

Using Twitter as an ELT Tool in the Saudi EFL Context

Madawi Allam (Corresponding author)

English Language Institute,
King Abdul Aziz University, Jeddah, Saudi Arabia
E-mail: madawi.allam@gmail.com

Dr. Tariq Elyas

Faculty of Arts & Humanities
Department of European Languages
King Abdul Aziz University, Jeddah, Saudi Arabia
E-mail: telyas@kau.edu.sa

Dr. Ayman Bajnaid

Department of Communication,
Faculty of Communication and Media,
King Abdulaziz University, Jeddah, Saudi Arabia
E-mail: anbajnaid@kau.edu.sa

Hussam Rajab

English Language Institute,
King Abdul Aziz University, Jeddah, Saudi Arabia
E-mail: hmrajab@kau.edu.sa

Received: August 25, 2017

Accepted: August 31, 2017

Published: September 5, 2017

doi:10.5296/ijl.v9i5.11813

URL: <https://doi.org/10.5296/ijl.v9i5.11813>

Abstract

The present study aims at investigating English as a Foreign Language (EFL) Saudi students' adaption of Twitter and utilizing it as an English language learning tool and the different characteristics of each adopter category using Roger's Diffusion of Innovation Theory (DOI). It targets both the foundation year Saudi female university students studying EFL at the English Language Institute (ELI) at King Abdul Aziz University (KAU) as well as the male and female Saudi students studying English at English language institutes abroad. The sample will consist of 50 female preparatory year students (PYS) studying EFL at the ELI. Their ages will range between the ages of 18 and 21 years old and will all be likely to come from an Arab origin. Furthermore, the study will include 50 male and female English learners who are studying abroad. This quantitative study uses a three parts questionnaire. The first part will request demographic information from participants such as age, years of experiences, academic ranking, and the level they are studying in the students' case. In the second section, participants were asked to choose the response that describes the degree to which they use the innovation (Twitter). In the last section, participants were asked to read 23 statements that measure the different characteristics of each adopter category which influence the user intention and behavior. The 23 statements were based on the five perceived attributes of innovations derived by Rogers (2003). A five-point Likert-type scale ranging from strongly agrees to strongly disagree was applied to assess the perceived attributes of Twitter. The researcher aims at identifying valuable insights on how much the social network website Twitter is accepted and used as a learning tool for Saudi language learners. Therefore, based on the findings of this study, researchers in the same field may expand the study by moving to further experimental research that maybe carried out to investigate the effectiveness of Twitter as a teaching tool in the ELI classroom at KAU and other language institutes outside the Kingdom.

Keywords: Twitter, EFL, Diffusion of Innovation Theory (DOI), Social Media, Constructivism Theory, Motivational Theory

1. Introduction

1.1 Background

The use of the Internet has increased exponentially in recent years with an estimated 37.9 % of the world's population (2.7 billion people) having access to it in 2014. In the case of the Middle East, according to statistics from November 2015, 52.2% of the population makes regular use of the Internet via various devices. (Internet World Stats. Miniwatts Marketing Group) and the use of Social Media sites such as Facebook, WhatsApp and Twitter has become commonplace with in the case of Twitter, over 300 million active users worldwide. Social Media is easily accessible thanks to the growth in the availability of mobile technology applications such as Smart Phones, Tablets and users can connect with their favorite social media platform at virtually any time and in any place, they choose (Livingstone, 2004). This has meant that an application such as Twitter, which allows users to create personalized content and to engage with and share their experiences with users from all over the world, has significantly changed the way Saudi EFL learners interact with fellow Saudis and with people from other countries and investigating this new phenomenon can shed light on how best to make use of Social Media to improve English Language learning for Saudi EFL students.

Twitter provides a platform where a student can speak and contribute on any given topic without fear of mockery (Stewart, 2015). It provides a genuinely democratic environment where an individual can provide his/her idea and comment on a given topic. Because of the democratic system, many students can learn from the various experts and corrected on their mistakes promoting learning and improvements in their studies.

In the case of Twitter, the limited range of the medium where thoughts etc. must be expressed in under 140 characters is offset by its simplicity, ease of use and popularity. Social media is now established as an essential feature of our modern life and one which is with easily acceptable and generally available to everyone around the world. For instance, it can be accessible at places of work, education institutes or domestic residence and that is largely due to the increased accessibility to and use of web based and mobile technology applications, especially smart phones and tablets (Livingstone, 2004). This new technology and its availability has provided a new mode for communication, which allows users to create new contents, engage and interact with other users as well as share their lives and experiences. Social media technology is ever present in our domestic, educational and professional environments with the Twitter application representing a means by which users can share a limited amount of data, opinions, comments and observations in a quick and easy manner to a wide number of users (Junco & Heiberger & Loken, 2010). In view of this, it becomes apparent that such a simple, widespread offering to a large population base presents valuable opportunities for personal, commercial and educational uses. This is particularly due to the way they encourage and support feedback and interaction and provide the framework for user-to-user engagement (Small & Borgan, 2009).

1.2 Problem Statement

To date there appears to be an absence of any strong empirical academic research into or substantive evidence into the assessment of the use of social media, particularly Twitter, as a language learning tool or the potential enthusiasm amongst users for the adoption of the Twitter application within the language learning environment. Fatany (2012) has stated “Saudis are the most active social media users in the Arab region, with an estimated 393,000 using Twitter” (Fatany, 2012, para. 1). Saudis are among the most creative users of Twitter. They are taking advantage of the independence and freedoms offered through this social media website. The Communication and Information Technology Commission in Saudi Arabia conducted a field survey to identify the main reasons for using the internet in the Kingdom of Saudi Arabia. The survey showed that navigation and communication with others were the main reasons for using the internet in the Kingdom, while the educational reasons came in the fifth place (CITC, 2012). Although that one third of Saudi Arabia’s online population are active Twitter users, and the fact that Saudi Arabia lines the first among ten different countries around the world (including the USA), there is still no clear evidence for Twitter’s educational uses in Saudi Arabia (The Socialclinic, 2013)

The purpose of this study is to investigate EFL Saudi undergraduate students’ adaption of utilizing Twitter as an English language learning tool. Moreover, the different characteristics of each adopter category using Roger’s diffusion of innovation theory.

1.3 Research Questions

1. How effective is the Roger’s diffusion of innovation Theory in measuring the acceptance and usage of Twitter as an English learning tool?
2. What are the different characteristics of each adopter category? (Attributes)
3. What are the adoption categories of the Saudis EFL students using Twitter as English learning tool?

1.4 Hypotheses

This study will hypothesize that:

- If the use of Twitter in the learning process is accepted as an English language-learning tool.
- People using Twitter as a learning tool will have different adopter categories.
- People who adopt an innovation early have different characteristics than people who adopt an innovation later.
- It is anticipated that the use of Twitter helps increase students’ motivation to learn the English language.

