RAIS RESEARCH ASSOCIATION for INTERDISCIPLINARY STUDIES
JUNE 2020

DOI: 10.5281/zenodo.3909893

The Influence of the Context on Adopting Mobile Games in Learning EFL Vocabulary at a Saudi Female Class

Dr. Madhawi Gh. Alharbi

English teacher, Saudi ministry of education, Saudi Arabia, m.alharbi30@yahoo.com

ABSTRACT: Learning English is a significant issue worldwide. As Saudi students experienced a difficulty in learning new English words, new teaching methods have been introduced including mobile games. Though we live in a global world where learning and teaching issues became similar, different contexts affect the process of using mobile games in formal learning and this study's purpose is to investigate the influence of the Saudi context on adopting mobile games in formal female classes. Total of 40 research participants, consisting of 33 students, 4 EFL teachers, 2 school principals and one EFL educational supervisor participated in this study. A mobile game was designed and programmed for the sake of this study. Data were collected from different sources, namely, interviews, focus group discussions and self-reflective essays. Collected data were analyzed qualitatively to yield the study's results. Results showed that the Saudi social context has a significant influence and an important role in adopting mobile games in female classes. These results will assist other researchers in mobile games' developers, educationalists in understanding the role of social context over adopting new teaching methods and in choosing or programming games for learning English or any other foreign language.

KEYWORDS: mobile games, context, EFL in Saudi

1. Introduction

Teaching English can be a challenge for both educators and learners themselves (Hashemi and Azizinezhad 2011; Khan 2011). For learners, formal instruction can be difficult and even counterproductive; now, a body of research shows that both teachers and learners benefit from less formal teaching methods, and students' tensions in learning language can be reduced (Wan 2017). As there is a general trend to integrate new technological aids, other than personal computers, for language learners, and reinforced by personal experience, looking for a portable, light, motivating and easy-to-use approach made the concept of mobile games immediately attractive. This study is a continuation of other studies of integrating games and technology in teaching, but the focus is not the same. Closest to the interests of this researcher is the study conducted by Ulfa (2012), which investigated the effect of using mobile games in teaching English vocabulary with two groups, experimental and control, and reported favourable results for the experimental group. However, the influence of context on mobile games adoption was not investigated. Studies like those of Nassuora (2012), Alshumaimeri (2008) investigated the effect of using technology, such as computers or mobile devices, in education, yet these studies focussed on using either computers or mobiles on learning outcomes, while the current study investigated the effects of Saudi context on using mobile games. At the contextual level, according to the researcher's best knowledge, the present study is the first to investigate the influence of Saudi context on using mobile games in learning EFL vocabulary in Saudi schools.

Context is one of the most important factors that affect the process of learning vocabulary. Dey (2001) defines context as "any information that can be used to characterize the situation of an entity. An entity is a person, place, or object" (p.5). The context of learning provides the environment for the interaction between learners, instructor, materials and content (Hawk and Shah 2007). In other words, context is very important in teaching vocabulary, as learners require the proper context for creating the connection between form and meaning. Arguably, circumstances and methods, which learners experience through their learning process, positively affect their learning outcomes. That is, students remember words more efficiently and easily because of the surrounding circumstances and atmosphere (Ur 1996).

2. Cultural Context of the Study: An overview on mobile learning in the Saudi educational system

The Kingdom of Saudi Arabia was established in 1932 and, since then, education has developed remarkably in terms of the number of students, schools, curricula and education policy (Hamdan 2005). The official language in Saudi Arabia is Arabic, and Islam is the official religion (ibid.). According to Smith and Abouammoh (2013), the Saudi educational system is focused on four principles: "the teaching of Islam, a centralised system of control and educational support, state funding (thus education is free at all levels in Saudi Arabia) and a general policy of gender segregation" (p.2). Regarding curriculum content, a high proportion is assigned to religious subjects and the method that is used by teachers involves rote learning (Smith and Abouammoh 2013). A gender-segregated system still applies in Saudi schools and the government's contribution to towards girls' education is equal to that of males, in terms of funds, curricula and operating systems. As the access to schools in Saudi is exclusively to female or male schools, it is open only to researchers of the same gender as the students. Thus, there is minimal research in Saudi Arabia that addresses gender-related differences in the influence of the Saudi context on mobile learning. The educational system in Saudi Arabia currently gives the teaching of English a high priority, since it is the only accredited foreign language in the Saudi educational system. One of the Saudi Government's efforts toward education in general, and teaching English in particular, is its endeavour to integrate technology at all school levels (Saqlain, Al-Qarni and Ghadi 2013). The outlook for the Saudi mobile technology market is encouraging, with the number of Internet and mobile users increasing. According to the Saudi Communication and Information Technology Commission, the percentage of mobile penetration at the end of 2017 was 138.7% (The Saudi Communication and Information Technology Commission, 2017), bearing in mind the total population of Saudi citizens and residents is 33,413,660 (The Saudi General Authority of Statistics, 2018). The percentage of Internet users among this number of mobile users is 88.8% (The Saudi Communication and Information Technology Commission, 2017), with total mobile internet subscriptions of 28.2 million. These numbers and percentages provide an overview of the nature of Saudi society and its involvement in the world of the Internet and mobile use. Education is no exception and technology integration in education in Saudi Arabia expanded in the last few decades, and E-learning materials are supported by both teachers and students (Alshumaimeri 2008).

