Chapter 48: Improving Academic Skills with the Use of Technology

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Abstract: This paper investigates the ways that technology, precisely the use of digital apps and websites, may be integrated in the English language classroom to enhance learning and to make the environment more effective for Saudi Arabian high schools' students. Currently, in Saudi Arabia, the education system lacks computers and other relevant technology in classroom. In some schools, there is no technology and in others, there may be limited access to computers. For the past eight years of my teaching career, this researcher seen first-hand that schools are often lacking in access to computers for students and teachers. As a result, this issue is obstructing the educational process, contributing to low educational student outcomes and the inability to communicate in English in situations requiring its use. To overcome this, technology can aid Saudi students' English language development in high school classrooms, achieve educational goals, and help in future career.

Introduction

Isaac Asimov once claimed, "I do not fear computers. I fear lack of them." I could not agree with this statement more. The reality is that technology is part of our life more than ever. Technology has additionally demonstrated its adequacy in language instructing which incorporates as a wellspring of inspiration and gives space for reliable learning. It streamlines access to instructive resources and progresses the knowledge proficiency. Since technology entered the field of education, learning is getting progressively adaptable and open. However, students collaborate with technology out of class, so coordinating the apparatuses into the classroom can help make the learning procedure more effective. Innovation rearranges the manner in which educators carry out their responsibilities, giving powerful approaches to manufacture a connection among instructor and learner .

Saudi Arabia School Technology in English Classes

Currently in Saudi Arabia, the education system lacks computers and other relevant technology in classroom. In some schools, there is no technology and in others, there may be limited access to computers. For the past eight years of my teaching career, I have seen first-hand that schools are often lacking in access to computers for students and teachers. As a result, this issue is obstructing the educational process, contributing to low educational student outcomes and the inability to communicate in English in situations requiring its use. For this, technology can aid student's English language development in high school classrooms, achieve educational goals, and help in future career.

Examples of Current Issues in English Classes

These above examples of lack of technological devices help to prove the problem I have identified of schools needing more access to technology in English classes. For example, in one school some of the school does not have a budget to provide English teachers devices such as a white board and a projector. It may seem like a teacher could work around this, buy the lack of proper technology makes it harder to teach. Additionally, some English classes do not even have the Internet to use when teaching or for students to access. Furthermore,

purchasing some needed equipment would be futile because of the fact that Internet accessibility is a problem in some classrooms. Another example of the way in which little to no technology affects a school English classroom is if students had 1:1 iPads to use when doing class assignments, students engagement would be much higher and would affect the academic outcomes. Finally, in my own classroom in Saudi Arabia, my students would benefit from having in-class laptops when we work on improving listening skills, just a native speaker learns Arabic by hearing it spoken. The technology will help me as a teacher to offer better English instruction and improve students skills.

Both students and teachers will benefit from greater access to technology in various ways. First, the students will learn English quicker and better. Secondly, the students also will be more prepared to enter the work force as English speakers in a global world, which is part of the Ministry of Educations 2030 Goal. Also, as the teacher, having more access to technology will assist my practice by creating a better classroom environment in which to achieve my instructional goals.

Conclusion

21st century students and teachers who use technology at home and in their personal lives should not walk into a classroom that looks 20th century. As a teacher, I often purchase and bring my own technology to the classroom. This can be a burden for teachers. Additionally, if a school is focused on the best learning environment for their students and the best teaching environment for their staff, in 2020 the education system should have a focused initiative on implementing technology in the classroom and providing the devices to do so. For this study, I am going to observe the access and use of technology at Junction City High School in Junction City, Kansas. After observing the ELL class and their use of technology, I will develop a plan to present to the Ministry of Education regarding the importance of securing technological devices for our Saudi Arabian classrooms.

Literature Review

In research, one must look to prior studies in order to build upon important research

and to then design and plan research that will affect the future. According to McKnight et al (2016), "The past decade has seen a strong focus in the United States on increasing the use of technology in the nation's schools" (p. 194). Modern technology is changing so rapidly that just as a teacher thinks they have software or an application figured out and are able to teach it to their students, they find it has already changed or morphed into another version or a completely different application has replaced the original one as the newest and best. The challenge in education technology is to build upon the great advances technology has made for use in schools by teacher and students, but also plan new and innovative ways to implement the technology into current classrooms .