1.5 Significance of the Research

The principal rationales for the choosing of this topic are based on my own personal experience of language learning, teaching in the University and my awareness of the frequency of use of the Twitter application amongst my friends, family, peers and wider social network.

Saudi Arabia is perhaps the most active user of social media in the Arab region evidenced by the 5.4m users of Twitter, 40% of Twitter users in the Arab region, and being responsible for more than 210 million tweets each month (TOP, 2015). These two features have prompted me to investigate the potential opportunities which could be derived from the use of Twitter as a means of improving language learning, both in terms of the frequency of use and accessibility outside of a normal classroom environment. This is in addition to the ability to practice language in the context of real life situations, issues and topics. It is anticipated that the research will require an extensive review of the research conducted to date followed by investigation of students' attitude towards using Twitter as an English learning tool. The results of this study will inform the formulation of a possible implementation of the use of Twitter as a potential English language tool and may lead to the need for further experimental research to evaluate its effectiveness.

1.6 Aims and Objectives

The present study aims at investigating if Twitter is acceptable as an English language learning tool for both the foundation year female students studying English at the English Language Institute (ELI) in King Abdul Aziz University (KAU) as well as the abroad Saudi learners studying English at the English language institutes abroad.

2. Literature Review

The theoretical basis of the study is defined by the Diffusion of Innovation Theory (DOI) (Sahin, 2006; Rogers, 2003) and is informed by Motivational Theory (MT) (Woolfolk, 2006; Ryan & Deci, 2000), and Constructivist Theory (CT) (Perry, 1999; Vygotsky, 1978; Piaget, 1950).

2.1 Diffusion of Innovation Theory (DOI)

There is plenty of literature on the Diffusion of Innovations Theory (DOI) that informs EFL teaching and learning (Sahin, 2006; Rogers, 2003). DOI dates to the 1960s with the investigation into how technologies develop and are implemented across cultures (Sahin, 2006; Rogers, 2003). Originating with Everett M. Rogers in 1962, DOI has been used in research as a framework in several disciplines, from economics and commerce to technology, from communications science and history to public health and political science (Sahin, 2006). Most significant to this study is research on DOI in the discipline of education (Sahin, 2006). According to Rogers (1995) there are five important attributes of an innovation include: relative advantage, which is the degree to which it, is perceived to be better than what it supersedes. Compatibility which is consistency with existing values, past experiences and needs. Complexity that refers to the difficulty of understanding and use. Trialability which is

the degree to which it can be experimented with on a limited basis. Observability which is considered as the visibility of its results.

2.1.1 Elements of the Diffusion of Innovation

Rogers (2003) established four elements around which DOI operates that have been developed to include innovation, communications channels, time, and social systems, and that have been adapted to include a fifth element identifying the adopters of DOI. Or, as Rogers (2003) has determined that “diffusion is the process by which 1) an innovation original emphasis 2) is communicated through certain channels 3) over time 4) among the members of a social system” (p. 11).

2.1.2 The pedagogical approaches and the DOI theory in EFL teaching/learning

Using Rogers’ (2003) theory of diffusion of innovation, researchers such as Sahin (2006) have highlighted the adoption of innovation(s) in higher education in general. These adoptions range widely, from faculty adoption of computer technology for instruction in specific regions and at specific levels (such as college level) to relationships between the level of computer use and selected factors: expertise, access, attitude, support, to specific technologies adopted in educational contexts, such as the computer and relevant teacher perceptions, attitudes, and behaviors. However, more specifically, others (Alotumi, 2015; Azim & Rahman, 2015; Naeini, 2012, Nehal, 2015; Stoller, 1994; Warford, 2005) have conducted studies emphasizing the adoption of innovation(s) in the EFL classroom. Alotumi (2015) considered the innovation Facebook and Facebook interaction (FBI) as it is associated with Yemeni EFL students’ perceptions, attitudes and challenges on integrating Facebook Interaction (FBI). He focused on integrating FBI to improve students’ essay writing and concluded that most subjects had positive perceptions and attitudes about the facilitative nature of FBI. “FBI helps students effectively in becoming familiar with the writing topics, forming better thought, brainstorming and mind-mapping, reducing spelling errors, as well as acquiring and practicing new vocabulary” (p. 125), despite such challenges as typing and time pressures.

2.2 *Motivational Theory (MT)*

As a factor affecting learning, motivation has been the centerpiece of theory in education for several decades. In addition, a generous amount of the literature is devoted to motivational theory, starting with general behavioral motivational theory developed by Abraham Maslow (1970) and continuing with cognitive motivation as well as extrinsic and intrinsic motivation further developed by Albert Bandura (1977) and studied by several authorities including Woolfolk (2006) and Ryan and Deci (2000).

2.2.1 Extrinsic Motivation

In learning contexts, extrinsic motivation is that motivation which is impelled by outer rewards or outcomes such as knowledge, grades, accolades, awards, a diploma, a job, or etc. (Woolfolk, 2006).

2.2.2 Intrinsic Motivation

Intrinsic motivation is “the natural tendency to seek out and conquer challenges as we pursue personal interests and exercise capabilities” (Woolfolk, 2006, p. 373). According to Ryan and Deci (2000), “intrinsic motivation is an important construct that reflects the natural human propensity to learn and assimilate” (p. 54).

2.2.2.1 Self Determination Theory

According to Ryan and Deci (2000), another specific theory of motivation and its sub theories become most relevant: self-determination theory (SDT) and internalization and integration. First, SDT for education takes into consideration behavioral motivation theory in general and operant theory (Skinner, 1953, in Ryan & Deci, 2000) in particular—whereby it is believed that all behavior is motivated by reward(s) or outcome(s); so, with activities having intrinsic motivation, the reward is in the participating in the activity itself (Ryan & Deci, 2000). Second, SDT for education takes into consideration cognitive motivational theory in general and learning theory in particular as these theories maintain that all behaviors are motivated by physiological drives (and their derivatives), so with activities having intrinsic motivation, the reward is in the satisfying of innate and basic psychological needs (Ryan & Deci, 2000)—including the needs for relatedness and competence, the need to belong and the need to be and feel competent, respectively.

