422.89.81, email: leanna_balci@byu.edu;
Profesör Tuncer YILMAZ, tel: 462.377.37.81, email: tyilmaz@ktu.edu.tr

IRB
A-285 ASB
Brigham Young University
Provo, UT 84602 USA
tel: 001.801.422.14.61
e-mail: irb@byu.edu