Given the rapid advancement in technology worldwide, mobile learning is not something new in the Saudi educational system (Chanchary and Islam 2009). Recently mobile learning entered the general education level by introducing official virtual classes that serve all levels of education in Saudi Arabia (ibid.). Though mobile resources were introduced officially for the general level of education, they were intended to be used mainly outside classes, for people in the remote parts of Saudi Arabia or outside Saudi Arabia who wish to obtain a Saudi degree (ibid.). That is to say, although there have been advancements in the introduction and adoption of mobile learning in Saudi Arabia, the investigation on the influence of Saudi context on the adoption of mobile games in formal Saudi education is absent.

In summary, the research detailed above shows that despite overall increased investment of educational effort and resources, Saudi context has not been tested as an influencing tool in using mobile games in classes. This situation thus needs to be explored and through the creation of new knowledge this study may provide new strategies that can help in improving educational mobile games design and adoption.

At issue is not 'why' caused this effect; rather, 'how' can this study's results contribute to other, global research in this field. It shows how the results of this study contribute to the changing world of teaching foreign languages in both Saudi Arabia and the other countries, in relation to major global developments and trends. Working at both an individual level and in the skills development area, with the participation of educators, teachers and students in the field, this study explores the influence of Saudi context on using mobile games in learning vocabulary. This

focus makes the study unique and enhances its contribution to the field of foreign language teaching and learning.

3. Methodology

This study's literature review led to the study's question: how does the Saudi context influence the use of the mobile game in Saudi female classes as a serious tool of teaching in the eyes of all relevant members of the Saudi educational system: teachers, principals, supervisors and students? And to answer this question this study adopted the Interpretivism paradigm as Interpretivists view reality in the world as it is seen by the individual, and it depends on one`s experiences and researcher's interpretations (Nudzor 2009; Creswell 2003). Thus, Interpretivism relies on qualitative data in its inquiry (Creswell, 2003; Johnson, Onwuegbuzie and Turner 2007; Nudzor 2009; Scotland 2012) and the influence of context in the current study necessitated qualitative data. Qualitative data are believed to capture the cultural as well as contextual aspects in a study (Patton 1999). Mack et al. (2005) noted that the benefit of qualitative data incorporation "is the culturally specific and contextually rich data it produces" (p.vi). The design of this current study is an exploratory study that aims to explore a new area in the field which is the influence of context over the adoption of a mobile game in learning. The data collection methods are described next.

3. 1. Data collection methods

3.1.1. Focus group discussions

Focus groups are accepted widely in research (Krueger and Casey, 2014), as they provide "believable results at reasonable costs" (Wilson, 1997, p.209). Focus groups, according to Mack et al. (2005), are used to understand what people think of a certain product, which in the present study is the mobile game. The current study used focus groups to identify the nature of applying mobile games in Saudi formal classes. Focus group discussions were conducted with participating teachers and students in small groups of 15 participants each time.