2.3 Constructivist Theory (CT)

This study is also informed by constructivist theory, which, as social constructivism and cognitive constructivism combined, rests on the belief that humans acquire knowledge through activity and interactivity over which they have control and which they themselves plan, design, create, use, and even assess (Lutz & Huitt, 2004). In other words, the theory operates on the premise that learners learn best when they construct their own knowledge (Biggs, 2003; Judson, 2006; Matzen & Edmunds, 2007). A great deal of literature is devoted to constructivist theory originating with Jean Piaget (1950) and further developed by Lev Vygotsky (1978) and others. Constructivist theory maintains that learning takes place through active engagement in student-centered activity, learner perception(s) and learner experience(s), and intrinsic motivation. And as a generous amount of research literature has evidenced, where “teachers who readily integrate technology into their instruction are more likely to possess constructivist teaching styles” (Judson, 2006, p. 581) is where a clear connection exists between constructivist pedagogy and the use of technology as an effective educational combination, a connection which “implies constructivist-minded teachers maintain dynamic student-centered classrooms where technology is a powerful learning tool” (p. 581).

2.3.1 Social Media

Teachers and instructors need to adapt and to understand that technology plays an important role in learning in the 21st century where everything is changing rapidly fast. According to the Merriam-Webster Dictionary (2014), social media includes “forms of electronic communication (as Web sites for social networking and microblogging) through which users

create online communities to share information, ideas, personal messages, and other content (as videos)". The use of social media as a form of e-learning can help in improving the quality of autonomous learning. Våljataga and Fiedler (2009) concluded that students acquired knowledge about the selection and meaningful combination of a diverse set of social media for their own purposes. Therefore, we can say that students enjoy the use of social media in their learning. Moreover, by using the social media as a learning technique, students will have the feeling that they have earned this knowledge and that will make them never forget the knowledge they have acquired. Furthermore, (Naeini, 2012; Nehal, 2015) suggest thus, the use of social media and other supportive innovative technologies lends to motivation for constructive, effective teaching and learning.

2.3.1.1 Twitter

The way students study languages nowadays are completely different from how our parents and grandparents were studying languages around twenty, thirty or forty years ago. Nowadays, any person's life is inevitably connected to social media networks such as Facebook, LinkedIn, What's Up, YouTube Twitter, and many others. Twitter as a part of social media networks that can facilitate the learning process is going to be discussed in this paper. Famous examples of social networking sites include Twitter, Facebook, MySpace, Badoo and Google+ (Aydin, 2012). Twitter is a social networking and microblogging service where Twitter users share their opinions, information, news, thoughts, and their feelings towards topics. In term of the exact definition of Twitter, according to the business dictionary, Twitter is a website that "allows users to publish short messages that are called tweets and can be 140 characters or less" (Businessdictionary.com, n.d.). It has over 500 million active users as of 2012, generating over 340 million tweets daily (Dugan, 2012). A defining factor of Twitter is that each Tweet has 140-character limit, which on the face of it seems to represent a barrier to effective communication. Several authors, however, have claimed that this is beneficial. Educause (2009) suggests that this helps users to think and communicate more effectively, and Rankin (2009) points out that users are forced to concentrate on their main point. Dunlap and Lowenthal (2009) make the point that this conciseness and precision is of great benefit in professional context and is therefore a useful skill to develop. Dickens (2008) argued that this limit helps L2 language learning and Jenkins (2009) highlighted its usefulness in formulating philosophical arguments. On the one hand, many academics have blamed this style, common not only on Twitter but on other social media such as Facebook, for leading to a fall in standards in English academic writing but on the other, Kelly (2010) and Parry (2008) reject this premise and argue for its use to help develop this kind of writing. Tweets can cover absolutely any topics, no matter if it is in the field of medicine, news, personal experience, customer service, shopping, restaurant reviews or public events information. Thankfully, Twitter gives this opportunity for language students.

2.3.1.2 Previous Studies Conducted in Using Twitter in EFL Teaching/Learning

More specifically, several recent studies have evidenced the effectiveness of using Twitter in teaching and learning EFL (Acar & Kimura, 2012; Borau, Ullrich, Feng, & Shen, 2009; Dogoriti, 2015; Greenhow & Gleason, 2012; Kim, Park, & Baek, 2011; Sekiguchi, 2012;

Kassens-Noor, 2012). Kim, Park, and Baek (2011) investigated the use of microblogging with Twitter by Korean learners of EFL to understand pattern, purpose, and features of microblogging as a learning activity. In a study of thirty-eight students from three grade levels—15 from elementary grade 5, junior high grade 7, and high school grade 11—the researchers analyzed student “tweets” over a three-week period. They found that besides demonstrating distinct patterns and other features, “the updated tweets provided convincing evidence that Twitter stimulates EFL learners to promote their foreign language output and helps them maintain social interaction with other users using [the] target language regardless of grade levels” (p. 113). Additionally, Borau, Ullrich, Feng, and Shen (2009) also conducted region-specific studies of the usefulness of microblogging for active rather than passive learning. With ninety-eight EFL learners at Shanghai Jiao Tong University registered at Twitter, the researchers determine that tools like Twitter lend to active learning and result in effective training in “communicative and cultural competence” (p. 78). In Eva Kassens- Noor study “Twitter as a Teaching Practice to Enhance Active and Informal Learning in Higher Education: The Case of Sustainable Tweets,” she stated that educators should benefit of Twitter as a learning tool that boosts the students’ learning through keeping up with their growing interest in the field of technology.

2.3.1.3 Previous Studies Conducted Using Twitter in EFL Teaching/Learning in Saudi Arabia

Although, one third of Saudi Arabia’s online population are active Twitter users and Saudi Arabia ranks the first among ten different countries around the world, including the USA, there is still a little evidence for Twitter’s educational uses in Saudi Arabia (The socialclinic, 2013). A limited number of research studies have documented the effectiveness of using Twitter in teaching and learning EFL in Saudi Arabia, specifically (Alshahrani & Al-Shehri, 2012 & Asiri & Alqarni, 2015 & Ahmad, 2015 & Kutbi, 2015). However, some research has been done on social media and EFL teaching and learning in Saudi Arabia that has integrated e-tools similar to Twitter as a social media tool, such as Facebook (Alwagait, Shahzad, & Alim, 2014; Mahdi & El-Naim, 2012). Alshahrani and Al-Shehri (2012) investigated students’ and teachers’ understanding of and responses to integrated EFL e-learning tools such as Twitter. Using one university in Saudi Arabia for the setting of their study, the researchers found conceptions and practices of integrating e-learning were not aligned. Asiri and Alqarni (2015) explored the main advantages of using Twitter for EFL. The study presented the potential benefits of using Twitter as an educational tool among high school students in Jeddah, inside and outside their schools. The study showed a positive effect of Twitter in the learning and educational process especially on English language learning process. Ahmad (2015) investigated the effect of twitter on EFL Saudi female writing and whether twitter influences: ideas and content, organization, voice and style. The researcher carried a pretest-posttest experimental-control group design on Saudi female students at Qassim University. Students in the experimental group were taught using Twitter and students in the control group were taught using the traditional method of teaching writing. Finally, students in both groups were post- tested using the EFL writing test. The study showed that the experimental group outperformed the control group on post-testing of writing. This difference can be attributed to using Twitter in teaching writing. Kutbi (2015) conducted