With so much educational dialogue about which software or applications to use, an important consideration needs to be analyzed first. Schools and teachers cannot be concerned about what they "do" on a computer, if they have little access to technology (McKnight et al, 2016). In this literature review, the benefits of having access to technology for both students and teachers will be explored using evidence-based research.

Schools with Limited Technology Face Problems

One of the problems in schools is that teachers do not typically have access to technology to use in their curriculum and teaching and that some of them can be afraid of the unknown. Mcknight et al discuss this issue as they point out that "access to technology is an important first step in the digital conversion of school systems; however, for the conversion to be successful, it is critical to move the focus beyond the technology itself, to how technology enables teaching and learning" (2016, p. 194). Teachers like to be confident in what they teach and asking them to teach using software or applications can create mixed feelings. Some teachers can also be apathetic to implementing new ways of doing things. It is important for teachers to be trained in how to use the technology they would like to incorporate into their instruction. This includes basic training on how to use basic equipment such as white boards and projectors (personal communication, T. Harlow, March 2020.(

Additionally, class sizes can be large and room sizes can be small, or there may not even be a room that could be used for technology classes. Collin (1996) in his introspective essay on his experience with the Apple Classroom of Tomorrow (ACOT) project names narrow classroom space and the massive size of computers, teachers' reluctance to take the students to the laboratory, and lack of access to computers at home as influences that bound the rehearsal of technology in schools. This is a problem all over the world, in that schools that have many options and larger budgets also have more resources .

Finally, schools should be preparing students for their future careers and most careers in the 21st century will use varying forms of technology. Larson et al (2011) discusses the futures of today's students:

" As technology becomes even more prevalent in today's society, students need increased expertise in digital technologies (computers, electronic white boards, GPS, etc.). Of even greater importance is the need for students' ability to use technology to research, organize, evaluate, and communicate information. Twenty-first century teachers must carefully guide their students within technology-rich classrooms that present more complex and diverse learning opportunities than traditional classrooms" (Larson et al, 2011 .(

Improving Students' Grades

By addressing problems that schools face, educators can be a part of the solution. When schools in Saudi Arabia and the Ministry of Education place even more emphasis on the availability of and use of technology in the classroom, there will be several benefits. Students will learn more. Successful implementation was fostered by a strong school-wide vision focused on pedagogy over technology. The vision was streamlined, effectively communicated, and emphasized daily. School and district data showed a reduced number of course failures, increases on state test scores, and reduced disciplinary actions, students will be better prepared to be adult members of our society. According to Beth Chance et al (2007, p.13,(

Educators cannot forget that part of educating students is preparing them for life outside   the classroom, so even if the use of technology does not provide immediate success in the teaching and learning of mathematics or statistics concepts, students are learning how to use technologies that they may encounter in their future jobs.

By making education more relatable to students real lives, students will be more motivated to learn. Anne T. et al (2010) asserted that "all teachers also discussed motivation within the context of improved student engagement." (p.1328) Maude described how students who were typically uninterested in content and learning in general become motivated by technology:

"students who showed little interest or motivation to learn, worked as active interested participants during the course of technology lessons" (p.1328 .(

Results of Improved Access to Technology

Technology in the classroom stands for students' engagement and motivation. Some academics preserve that one of the aids of technology use is a growth in student motivation (Dunken, 1990), as fun and games are being brought into the classroom (Lee, 2000). This fun factor is a key benefit in a language classroom (Galavis, 1998; Warschauer & Healey, 1998). Moreover, the novelty of the new technologies or learners' experience of those technologies in the classroom can enhance learners' engagement and motivation in fulfilling tasks (DEECD, 2010.(

Educational Choices

There are many technological choices for the 21st century educator. There is a technological training revolution going on education in order to deliver sound instruction (Clark & Mayer, 2008). There are endless choices for the progressive, forward thinking teacher. In fact, using games and applications has even moved into the educational field. "The value of games as a vehicle for teaching concepts while inspiring students is now well accepted at almost all levels of education" (Becker, 2001, p. 23). In this section, digital applications and software that this researcher has seen used at Junction City High School in Junction City, Kansas and also at Kansas State University College of Education in Manhattan, Kansas will be explored.