3.1.2. Interviews

In qualitative inquiry, interviews represent a "primary" data collection method (Jamshed, 2014). Interviews are sensitive and powerful in capturing people's real-life experiences (Kvale, 2006). Using interviews in this study shed light on participants' experiences and their lives in their own words and descriptions. According to Alshenqeeti (2014), interviewing as a data collection method allows the addition of the social aspect and personal experience of participants to the data collected, which is the goal in this study. Understanding participants' experience, as in this study, is new in the field of Saudi education. It is important in adjusting future implementations as well as providing an insight into the context's influence to be taken in mind in future studies. The complexity of the social phenomena in this study make the semi-structured interview a good method to grasp experiences, as it "offers great potential to attend the complexity of a story" (Galletta, 2013, p. 9). Accordingly, this is the interview style adopted by this study. Thematic analysis was used to analyse the collected interview data as it is considered by Braun and Clarke (2006) to be a "foundational" method in analysing qualitative data.

3.1.3. Self-reflective essays

As noted by Mason (2017), the decisions of qualitative inquiry are "ongoing and are grounded in practice" (p.24). After conducting a number of focus group discussions with participating students, the data collected did not reveal much about their experience in mobile game learning, so a decision was made to include self-reflective essays in the data collection methods. Self-reflective essays were needed as a supportive method (Alebaikan 2010), which can clarify unrevealed areas in the process of learning by playing the mobile game in a Saudi class, such as the effect of context. Document analysis was adopted to analyse the data collected from the

students' reflective essays. Document analysis, like focus group or interview transcripts, includes coding content into themes which are then analysed (Bowen 2009).

3.2. Population and sample of the study

The population in the present study is defined as all EFL learners, and the target population is defined precisely as second level students in the secondary stage in Saudi female schools, and the sample is one such school. The present study adopted a convenience sampling technique in which participants are chosen from relatively easily-accessed groups (Onwuegbuzie and Collins 2007). Second level students in the Saudi school were chosen, and the approval to conduct the study there in cooperation with the school's administration and staff was taken from the Saudi training sector in the region. Choosing participants from this school derived from its location in the city, in order to make it easier for collecting self-reflective essays, since this process takes a long time, and this enabled speedy and constant data collection methods throughout the study's implementation. A class of 33 students participated in the current study after obtaining required ethical procedures, 4 EFL teachers, 2 schools' principals and one EFL supervisor participated as well.

3.3. The Study's intervention, The English Bee, and the study's application

A game was designed depending on the Saudi curriculum for the secondary stage, second grade, after counting all the targeted vocabulary in the targeted chapter in the study. After that, number of vocabularies were chosen to be designed in the game's tasks. The game, The English Bee, was designed to suit the Saudi context as the character was respected and valued in the Islamic tradition. The story of the game is about a bee which is trying to collect the target word's letters. Random letters including the targeted word's letters come across the bee and the player try to avoid the letters that do not belong to the word's spelling by pressing the ''jump'' button and at the same time the player try to collect the word's letters. The target word appears at the beginning of the task before it disappears and the letters start to come cross the bee. This game was designed after conducting number of focus group discussions with the teachers and students to collect their game's preferences and expectations. Students were asked to play the game inside the class with their teacher's supervision to learn the new words' written form.

4. Results and discussion

An analysis of the data collected from the previously mentioned methods resulted in the following findings of this study which showed that the Saudi context has a major influence over adopting mobile games in female classrooms. Indeed, in this pioneering study, this context is crucial to investigating a learning and teaching phenomenon that is rarely discussed in the Arab world, yet impacts at several levels of the pedagogical process.

The Saudi context affected the adoption of mobile games in formal learning significantly, as found in the data collected from participating students, teachers, principals and EFL supervisor. Data collected showed that the Islamic religion plays an important role in mobile games adoption in Saudi schools, as all participants in this study expressed their alliance with Islamic beliefs and their total rejection to what does not align with these beliefs, as Islam is the religion of the country (Hamdan 2005). Education in Saudi is built on four principles, and one of them is the teaching of Islam (Smith and Abouammoh 2013). No previous study, as far as the researcher knows, has investigated the effect of Islam on mobile games' adoption, and this study attempts to shed light on the influence of this context, including especially religious beliefs. Data showed teachers' rejection of the use of mobile applications or games that includes: music; unacceptable Islamic figures such as pigs (pork); female figures that are not dressed appropriately; or two players' characters appearing at the same time, where one of them is male and the other is female (any kind of such relationships in the applications). In his online article, 'When religion and games intersect—and how it often goes badly', Thompson (2009) referred to the great opposition of Muslim people to some Sony video games, which they considered as

inappropriate and having figures offensive to Muslims. Participants in this study are no exception, as they reject any game that has features unacceptable to the Islamic community.