a study on how undergraduate female students in the Kingdom of Saudi Arabia Perceive the social media website Twitter as an educational Tool. The results of the study found that high percentage of the participants, 84%, prefer the use of Twitter as a learning tool. This high percentage proves that youth has a huge growing interest in technology. According to the Internet World Stats, 53% of Twitter users around the world are females and 77 % of them are between the ages of fifteen and twenty-five (Internet World Stats, 2013). Alwagait, Shahzad, and Alim (2014) investigated the effect of excessive social media use on academic performance. Using universities in Saudi Arabia for the setting of the study, the researchers collected surveys from 108 students to discern social media platform popularity. They found “no linear relationship between social media usage in a week and GPA score” (p. 1092). They also found that instead, other factors such as time management were reported to negatively affect academic performance. However, Mahdi and El-Naim (2012) investigated what if any impact computer-mediated communication (CMC) had on EFL learner’s interaction(s) when used informally—in the context of “unevaluated and unplanned activities which can occur outside the classroom...and can be initiated by the students” (p. 75). In particular, the researchers conducted experiments with fifty adult EFL Saudi learners at Najran University, Saudi Arabia, using Facebook, to investigate the extent of active participation by students in informal CMC, the factors that facilitate effective informal CMC, and the effect of informal CMC on student written output. The researchers concluded that informal use of CMC can be affected by several factors include the degree of voluntary participation on the part of the learners, inhibitive schedules, and teacher interference, but that participant attitudes toward the use of informal CMC such as Facebook to improve language learning were mostly positive.

2.3.2 Drawbacks of Using Twitter as an E-Learning Tool

While the introduction of the Twitter led to many benefits, unfortunately, it also came with its own set of drawbacks. Most significantly, these drawbacks can negatively impact the full acceptance of the program. The most notable drawbacks of using Twitter are addressed below:

2.3.3 Language Barrier

Language barrier could be one of the biggest challenges that face low proficiency speakers of English while posting on Twitter. Low proficiency English level users face lots of challenges when they are trying to communicate with their high proficiency English level peers. In their article “Learning in an Online Distance Education Course: Experiences of Three International Students.”, Zhang and Kenny focused on the online experience of three international students who were enrolled in a Canadian university that offers an online master’s program. They concluded that low proficiency English level speakers or the international students when they take an online course and suppose to engage in discussion and share their opinions, reflections, and thoughts with their high proficiency English level peers, they were having difficulties in communicating in the online environment and having a successful and meaningful communication with their high proficiency English level peers. The study concluded that low proficiency English level were not very confident about their English and

spent considerably more time reading and composing messages. Thus, the language barrier prevented them from posting as many messages as they would have liked (Zhang & Kenny, 2010, p. 5).

2.3.4 Internet Connectivity Problems

The quality of the internet services or the technology in our hands can have a huge impact on the success of any e-learning environment. High quality Internet can lead to student's satisfaction, which is an important factor in the success of any learning method. As a matter of fact, researchers indicate that "technology quality and internet quality significantly affect satisfaction in e-Learning (Piccoli et al., 2001; Webster & Hackley, 1997 as cited in Sun, Tsai, Finger, Chen, Yeh, 2008, p. 1188). Therefore, low internet speed or connection can be frustrating for the students and the instructors, and that, indeed, could hinder the education process. A study conducted in King Khalid University in Saudi Arabia explored students' views regarding the advantages and disadvantages of using Blackboard in the learning process (Al Zumor, Al Refaai, Bader-Eddin & Al- Rahman, 2013, p. 1). The study concluded that Internet problem was a major drawback to a successful learning.

2.3.5 Lack of Technical Knowledge

Lack of technology skills and computer knowledge are two major obstacles that face the users. Researchers from Sudan and Jordan believes that computer illiteracy and a lack in technical experience among the instructors and students are still high in the Arab region that prevent or hinder the development of e-learning in the Arab world (Yaseen & Melhem, 2012). In other words, if the user does not have technical skills and have difficulties in dealing with the computer and the software, this will narrow the learning process. Alsharhan (2012) indicates in his study that the major difficulties and challenges in the Arab world are to introduce the new technology in the educational life. He believes that students, faculty members, and teachers should be well prepared with all technological needs to create a rich educational environment (Alsharhan, 2012). Yaseen and Melhem (2012) suggest that in order to improve social media in education, the users should be giving the option to use the social media or not. In other words, students should have the alternative if they choose not to use social media. Another suggestion was that institutions should provide appropriate and intensified training for all users and on how to deal with the computer hardware and software. Teachers need to be trained in how to construct an e-learning curriculum and how to deliver it successfully and effectively, moreover students should be well trained with the appropriate skills of technology in order to achieve greater interaction and develop an effective learning style (Yaseen and Melhem , 2012).

3. Methods

3.1 Participants

In the study, the sample will consist of 50 female preparatory year students (PYS) studying EFL at the ELI. Their ages will range between the ages of 18 and 21 years old. Furthermore, the study will include 50 male and female English learners who are studying English abroad.

3.2 Methods of Data Collection

The present study uses Everett Roger's diffusion of innovation theory to measure students' level of adaption of utilizing Twitter as a language-learning tool. This model used a questionnaire to develop the level of adoption and the different characteristics of each adopter category. Prior to beginning the study, the researcher completed and submitted the Data Collecting form to the graduate study Committee at the English Language Institute, King Abdulaziz University. Approval to conduct the study was granted.

3.3 The Questionnaire

The questionnaire of the present study consisted of three sections. The first section included the demographic information from participants such as age, previous experience of English language learning, and the level they are currently studying in. In the second section, participants were asked to choose the response that describes the degree to which they use the innovation. In the last section, participants were asked to read 23 statements that measure the different characteristics of each adopter category influence user intention and behavior. The 23 statements were based on the five attributes of innovations derived by Rogers (2003). A five-point Likert-type scale ranging from strongly agrees to strongly disagree was applied to assess the perceived attributes of Twitter. The first group of statements discusses that the innovation must have some relative advantage over an existing innovation. The second part has few statements argues the importance of the innovation to be compatible with existing values and practices. The third group of statements presents the idea that the innovation cannot be too complex. The fourth group discusses that the innovation must have trialability. This means the innovation can be tested for a limited time without adoption. In the fifth group of statements, the theory discusses that the innovation must offer observable results (Rogers, 1995).