Kahoot

Plump et al (2017) pointed out that Kahoot! is a popular eLearning tool that can easily be used to add vitality, student engagement, and meta-cognitive supports to higher education classrooms with limited instructor or student training required. The free online learning platform has gained wide acceptance globally with more than 30 million users worldwide, and it is based on current user-centered and behavioral design methodologies".

Looking into the Future

Based on the research provided in this literature review, more investigation is needed in how having more access to technology in the classroom in Saudi Arabia schools will benefit both the teacher and the learner. By using technology in the classroom, both teachers and students can advance talents crucial for the 21st century. Also, technology can support to improve engagement and make learning fun. However, it provides an opportunity for individual learning. Technology is advantageous in developing education through using apps and reliable digital resources .

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and to then design and plan research that will affect the future. According to McKnight et al (2016), "The past decade has seen a strong focus in the United States on increasing the use of technology in the nation's schools"(p. 194). Modern technology is changing so rapidly that just as a teacher thinks they have software or an application figured out and are able to teach it to their students, they find it has already changed or morphed into another version or a completely different application has replaced the original one as the newest and best. The challenge in education technology is to build upon the great advances technology has made for use in schools by teacher and students, but also plan new and innovative ways to implement

the technology into current classrooms. With so much educational dialogue about which software or applications to use, an important consideration needs to be analyzed first. Schools and teachers cannot be concerned about what they "do" on a computer, if they have little access to technology (McKnight et al, 2016). In this literature review, the benefits of having access to technology for both students and teachers will be explored using evidence-based research.

Schools with Limited Technology Face Problems

One problem in schools, where teachers have not typically had access to technology to the use in their curriculum and teaching, is that some teachers can be afraid of the unknown. Teachers like to be confident in what they teach and asking them to teach using software or applications can create mixed feelings. Some teachers can also be apathetic to implementing new ways of doing things. In order to improve English class skills, one must first address the skills of the teachers .

Additionally, class sizes can be large and room sizes can be small, or there may not even be a room that could be used for technology classes. This is a problem all over the world, in that schools that have many options and larger budgets also have more resources. Finally, schools should be preparing students for their future careers and most careers in the 21st century will use varying forms of technology .

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Implementation Plan

In order to investigate the use of added technology in school English classes, in order to improve students skill levels, this study will work with the Ministry of Education, school district, and various English teachers and their supervisors in order to implement the study. This researcher will oversee the planning and development of the curriculum and technological use.   This study cannot be conducted as planned without specified devices, equipment, applications, and websites. Therefore, it is imperative for the researcher to prepare a list of needed technology, make a financial budget of the cost of securing these items for the three participating classrooms, and presenting this information to the school principal. The researcher should be prepared to discuss the importance of this study and the need for this technology with the principal.

Goals

The goal of this study is to examine whether or not high school English students' skills at Algaznawi School will improve by using technology. For this study, certain technology will be used and this is explained in this phase.

Objectives

•   To implement the digital applications of Kahoot, Quizlet, and the website Spelling City to teach needed skills in EFL classes.

•   To determine if using selected digital applications and website will help students master English skills with more efficiency.

•   To investigate improving this researcher's and participating EFL teachers' instructional practice by using these digital applications and this website .

Timeframe

This study will be implemented during the 2020-2021 school year. The research was planned as part of the Khbrat Program at Kansas State University in Manhattan, Kansas in 2019-2020, as part of an exchange program with the Saudi Arabia Ministry of Education. This exchange program works towards the 2030 Vision Program of the Ministry of Education.