Relying on the data collected, the effective entities in the Saudi context were arranged in the following Figure 1, according to their power of influence, as there is more than one source of power that affects the adoption of mobile games in the Saudi context and these entities included objects and people.

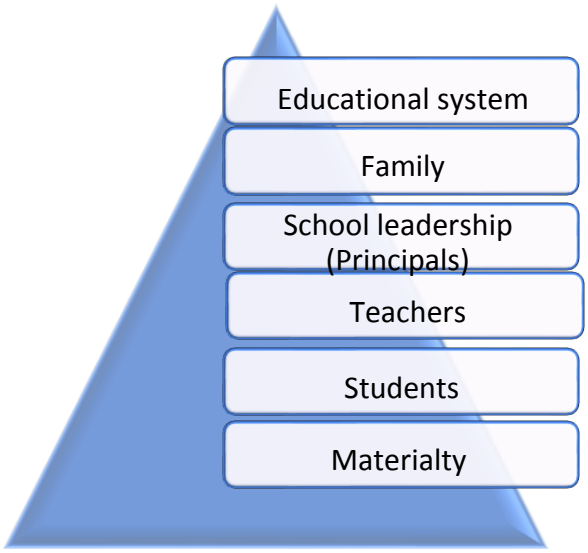

Figure 1. The effective powers in the Saudi context over mobile games learning

As noted by Dey (2001), context includes any information that helps in describing the situation of an entity, and it includes people, places and objects. This previous Figure, was generated using data in this study about the hierarchy of the effective powers over mobile games learning in the specific context of this study at a female Saudi context. It is organised from top to bottom, with the most effective power on the top. It shows that the most effective power in this study's context, in terms of adopting mobile games in formal education, is the educational system, as the centralised system has the power to order, allow or even refuse the adoption of new techniques or methods. The centralised system is one of the four principles on which the Saudi educational system is focused, according to Smith and Abouammoh (2013). Teaching staff (teachers, Principals and educational supervisors) follow the Ministry of Education's regulations at every step in the teaching process.

The next effective power is families. Families represent a major influence in the Saudi context. Families acceptance of the teaching method would guarantee its success in the Saudi community, as this study could not be completed without their acceptance in the first place. When the educational system regulates the adoption of new techniques, its success depends on families' acceptance and support. Families in Saudi society have great power over their children, and this power includes their educational choices. When families reject a new intervention, the adoption will not succeed as planned. Participating students referred to their families' role in their reflective essays clearly. Students also disliked the games or mobile applications if they thought it would take them away from being with their families, as shown in student 13's quote from her reflective essay that they do not like games which would "take us away from our parent's service or our religious duties". Some students in this study said that their families had strong negative attitudes towards using mobiles in general and mobile games specifically in education, which made it difficult for their daughters to practise learning by playing the game at home, as parents considered that games were not serious learning and that their daughters were wasting their time. Similarly, some research has found that families have negative perceptions and attitudes towards using games, especially video games, inside classrooms (Bourgonjon et al. 2011). Saudi families'

involvement in their children schools' activities is weak, as qualitative data showed, and this might be a result of the separation between families and schools. This does not help in the implementation of recent educational reform actions (adopting new curricula, new learning approaches and adopting technology), since there is no cooperation between the two entities. Principals of both schools A and B did not mention any cooperation between the school's administration and families in designing or choosing the learning agenda for the academic year, and the meetings that they hold every year between the school's staff and parents (mothers only, as this study was conducted in female schools) are limited to discussion of their daughters' academic achievement and behaviour in general. This finding is consistent with that of AlMakadma and Ramisetty-Mikler (2015), who have found that Saudi parental involvement in their children's school activities is low. In addition, the economic status of families may also affect the adoption of learning by using mobile games, since the capacity to afford the purchase of mobile devices is central to this proposed learning method. It is worth noting that this issue of the economic status of Saudi families and its impact on mobile games' adoption has not been addressed before in the field of mobile learning studies or FL learning studies, to the best knowledge of the researcher, and needs further research.