3.4 Pilot Study and Questionnaire Revision

The researcher conducted a two stages method in order to establish the face validity (Buckingham & Saunders, 2004, p. 65) and content-related validity (Fraenkel & Wallen, 2003, p. 159) of the questionnaire. On the first hand, a sample questionnaire was formed and shared with 4 English language experts familiar with the study. These experts were from King Abdulaziz University, the British Council in Jeddah, as well as a female PhD professor familiar with the diffusion of innovation theory. The Participants were informed of the purpose of this study and then they were asked to revise the online questioner. Based on the four experts' feedback and suggestions, several minor corrections were made, as well as the inclusion of a third section of the survey. On the other hand, 10 ELI foundation year female students studying English at the English Language Institute (ELI) in King Abdul Aziz University (KAU) were chosen randomly from level 101 and were asked to complete an online form of the quantitative questionnaire at that time. This process was conducted to ensure the face validity and the reliability of the questionnaire. The collected data was entered in the SPSS program to be analyzed. Tests were done on the results of the questionnaire confirmed the face validity and reliability

3.5 Reliability

Reliability was tested through conducting a pilot study of the questionnaire. The aim of the reliability test is to ensure that whether the same test could produce the same results if it was recast. In order to measure the internal consistency reliability, a Cronbach Alpha coefficient is used. A Cronbach Alpha test can identify whether a test has high reliability and could produce the same results under consistent conditions. According to Dornyei (2007), reliability coefficient should be of (0.70) or higher to be considered acceptable in most research situations; however, if the Cronbach Alpha does not reach (0.60) the questionnaire is considered of a low reliability (Dornyei, 2007). The Cronbach alpha's calculated value of the raw data of this study was 0.966. The Cronbach alpha coefficient for this study exceeded 0.9, thus satisfying the internal consistency requirements.

4. Results

4.1 IBM SPSS® Data Entry and Variable Coding

Following the collection of the data from the online survey, the gathered data were saved in an MS Excel® file format where they were then entered into a new SPSS data file (.sav) and all the variables were coded and labeled with their corresponding levels of measurements, which included six nominal variables: gender, age, number of years studying English, place of study (if abroad in which country) and the proficiency level of English. The twenty-four remaining variables were mainly ordinal type data. Since SPSS® performs numerous statistical analysis on numbers and arithmetical figures rather than textual variables or values, the first stage of coding the responses were performed where each set of options in either the nominal variable or the ordinal ones were coded to allow for the ease of analysis of those variables. For instance, a number indicator of "1" was given for male option and a number indicator of "2" was given for the female option, in the nominal variable relating to gender of the participants. Similarly, a number indicator of "1" was given to the strongly agree option, a number indicator "2" for the agree option, a number indicator of "3" for undecided or neutral, a number indicator of "4" for the disagree option and a number indicator of "5" for the strongly disagree option in the ordinal items responses in the questionnaires. This first stage of coding of the responses helped in performing several analyses of the data including the testing of the reliability of the data as well as frequency tables. The second stage of coding involved giving an actual reflective value for the twenty-three ordinal items in the questionnaire having the homogenous five choices of responses to the statements in the three groups. For instance, a value of '4' was given for the strongly agree option, a value of '3' for the agree option, a value of 'zero' for the undecided, a value of '2' for the disagree option and a value of '1' for the strongly disagree option. Thus, by assigning reflective values to the different response options the participants' choices, it was much easier to carry out representations of this data using SPSS and carry out parallel descriptive analysis of the survey (e.g. mean, standard deviation and cross-tabulation analysis).

4.2 The Reliability of the Questionnaire Constructs using the Cronbach's Alpha and the Pearson Correlation Coefficient

The initial stage of the statistical analysis was performed on the coded responses in the questionnaire using the Cronbach's alpha coefficient and the Pearson test. The Cronbach alpha is considered by many researchers as the most commonly used indicator of internal consistency (Franzen, 2013). It provides reliability estimates from the consistency of item responses from a single assessment. In addition, in statistics, Cronbach's (alpha) is used as an estimate of the reliability of a psychometric test (Coolican, 2014). The generally agreed upon lower limit for Cronbach's alpha is 0.70 (Hair, Anderson, Tatham & Black, 1998). The calculated Cronbach's alpha value of the raw data was 0.966. The Cronbach alpha coefficient for this study exceeded 0.9, thus satisfying the internal consistency requirements. On the other hand, the Pearson correlation coefficient gives an indication of the relative measure of relationship between individual items in the questionnaire and their corresponding aspect they belong to. All the calculated Pearson correlation coefficients indicate that the items within each group generated a high coefficient value indicating a significant correlation between each item and its aspect and thus, it is evident that these reflective responses had acceptable internal consistency.

4.3 Descriptive Statistics

The calculated means of the representative coded values of the twenty-three items (Likert Scale) of the survey have all generated mean values above 2 which indicates a tendency towards agreeing with the statements presented to them in the survey. This is apart from the following seven items which all generated average means below 2:

1. I learned English more quickly and easily by using Twitter
2. I think English classes should implement social media programs like Twitter.
3. Twitter offered me real advantages over the way I usually learn.
4. Using this tool (Twitter) made what I was learning in class seems more relevant to me.
5. I first become familiar with Twitter through a colleague at school.
6. Other students seemed interested in Twitter when they saw me using it.
7. My classmates can tell that my English had improved since I've used Twitter

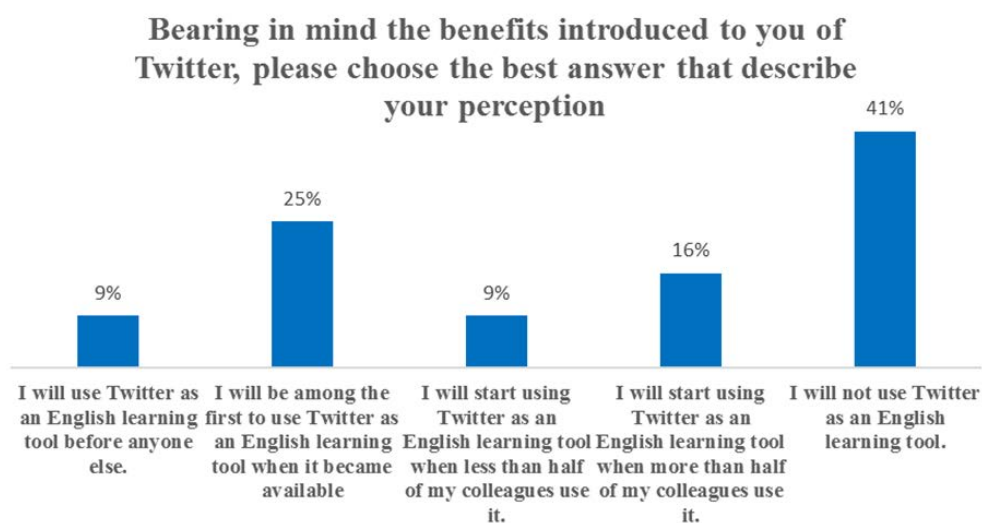
The interpretation of the responses of the participants does not necessarily indicate that the participants disagreed with the statements but rather have different views with regards to some very generalized statements. This is evident in items 4, 5, 6 and 7 where the statements may well result in disagreement but not necessarily with a negativity towards using twitter. We can confidently deduce that the participants had mainly positive views towards using Twitter and believe that Twitter is a vital tool in improving their English as L2.