Timeline

This study has been planned over the course of one calendar year. It will begin in the Summer of 2020 and end in the summer of 2021. Table 1 below presents the estimated timeline.

Table 1: Implementation Matrix-The table below summarizes the implementation of the study.

Time Period	Timeline	Activities
Summer 2020	June 2020 June 2020 July 2020 July 2020	1) Preparation for Implementation: • The researcher will contact his school principal to discuss available funds to purchase a projector, interactive white board, computers for students, Internet access, and to purchase any of the digital applications or website that may charge a fee. •While waiting to see if the funding for the technology is approved, this researcher will begin to develop plans using Kahoot, Quizlet, and Spelling City. •Based upon approval to purchase all of the above items, this researcher will plan the course curriculum for his course and his participating teachers. • Identify the participating EFL teachers at this researcher's high school. •This researcher will train the participating teachers on how to implement the curriculum this researcher develops.

	August 2020	
1st Semester 2020-2021 School Year	August 2020 to December 2020	2) Implement the use of Kahoot, Quizlet, and Spelling City, and the curriculum this researcher develops in three English teacher's classrooms at Algaznawi School.
2nd Semester 2020-2021 School Year	February 2021	3) Gather data from student use of Kahoot, Quizlet, and Spelling City. Data will be gathered from four sources. • 1st Data Source: Observations by this researcher of student use of the technology. (Qualitative) •2nd Data Source: Survey of participating students. (Quantitative) •3rd Data Source: Students' scores from using Kahoot, Quizlet, and Spelling City •4th Data Source: Interview a high performing student, average student, and low performing student in each participating class. (Qualitative)
	March 2021	4) Analyze data. •The analysis of how students responded to using the technology to assist with learning English. • The analysis of how participating teachers reported students' accomplishments using the technology.

Participants

• The Researcher: This researcher has planned this study, will contact his school principal, contact the other English teachers at his school, and work with his supervisors to coordinate the study with the Ministry of Education .

• Principal and Supervisor: This researcher will present this study idea to his principal and supervisors to approve and discuss. It will be important to discuss the budget needed for technology.

•   Ministry of Education: The supervisor will contact the Ministry of Education's Department of English Language to discuss implementing this study, secure funding for the technology needed, and to work out other important details .

•   Three English Teachers at Algaznawi School: The three English teachers at Algaznawi School will be asked to participate in this study by implanting the technology and curriculum as planned by the researcher.

•   Students: Students in the English classes at Algaznawi School will participate in this technology investigation as part of normal classroom learning.

In the next section, the evaluation plan for analyzing data will be discussed.

Evaluation Plan

The main purpose of this study is to reinforce Saudi students' English language skills by using certain technology, digital apps and websites. This section will cover a basic evaluation plan to review the data generated by the study .

Quantitative and Qualitative Data Measurement Tools

Both quantitative and qualitative data that the study of generates will be examined. Quantitative data will be results from using Kahoot, Quizlet, and Spelling City and also the results of two researcher-made surveys. Qualitative data will come from the researcher's field notes and informal interviews of participants conducted by this researcher.

Quantitative Data Tools.