Next, at the school level, the most important people in mobile game adoption are school Principals. It was found in this study that a school Principal can facilitate or hinder mobile game adoption, according to her beliefs, motivation and her willingness to adopt new methods. When the Principal is motivated, she will encourage and facilitate the adoption of mobile games in her school among her teaching staff and students. The lack of support and vision of school leadership and educational systems was considered one of the challenges that may face teachers and educators in adopting new methodologies, as noted by AL-Bataineh and Brooks (2003). This finding is consistent with what was noted by many studies such as Rekkedal and Dye (2007); Kukulska-Hulme (2007) and Traxler (2007), that lack of leadership might be one of the reasons behind the difficulty in adopting mobile learning (including mobile games) in schools. Some studies on the relationship between Principals' leadership styles and teachers' motivation have found that staff motivation, well-being and satisfaction are influenced to a great extent by their Principals' leadership (Robangel, 2017), which support this study's finding that leadership is an influential entity in adopting mobile games in formal education.

The next three levels in the power structure outlined in Figure 1 are teachers, students and materiality respectively. Since teachers govern the mobile game adoption process, their adopted teaching approach and practices represent a major axis in the current study. Because this role of the teacher is so crucial and extensive, discussion of this influential entity takes place in a separate section below, and the roles of students and materiality will be explored first. Leaving aside teachers for the moment, then, the fourth influential entity is the group of students who are receptive to teaching methods. The students' motivation will help in mobile game adoption, but they appear to be powerless in the teaching or learning decision-making process. Students do not participate actively in the learning/teaching process in terms of choosing curricula, learning objectives, teaching/learning methods, or learning agenda. Participating students in this study gave their consent to participate in the study, as they were involved voluntarily. Students cannot involve themselves actively in the application of mobile learning in formal Saudi schools, since they are not allowed to bring their own devices to the school. This might be a result of the centralised system of Saudi education, which applies the same rules over all Saudi schools in all Saudi regions equally, with some exceptions for some of the private schools that may allow their students to bring their devices. These schools, mentioned previously, do not share this regulation publicly or have it referenced in their policy, as it does not align with the general policy of the Saudi formal education (that proceeds to the university level). Though participating students showed very positive attitudes in the data collected towards using mobile games in learning, they mentioned that they had not used it before in formal learning. Integrating technology is believed to be supported in Saudi schools by both teachers and students, as noted by Alshumaimeri (2008).

The students' role in adopting mobile games in formal education was missed in studies like Frohberg, Goth and Schwabe (2009); Lee et al. (2016); Sung, Chang and Liu (2016) and Ulfa (2012), where students' achievement was the focus of their studies, completely overlooking any student role in mobile games adoption. The study carried out by Ulfa (2012) investigated the effect of using mobile games in teaching English vocabulary, however, this research design ignores and omits any information on the role of students in adopting mobile games.

The least influential entity found in the data collected was materiality, since all the aforementioned entities can affect it and control it. However, it was found that the physical environment does have some effect on mobile games' adoption in Saudi female classes. In this study, one of the reasons behind teachers' rejection of adopting mobile games was materiality. Materiality in this study refers to Internet connection, mobile devices, mobile application, classrooms, device size and space. Device size affected learners' choice, as they prefer small and light devices to perform tasks better. In this study it was found that 34% of the participating students who installed the game on the IOS platform used their iPads, while 66% of the students who used the IOS platform, installed the game on an iPhone (mobile device). This finding is supported by Sung, Chang and Yang (2015), who reviewed 44 peer-reviewed articles as well as dissertations, and found that smaller devices are more efficient and popular among students than desktops and laptops in language learning. The data collected also showed that Internet connection represented the biggest challenge for teachers as well as students in mobile learning. Participated teachers referred to their avoidance of any material that depends on an Internet connection, because of potential problems which may cause disturbances in the class and waste time. These technical problems, including Internet problems, according to AL-Bataineh and Brooks (2003), are challenges that may hinder the integration of technology in schools. Students in this study were aware of the problems that may face them when adopting mobile game learning. Student 6 referred to the difficulty in adopting mobile games, or mobile learning in general, for low income students who might lose or break their mobiles. If that happened, they would lose their learning materials without a chance of getting them back in the short-term, and this problem was also found by Wang (2005) and AL-Bataineh and Brooks (2003); that is, costs may hinder technology adoption. As noted above, this aspect needs further research.

The influence of gender segregation system cannot be reached in this study as Saudi schools are strictly gender segregated, therefore whether the findings around the use of mobile games in this all-female school study can be extrapolated to all-male schools is unclear, and requires a similar study conducted by a male researcher. As noted earlier, this researcher had no access to male schools. The question is whether there may be significant differences. For example, this study's data showed that the main obstacle in adopting mobile games learning in female schools was the existence of cameras in the devices, technical solutions such as devices without cameras or removing the camera software from the devices are available, and then the contextual factors between the two sectors may be equal. It is worth repeating that this study cannot address any other potential gender-related differences in mobile games learning since having access to both sectors is not permitted. The gender segregated system is one of the four principles that education policy in Saudi is built on, according to Smith and Abouammoh (2013).