4.4 Level of Twitter Adoption Amongst Participants

When the responses of the participants are plotted against the level of twitter adoption statements in section B, the following bar chart is generated which gives the percentages of the participants in each category of the section.

Table 1. Percentages representation of the level of Twitter adoption amongst the participants.

The bar chart is generated from the responses by a hundred participants and their level of adoption using Twitter as a study tool. The graph depicts the percentages of participants in different categories.



The group with the highest percentage at 41%, named laggards, stated that they will not use Twitter as an English learning tool. In stark contrast, only 9% of the participants said they would use Twitter before anyone else. This group goes by the name of innovators. The same percentage was obtained by the group called early majority. This particular group indicated they would start using Twitter as a tool in learning English when less than half of their colleagues use it. The second highest percentage came from the early adopter group, with a quarter (25%) of the respondents showing willingness to be among the first to use Twitter when it became available. This group was followed by the late majority group, in the third place, at 16%. The late majority group would start using Twitter only when more than 50% of their colleagues use it.

In summary, it can be concluded that more than half of the participants (laggards and late majority) are skeptical of using Twitter as an English learning tool, while the rest showed reasonable willingness to use Twitter as a means of studying. A third of the participants felt so strong about Twitter that they indicated that they would start using it instantly

4. Discussion

The main aim of this part is to identify the EFL Saudi students' adaption of utilizing Twitter as an English language learning tool and the different factors that influence the adoption. Data used to answer the research questions were obtained from a survey questionnaire filled

out by participants. Each research question has been discussed and in each section, there is a brief discussion of the justification of the analysis being performed, as well as a summary of the findings.

The first research question was about the effectiveness of the Roger's diffusion of innovation Theory in measuring the acceptance and usage of Twitter as an English learning tool. Rogers' Diffusion of Innovation theory (Rogers, 1995) is used to determine how successful the adoption of a new technology is. This theory applies to this research project because Twitter is a relatively new technology in the Saudi context that is just and only recently used in education. Rogers offers a classification of users according to how soon they adopt the new technology, this classification could be used to EFL Saudi students participating in this research. In this study, the Diffusion of Innovations theory could measure the acceptance and usage of Twitter as an English learning tool by finding out whether EFL Saudi students are: innovators, early adopters, early majority, late majority, or laggards (Rogers, 1995). Furthermore, the current research project could study what factors facilitated the adoption or rejection of Twitter as an English learning tool and how successful its adoption is. Furthermore, the properties of Twitter itself affect its rate of adoption in the society the variances in the rate of adoption of Twitter could be explained by the five attributes.

The second research question discussed the different characteristics of each adopter category. In order to answer this question, the researcher divided it into two parts. The first part deals with the demographic differences and the second part deals with the attributes of Twitter. When the gender factor has been studied to determine their influence on the decision to adopt Twitter by EFL Saudi learners, the findings revealed there were no statistically significant differences among Twitter adopters and non-adopters regarding gender. Both male and female participants seem to be willing to use Twitter once it becomes available and on the other hand, they mostly do not plan to use it as a learning tool. This is not necessarily interpreted as negativity towards using Twitter, but rather, a sense of different purpose for the use of Twitter (e.g. more as a social media and fun rather than academic learning tool). When we looked at the place of study, we found that more students abroad are inclined to adopt Twitter as a tool to improve their English (L2) proficiencies and this is likely due to the fact that students studying in the USA, UK, Canada or Australia tend to become immersed in that culture where social media is a big part of daily life in these countries. Furthermore, when the age factor has been analyzed, the results showed that the lower age groups (18-20 and 21-30 years old) tend to be more adapting to the digital media and tools compared to the older age groups of 30-35 years old. This is likely to be because newer generations are more digital natives than the older ones. This is an indication of the popularity of social media website Twitter among this age that the youth's rising interest in using Twitter. Moreover, English language proficiency was statistically significantly different among Twitter adopters and non-adopters. The findings revealed that the higher the proficiency level (intermediate and advanced), the more inclined the participants to adopt the use of Twitter as a learning tool. This is likely because intermediate and advanced English (L2) learners tend to explore more avenues and opportunities to improve their level of English including social media such as

Twitter. This proved that language barrier could hinder lower level EFL Saudi English learners from accepting Twitter as an English learning tool.

The second part discussed the main five attributes of an innovation that affect the rate of adoption by individuals. These variables included: relative advantage, compatibility, complexity, trialability and observability. Individual analyses of each construe showed that the compatibility attribute was a weak predictor, while Relative advantage, Simplicity, Trialability and Observability were considered the strongest predictors and most influential attribute regarding Twitter adoption. We can confidently deduce that the participants had mainly positive views towards using Twitter and believe that Twitter is a vital tool in improving their English as L2. (see Table 7).

The third research question discussed the adoption categories of the Saudis EFL students using Twitter as English learning tool. The rate of adoption was investigated and the findings revealed that the rate of adoption was not high, reaching only approximately 43%, including those who are innovators, early adopters and early majority. More than half of the participants 57% including those who are laggards and late majority are skeptical of using Twitter as an English learning tool. A third of the participants felt so strong about Twitter that they indicated that they would start using it instantly. The difference in the adoption of Twitter can be attributed to different factors. Rogers (2003) identified variables that affect an innovation's rate of adoption including factors influencing peoples' decision whether to adopt the innovation, the type of innovation-decision, the nature of communication channels that diffuse the innovation to a social system, and the extent to which promotional efforts are made to diffuse the innovation.

5. Conclusion

Looking at the analysis of the gathered data in this study, one can conclude that the rate of adoption was not high reaching only approximately 43%, including those who are innovators, early adopters and early majority. More than half of the participants 57% including those who are laggards and late majority, are skeptical of using Twitter as an English learning tool. Having said that, it was noticeable that the students who reported their neutral or negative opinion were either still not sure how to use Twitter as a learning tool or, they might like the use of it only under certain conditions. On a general level, it is important to notice that there are students who showed positive perception towards Twitter. Therefore, Twitter has been found to be an accepted English learning tool that promote learning English among the EFL Saudi learners.

5.1 Limitations and Recommendations of the Study

The most significant limitation of the study was the sample population of the study investigated at the ELI. As the education system in Saudi Arabia segregates female students from male students and co-education is not permitted, the researcher of the present study had access to female participants only. The study would have been more effective if the study was conducted on a mixed population. Further research could investigate this issue on both

genders at the ELI. Furthermore, the experimental study could focus on the teachers' perception and attitudes towards the use of Twitter in language teaching environment.