Use of Kahoot. One of the computer applications that will be used during this study is Kahoot. The data will be examined to determine if using Kahoot shows increased comprehension of the course materials by students and also if student participants and researcher observations indicate that student motivation has increased. The data will also be examined to determine if Kahoot supports learning and adds active participation in the classroom. Figure 1 below gives an example of how this researcher will implement Kahoot into this research and gives an example of how the data that will be gathered.
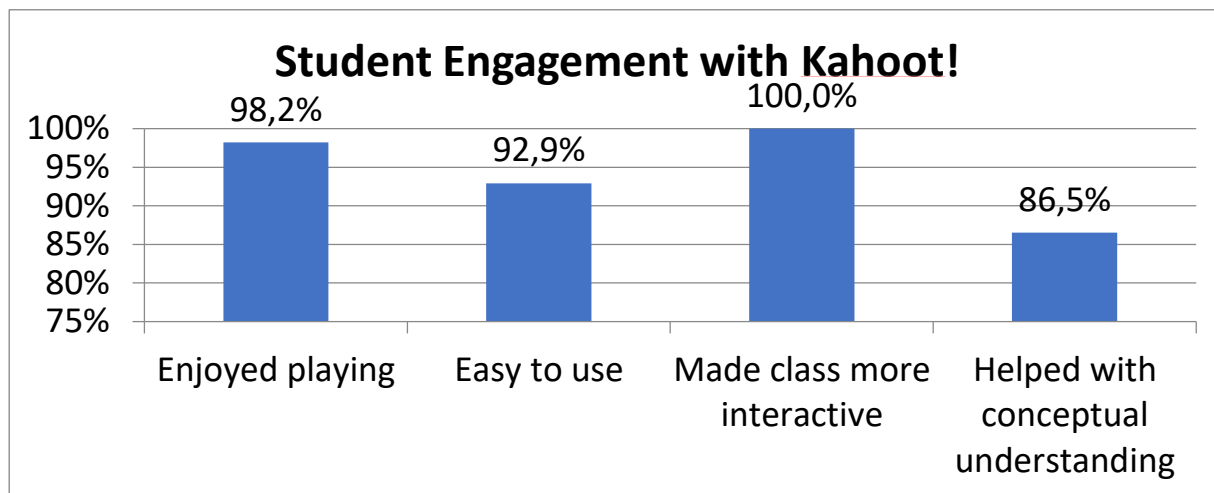

Figure 1. *Student Engagement with Kahoot*
(https://www.researchgate.net/publication/313418401_Using_Kahoot_in_the_Classroom_to_Create_Engagement
_and_Active_Learning_A_Game-Based_Technology_Solution_for_eLearning_Novices)

As can be seen in the Figure 1 above, results from a Student Survey of 139 Undergraduate and Graduate Students show how data can be gathered using Kahoot.

Using Figure 1 above, this researcher will draw some thoughts on the implementation of Kahoot for enhancing students' English learning. This data will help this researcher understand how Kahoot contributed to students achievement of goals, created enjoyment in regards to learning by students, and to helped student participants to learn. This Kahoot data will also help this researcher to explore the academic environment in order to gain data on whether or not using Kahoot made for a more interactive classroom, as well as whether or not Kahoot is easy to use or not.

Other technological tools. Additionally, Quizlet and Spelling City will also be used within the classroom curriculum as a part of this study and data will be gathered from students' scores determined by their use. Quizlet is a digital app that teachers can use, much like Kahoot, to make quizzes, surveys, an questionnaires. Spelling City is a website that provides many resources for the teaching of English. Some of these resources will be included in the curriculum planned by this researcher .

Survey of Student Accomplishment. In Figure 2 below, this researcher will make a simple

survey for student participants to take at the conclusion of the study.

Survey Questions	Disagree	Neutral	Agree
1-Learning English was easier for me by using Kahoot.			
2- I was more motivated to learn.			
3- Kahoot was a worthwhile addition to the normal instruction usually provided in English classes.			
4-I made a good effort to actively participate in using Kahoot to learn English.			

Figure 2. *Sample Kahoot Survey*

Using the below survey instrument, students will self-analyze their learning, motivation, participation, and academic accomplishment.

Qualitative Data Tools

For this study, as a researcher, I will keep field notes of his experiences and observations during the implementation of this study. These field notes will be examined for important observations regarding students accomplishments in learning, participation, motivation, and other observations relevant to the goals of this study. This researcher will also conduct three informal interviews of student participants who performed poorly using Kahoot, Quizlet, and Spelling City, performed averagely, and performed well, and other teachers that might participate in the study.

Creswell and Poth Looping Strategy for Data Evaluation

For evaluating the data, this researcher will use Creswell and Poth's Looping Strategy (2018) to organize and analyze the data. The data will be divided into five loops. See Figure 3 below. In loop 1, the data will be gathered and stored. In loop 2, this researcher will read the data. In loop 3, the data will be divided into emerging themes. In loop 4, this researcher will interpret the data. Finally, in loop 5, this researcher will share the data with the educational community in his school and district.