Conclusion and recommendations

The effect of the Saudi context on mobile games adoption was investigated, and the results showed the significant influence of the Saudi context over mobile games adoption. The results showed that, regarding games, preferences are sensitive to issues such as Islamic values and Saudi cultural traditions. The adoption of mobile game is dependent on the decisions of educational policy makers in Saudi Arabia, since the Saudi educational system is a highly centralised one and this centralised system may hinder the effective adoption of mobile device use in Saudi female schools.

Accordingly, among the preliminary recommendations of the study are that more flexibility be given to teachers in choosing and deciding their teaching instructional methods. Students and educational school staff are ready to use mobile games in learning, with the results showing students' appreciation of the experiment, as well as teachers' recognition of the value of the experiment once they have tried it. Also, educating families is an important axis in mobile game adoption, since families represent a very powerful entity in the Saudi context. Further research on the gender related differences in using mobile games in learning is encouraged in the local context of Saudi and in the larger context or the world would help in acquiring the necessary knowledge to adjust the implementation of mobile games in learning.

References

AL-Bataineh, A., & Brooks, L. 2003. "Challenges, advantages, and disadvantages of instructional technology in the community college classroom." *Community College Journal of Research and Practice* 27(6): 473-484.

Alebaikan, R. 2010. *Perceptions of blended learning in Saudi universities*. PhD Thesis, University of Exeter.

AlMakadma, A., & Ramisetty-Mikler, S. 2015. "Student, school, parent connectedness, and school risk behaviors of adolescents in Saudi Arabia." *International Journal of Pediatrics and Adolescent Medicine* 2(3): 128-135. doi:https://doi.org/10.1016/j.ijpam.2015.09.004.

Alshenqeeti, H. 2014. "Interviewing as a data collection method: A critical review." *English Linguistics Research* 3(1):39-45.

Alshumaimeri, Y. 2008. "Perceptions and attitudes toward using CALL in English classrooms among Saudi secondary EFL teachers." *The JALT CALL Journal* 44(2): 29-66.

Bourgonjon, J., Valcke, M., Soetaert, R., De Wever, B., & Schellens, T. 2011. "Parental acceptance of digital game-based learning." *Computers and Education* 57(1): 1434-1444.

Bowen, G. 2009. "Document analysis as a qualitative research method. *Qualitative Research Journal* 9(2): 27-40.

Braun, V. & Clarke, V. 2006. "Using thematic analysis in psychology." *Psychology* 3(1): 77-101.

Chancary, F., & Islam, S. 2009. "Mobile learning in Saudi Arabia–prospects and challenges. Paper Presented at the *International Arab Conference on Information Technology* (ACIT' 2011).

Creswell, J. 2003. Research design: Qualitative, quantitative, and mixed methods approaches (2nd ed.). CA: Thousands Oaks: Sage.

Dey, A. 2001. "Understanding and using context." *Personal and Ubiquitous Computing* 5(1): 4-7.

Frohberg, D., Goth, C., & Schwabe, G. 2009. "Mobile learning projects–a critical analysis of the state of the art." *Journal of Computer Assisted Learning* 25(4): 307-331.

Galletta, A. 2013. Mastering the semi-structured interview and beyond. From research design to analysis and publication (1st ed.). USA: New York University Press.

Hamdan, A. 2005. "Women and education in Saudi Arabia: Challenges and achievements." *International Education Journal* 6(1): 42-64.

Hashemi, M., & Azizinezhad, M. 2011. Teaching English to children: A unique, challenging experience for teachers, effective teaching ideas. Procedia-Social and Behavioral Sciences, 30(1), 2083-2087.

Hawk, T., & Shah, A. 2007. "Using learning style instruments to enhance student learning." *Decision Sciences Journal of Innovative Education* 5(1): 1-19.

Jamshed, S. 2014. Qualitative research method-interviewing and Observation 5.4 (2014): 87–88. PMC. web. 24 apr. 2018. *Journal of Basic and Clinical Pharmacy* 5(4): 87-88.