5.2 Implications of the Study

The results of this study give a clear indication of a general acceptance of the Saudi EFL students towards the utilizing of Twitter as an English learning tool. This suggests that Twitter could be made part of the ELI curriculum as supplementary source of information in the teaching and learning of English as a foreign language. This can be applied through conducting further experimental studies with the intent to explore the effects of integrating Twitter on EFL students linked to subjects and concepts presented in the classroom. The researcher of the current study suggests that the future research should reduce anxiety and increase confidence through presenting the authentic materials available on Twitter. It is also anticipated that the future study could be in favor of the teachers because Twitter can be beneficial in numerous ways including illustration of concepts, presenting alternate viewpoints, stimulating learning activities etc. Teachers should be encouraged to use learning technologies in their classrooms because, in this generation of digital natives, using technology is not merely a prop in the teachers' bag of tricks, but a necessity to foster and capture the attention of the fast-paced attention span of the students of the digital age (Prensky, 2001). Teachers should also be well trained so that they will be able to use these modern amenities effectively and efficiently. Additionally, a short workshop to be provided by the institution to teachers and students to familiarize them with this technology in order to apply it well in the teaching-learning process.

References

- Acar, A., & Kimura, N. (2012). Twitter as a Tool for Language Learning: The Case of Japanese Learners of English. Paper presented at The Eighth International Conference on eLearning for Knowledge-Based Society, 23-24 February, Thailand. Retrieved from <http://www.elearningap.com/eLAP2011/Proceedings/paper24.pdf>
- Ahmad, M. (2015). The Effect of Twitter on Developing Writing Skill in English as a Foreign Language. Arab World English Journal. Retrieved from <http://www.awej.org/images/AllIssues/Specialissues/CALLjuly2015/10.pdf>
- Al Zumor, A., Al Refaai, I., Eddin, E., & Al-Rahman, F. (2013). EFL Students' Perceptions of a Blended Learning Environment: Advantages, Limitations and Suggestions for Improvement. *English Language Teaching*, 6(10), 95. <https://doi.org/10.5539/elt.v6n10p95>
- Al-Naji, A. (2013, September 9). The successful experience of faculty members in the program of technical week. Al-jazeera.
- Alotumi, M. (2015). Facebook Interaction (FBI) and essay writing pre-task: Yemeni EFL students' perceptions, attitudes and challenges. In G. Pickering & P. Gunashekar (Eds), *Innovation in English Language Teacher Education: Selected papers from the fourth International Teacher Educator Conference, Hyderabad, India* (pp. 125-133). New Delhi, India: The British Council. Retrieved from <https://goo.gl/RDRfBN>

- Alshahrani, K., & Al-Shehri, 2012. Conceptions and responses to e-learning: The case of EFL teachers and students in a Saudi Arabian university. *Monash University Linguistics Papers*, 8(1), 21-31.
- Althemairy, A. (2013, February 22). Million users of social networks in Saudi Arabia without the benefit of learning. Aleqtisadiah News.
- Alwagait, E., Shahzad, B., & Alim, S. (2014). Impact of social media usage on students' academic performance in Saudi Arabia. *Computers in Human Behavior*, 51(Part B), 1092-1097. <https://doi.org/10.1016/j.chb.2014.09.028>
- American Psychological Association. (1972). Ethical standards of psychologists. Washington, DC: American Psychological Association.
- Asiri, A., & Alqarni, M. (2015). Twitter as a Tool for English Learning: The Case of High Schools Students in Jeddah. King Abdul-Aziz University, Faculty of Arts and Humanities, Department of European Languages & Literature.
- Aydin, S. (2014). TWITTER AS AN EDUCATIONAL ENVIRONMENT. Retrieved 26 February.
- Baker, T. J. (2012), Connectivism for EFL Teachers: A Theory of Learning for A Digital Age. CreateSpace Independent Publishing Platform.
- Bandura, A. (1977). Social learning theory.
- Biggs, J. (2003). Aligning teaching for constructing learning. The Higher Education Academy.
- Borau, K., Ullrich, C., Feng, J., & Shen, R. (2009). Microblogging for Language Learning: Using Twitter to Train Communicative and Cultural Competence. In M. Spaniol, et al. (Eds.), *Advances in Web Based Learning – ICWL* vol. 5686 of the series *Lecture Notes in Computer Science* (pp 78-87). Berlin: Springer-Verlag. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.397.5164&rep=rep1&type=pdf>
- Buckingham, A., & Saunders, P. (2004). *The survey methods workbook: From design to analysis*. Cambridge: Polity Press.
- BusinessDictionary.com (2016). What is Twitter? definition and meaning. Retrieved 27.
- CITC (2012). *The ICT Sector in the Kingdom of Saudi Arabia*. Communication and information technology commission, Saudi Arabia.
- Coffin, T., & Fournier, J. (2015). *Social Media in the Learning Setting*. *Information Technology (June Edition)*, University of Washington, 1-4.
- Deci, E. L., & Ryan, R. M. (2010). *Self-determination*. John Wiley & Sons, Inc.
- Dogoriti, E. (2015). Towards an Instructional Tool for the Teaching of English as a Second/Foreign Language (ESL/EFL) in Higher Education. *ICICTE 2015 Proceedings*, Kos, Greece.