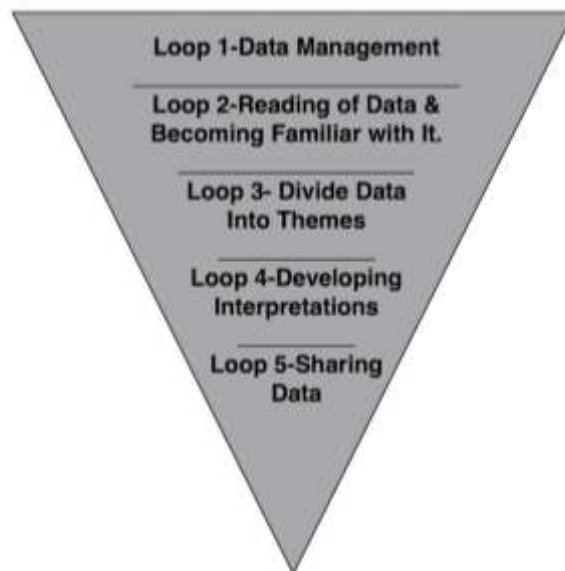Figure 3. Creswell and Poth's Looping Strategy will be used to organize and analyze the data.

Fig. 3: Creswell and Poth's Looping Strategy will be used to organize and analyze the data.

Conclusion

The purpose of data analysis is to examine whether or not adding applications such as Kahoot, Quizlet, and Spelling City to classroom instruction will allow students to learn more quickly and efficiently. The data will be explored using the criteria detailed in this Phase 4. In the next phase, this researcher will share his biography and the abstract for this study.

Results

The goal of this study is to explore the use of Kahoot, Quizlet, and Spelling City as tools to see if students' English skills will improve by using them. Given the proposed implementation plan and the research behind this project, this researcher anticipates that the results of the study might show that English skills can be improved based upon the use of the selected digital tools. Compared to the traditional ways of providing instruction in English classes, this researcher proposal predicts that students who use technology in the classroom will have increased English language abilities. This researcher also anticipates that the students who use these digital tools will develop English skills more rapidly than the students who study English in a traditional way .

The next steps, if the expected results will be met, involve informing the researcher's principal and supervisor, and the Ministry of Education of the success of the program. After seeing the expected results in the classroom, the program could then be extended to the rest of the school and district, and may even be used by other content areas besides English.

If this research does not meet this researcher'sthe anticipated expectations, he will meet with the teachers, principal, and supervisors to discuss another investigation of using the digital tools. This researcher will also closely examine the opinions of the participating teachers to see how he study can be improved upon. This researcher will conduct more research on the use of technology in teaching English in Saudi Arabia. Technology is here to stay and it is imperative that it is used for the learning process in schools.

Conclusion

This paper investigates the ways that technology, precisely the use of digital apps and websites, may be integrated in the English language classroom to enhance learning and to make the environment more effective for Saudi Arabian high schools' students. Currently, in Saudi Arabia, the education system lacks computers and other relevant technology in classroom. In some schools, there is no technology and in others, there may be limited access to computers.

By addressing problems that schools face, educators can be a part of the solution. When schools in Saudi Arabia and the Ministry of Education place even more emphasis on the availability of and use of technology in the classroom, there will be several benefits. Students will learn more. Successful implementation was fostered by a strong school-wide vision focused on pedagogy over technology. The vision was streamlined, effectively communicated, and emphasized daily. School and district data showed a reduced number of course failures, increases on state test scores, and reduced disciplinary actions, students will be better prepared to be adult members of our society .

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Author Biography

Mohammed Rafaan Alqahtani is an English teacher in Algaznawi high school, located in Riyadh, in the Kingdom of Saudi Arabia. He holds a bachelor's degree of English Language and Literature. His work has focused on applying technology to boost student's skill in English language. He has completed research in the field of Technology such as the use of digital apps and educational websites. He has an interest to implement the latest revolutions in the field of Technology and to share them with his colleagues.