Johnson, R., Onwuegbuzie, A., & Turner, L. (2007). "Toward a definition of mixed methods research." *Journal of Mixed Methods Research* 1(2): 112-133.

Khan, I. 2011. "Learning difficulties in English: Diagnosis and pedagogy in Saudi Arabia." *International Research Journals* 2(7): 1248-1257.

Krueger, R., & Casey, M. 2014. *Focus groups: A practical guide for applied research* (5th ed.). United States of America: SAGE Publications.

Kukulska-Hulme , A. 2007. "Mobile usability in educational contexts: What have we learnt?" *International Review of Research in Open and Distance Learning* 8(2): 1-16.

Kvale, S. 2006. "Dominance through interviews and dialogues." *Qualitative Inquiry 12*(3): 480-500.

Lee, H., Parsons, D., Kwon, G., Kim, J., Petrova, K., Jeong, E., et al. 2016. "Cooperation begins: Encouraging critical thinking skills through cooperative reciprocity using a mobile learning game." *Computers & Education* 97(1): 97-115.

Mack, L., Woodsong, C., Macqueen, K., Guest, G., & Namey, E. 2005. *Qualitative research methods: A data collector's field guide* (1st ed.). USA: Family Health International.

Mason, J. 2017. *Qualitative researching* (3rd ed.). London: Sage.

Nassuora, A. 2012. "Students acceptance of mobile learning for higher education in Saudi Arabia." *International Journal of Learning Management Systems* 1(1): 1-9.

Nudzor, H. 2009. "A critical commentary on combined methods approach to researching educational and social issues." *Issues in Educational Research* 19(2): 114-127.

Onwuegbuzie, A., & Collins, K. 2007. "A typology of mixed methods sampling designs in social science research." *The Qualitative Report* 12(2): 281-316.

Patton, M. Q. 1999. "Enhancing the quality and credibility of qualitative analysis." *Health Services Research* 34(5 Pt 2): 1189-1208.

Rekkedal, T., & Dye, A. 2007. "Mobile distance learning with PDAs: Development and testing of pedagogical and system solutions supporting mobile distance learners." *International Review of Research in Open and Distance Learning* 8(2): 33-53.

Robangel, C. 2017. "Leadership and motivation." In J. Marques, & S. Dhiman (Eds.), *Leadership today. Practices for personal and professional performance* 1st ed., pp. 217-228. Cham: Springer.

Saqlain, N., Al-qarniL, F., & Ghadi, N. 2013. "Are English language teachers in Saudi Arabia ready to integrate technology?" *Procedia-Social and Behavioral Sciences* 103(1): 146-153.

Scotland, J. 2012. "Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms." *English Language Teaching* 5(9): 9-16.

Smith, L., & Abouammoh, A. 2013. "Higher education in Saudi Arabia: Reforms, challenges and priorities." In L. Smith, & A. Abouammoh (Eds.), *Higher education in Saudi Arabia; achievements, challenges and opportunities* (1st ed., pp. 1-12). New York: Springer.

Sung, Y., Chang, K., & Liu, T. 2016. "The effects of integrating mobile devices with teaching and learning on students' learning performance: A meta-analysis and research synthesis." *Computers & Education* 94(1): 252-275.

Sung, Y., Chang, K., & Yang, J. 2015. How effective are mobile devices for language learning? A meta-analysis. *Educational Research Review* 16(1): 68-84.

Thompson, M. 2009. "When religion and games intersect and how it often goes badly." Retrieved 10/3, 2018, from https://arstechnica.com/gaming/2009/12/when-religion-and-games-intersectand-why-it-often-goes-badly/

Traxler, J. 2007. Defining, discussing, and evaluating mobile learning: The moving finger writes and having writ…. *International Review of Research in Open and Distance Learning* 8(2): 1-12.

Ulfa, S. 2012. Promoting vocabulary acquisition through mobile game for supporting second language learning. *Edu Tech Journal of Education and Technology* (1202).

Ur, P. 1996. *A course in language teaching: Practice and theory* (1st ed.). Cambridge: Cambridge University Press.

Wan, Y. 2017. "Drama in teaching English as a second language - A communicative approach." *The English Teacher* (2017): 13.

Wang, L. 2005. "The advantages of using technology in second language education." *T.H.E. Journal* 32(10): 38-42.

Wilson, V. 1997. Focus groups: A useful qualitative method for educational research. *British Educational Research Journal* 23(2): 209-224.