- Dornyei, Z. (2007). *Research Methods in Applied Linguistics*. UK: Oxford University Press.
- Dugan, L. (2012). Twitter to surpass 500 million registered users on Wednesday. All Twitter, The Unofficial Twitter Recourse.
- Dunlap, J. C., & Lowenthal, P. R. (2009a). Horton hears a tweet. *EDUCAUSE Quarterly*, 32(4).
- Dunlap, J. C., & Lowenthal, P. R. (2009b). Tweeting the night away using Twitter to enhance social presence. *Journal of Information Systems Education*, 20(2), 129-135.
- Dunn, L. (n.d.). *Teaching In Higher Education: Can Social Media Enhance The Learning Experience?* University of Glasgow.
- Educause. (2007). "7 things you should know about Twitter", July. Retrieved from <http://www.educause.edu/ELI/7ThingsYouShouldKnowAboutTwitt/161801> (accessed 17/05/2012).
- Fatany, S. (2012, July 28). The influence of Saudi social media. *Saudi Gazette*.
- Fraenkel, J. R., & Wallen, N. E. (2003). *How to design and evaluate research in education* (5th ed.). Boston: McGraw Hill.
- Greenhow, C., & Gleason, B. (2012) Twitteracy: Tweeting as a New Literacy Practice. *The Educational Forum*, 76(4), 463-477.
- Judson, E. (2006). How Teachers Integrate Technology and Their Beliefs about Learning: Is There a Connection? *Journal of Technology and Teacher Education*, 14(3), 581-99. Retrieved from https://www.learntechlib.org/index.cfm?fuseaction=Reader.ViewAbstract&paper_id=6046
- Junco, R., Heiberger, G., & Loken, E. (2010). The Effect of Twitter on college student engagement and grades. *Journal of Computer Assisted Learning*. August 2010 Blackwell Pub. Ltd.
- Kalton, G., & Schuman, H. (1982). The effect of the question on survey responses: A review. *Journal of the Royal Statistical Society. Series A(General)*, 42-73.
- Kassens-Noor, E. (2012). Twitter as a teaching practice to enhance active and informal learning in higher education: The case of sustainable tweets. *Active Learning in Higher Education*, 13(1), 9-21.
- Kutbi, A. I. (2015). How Undergraduate Female Students in the Kingdom of Saudi Arabia Perceive Social Media as a Learning Tool: An Exploratory Study.
- Livingstone, S. (2004). Media literacy and the challenge of new information and communication technologies. *The Communication Review*, 7(1), 3-14.
- Lutz, S., & Huitt, W. (2004). Connecting cognitive development and constructivism: Implications from theory for instruction and assessment. *Constructivism in the Human Sciences*, 9(1), 67-90.

- Mahdi, H. S., & El-Naim, M. E. M. (2012). The Effects of Informal Use of Computer-Mediated Communication on EFL Learner Interaction. *CS Canada Studies in Literature and Language* 5 (3). <https://doi.org/10.3968/j.sll.1923156320120503.801>
- Maslow, A. H., Frager, R., & Cox, R. (1970). *Motivation and personality* (Vol. 2). J. Fadiman, & C. McReynolds (Eds.). New York: Harper & Row.
- Maslow, A. H., Frager, R., & Cox, R. (1970). *Motivation and personality* (Vol. 2). J. Fadiman, & C. McReynolds (Eds.). New York: Harper & Row.
- Matzen, N. J., & Edmunds, J. A. (2007). Technology as a Catalyst for Change: The Role of Professional Development. *Journal of Research on Technology In Education*, 39(4), 417-430. Retrieved from <https://pdfs.semanticscholar.org/8cfd/00047f1c55c72933e380687a7dbff0848335.pdf>
- Matzen, N. J., & Edmunds, J. A. (2007). Technology as a Catalyst for Change: The Role of Professional Development. *Journal of Research on Technology In Education*, 39(4), 417-430.
- Naeini, M. B. (2012). Meeting EFL Instructors' Needs through Developing Computer Assisted Language Learning (CALL). *International Journal of Language Teaching and Research* 1(1), 9-12. Retrieved from <http://researchpub.org/journal/ijltr/number/vol1-no1-2.pdf>
- Nehal, R. (2015). Technology-mediated language teaching through a Kindle-based mobile learning initiative in India: the access experience. In G. Pickering & P. Gunashekar (Eds), *Innovation in English Language Teacher Education: Selected papers from the fourth International Teacher Educator Conference, Hyderabad, India* (pp. 267-274). New Delhi, India: The British Council.
- Prensky, M. (2001). Digital natives, digital immigrants. *MCB University Press*, 9(5), 1-6.
- Rogers, E. M. (1995). *Diffusion of innovation theory*.
- Rogers, E.M. (2003) *Diffusion of innovations*. New York: Free Press.
- Ryan, R.M., & Deci, E.L. (2000). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology*, 25, 54–67. <https://doi.org/10.1006/ceps.1999.1020>
- Sahin, I. (2006). Detailed review of Rogers' Diffusion of Innovations Theory and educational technology-related studies based on Rogers' theory. *The Turkish Online Journal of Educational Technology (TOJET)*, 5(2), 14-23. Retrieved from <http://tojet.net/articles/v5i2/523.pdf>
- Scardamalia, M., & Bereiter, C. (1994). Computer Support for Knowledge-Building Communities. *Journal of the Learning Sciences*, 3(3), 265-283.
- Sekiguchi, S. (2012). Investigating the effects of Twitter on developing a social learning environment to support Japanese EFL students' self-regulated learning. *ICT for Language*

Learning International Conference, 15-16 November, Florence, Italy. September 4, 2014. Retrieved from http://conference.pixel-online.net/ICT4LL2012/common/download/Paper_pdf/279-IBT56-FP-Sekiguchi-ICT2012.pdf

Small, G., & Borgan, G. (2009). *iBrain: Surviving the Technological Alteration of the Modern Mind*. Harper Collins Publishers.

Social Media. (2014). In Oxford Dictionaries Online. Social media: definition of social media in Oxford dictionary (British & World English).

Social Media. (2014). In Webster Online. Retrieved December 13, 2014, from <http://www.merriam-webster.com/dictionary/social%20media>

Stewart, B. (2015). Open to influence: what counts as academic influence in scholarly networked Twitter participation. *Learning, Media and Technology*, 40(3), 287-309.

Stoller, F. (1994). The Diffusion of Innovations in Intensive ESL Programs. *Applied Linguistics*, 15(3), 300-327. <https://doi.org/10.1093/applin/15.3.300>

Sun, P. C., Tsai, R. J., Finger, G., Chen, Y. Y., & Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & education*, 50(4), 1183-1202.

The Online Project. (2015), Reintroducing Social Saudis: How Saudi's Social Media Behaviour Changed Over the Past Two Years. Retrieved from http://theonlineproject.me/files/reports/Reintroducing_Social_Saudis_English.pdf

Väljataga, T., & Fiedler, S. (2009). Supporting students to self-direct intentional learning projects with social media. *Educational Technology & Society*, 12(3), 5869. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.178.5833&rep=rep1&type=pdf>

Warford, M. K. (2005). Testing a diffusion of innovations in education model (DIEM). *The Innovation Journal*, 10(3), 32. Retrieved from https://www.innovation.cc/peer-reviewed/warford_test_diffusion_6af_v10i3a7.pdf

Wegerif, R. (1998). The social dimension of asynchronous learning networks. *Journal of Asynchronous Learning Networks*, 2(1), 34-49.

Yaseen, B., & Melhem, M. (2014). Impediments to the use of e-learning faced by teachers in the Educational Directorate of the first Irbid. *The Palestinian Journal for Long Distance Learning*, 5(3). Retrieved from <http://www.hraljournal.com/Page/20%20Muhannad%20Al-Shboul.pdf>

Zhang, Z., & Kenny, R. (2010). Learning in an online distance education course: Experiences of three international students. *The International Review of Research In Open And Distance Learning*, 11(1), 17—36. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/775/1481>

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>)