

## Technology and English Language Teaching and Learning: A Content Analysis

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### ABSTRACT

Researchers over the past years have proven the positive effects of using information and communication technology in learning. This research work considers the digital nature of modern students associated with educational technologies and their importance in learning English through the medium best known to modern students. A review of related literature with a sole purpose of measuring the recent research trends on the contributions of innovative technology towards English language learning and teaching. To measure the trends on technology contributions in English teaching, quantitative content analysis method was employed for the purpose of this research where fifty academic articles published between the years 2000 – 2018 were considered for being relevant and available with full text open access and written in English language. Twenty-six of which from EBSCO and twenty four from Science Direct Database, under the title of social sciences: Teaching of English by innovative technology, obtained from the Near East University library, online resources, serve as the source of data collection. SPSS software will be the data analysis tool.

*Keywords: Technology, Learning, English Language Teaching, Innovations, ELT*

### INTRODUCTION

Technology keeps up developing in all aspects of our life. Great majority of people all around the world became involved in using technology in everyday life as it saves time and effort. In this sense, my research paper will address the innovative technologies embedded in teaching and education and its impact on English learning process; How the technology tools facilitate learning in educational institutions and to what level teachers and students are involved. The focus of this article is the measuring of the recent trends on educational English language teaching facilitated by modern innovative technologies.

Connectivism (2005) is a learning theory created by Stephen Downs and George Siemens which states how globally technology and internet brought up new opportunities for learners to share and study educational and learning information among themselves and across the world. Network is being a medium to exchange knowledge and scholarly innovative ideas that will finally lead to prosperity and development both

culturally and socially. In the past years, considerable effort has been made towards integrating technological enhancement and support for learning. These technologies have not only impacted the field of education, but have also expanded and challenged our thinking of what constitute a learning environment. Not only that the learning environment has incorporated computers or internet, but also simulations, games, smart phones and later 3D technologies (Dror, 2008). One cannot dispute the fact that our lives have hugely been influenced by technology. Technology now assumes a vital place in current human's societal developments. Technology is indispensable in facilitating teaching and learning. Students learning English as a second language will need frequent hearing, speaking, reading and writing in order to improve their skills and experience (Ybarra & Green 2003). It is evident that technology improves learning pronunciations (Seferoglu, 2005), language fluency and performance (Guzel & Aydin, 2016) and skills development (Nomass, 2013). Therefore, in order to undertake this task, language students need to utilizing

different instruments which will enable them learn the language effectively and easily.

The goal is not technology itself, yet one ought to understand that technology as a continuous process needs patience, commitment and attention of all the individuals utilizing it. Therefore, users need to appreciate and understand the pros and cons of applying technology to learning (Tafani, 2009). The role of technology in teaching and learning is so enormous that researchers now think that only the mixture of teachers and technology will lead to great learning success (Sharma, 2009).

### **Purpose of the Study**

This trends article on technology and English teaching aims at measuring the recent research studies conducted in different countries on this particular field. The measurement of these trends have been intentionally investigated to indicate the international tendency toward technology implementation as a pedagogical tool in teaching for more learner centered, motivational and successful education. To conduct this research trends article, the following questions have been set:

1. How many articles have been frequently conducted in technology and ELT in the reviewed articles in terms of the year of publication?
2. Where the reviewed articles were conducted in regard to context and year of publication?
3. What paradigm was applied in the reviewed papers in terms of the year of publication, context and country of Publication?
4. What data collection tools were frequently applied in the reviewed papers?

### **Significance of the Study**

The research is so important because education is developing alongside technology (Nawaila, Kanbul & Uzunboylu, 2018) and we need to be updated to gain the benefits of this development in our society and educational institutions. The implementation of technology in education helps bridge the gap in knowledge transfer and in education system. The significance of this research relies on its purposeful objective to encourage education institutions like in my country; Libya and others who still follow old traditional methodologies in teaching to shift to modern communicative approaches. This quantitative research design will come up with generalizations and facts that would hopefully stimulate traditional education institutions adopt modern teaching techniques.

Erben et. al. (2009) states that from Vygotsky's theoretical perspective, technology has the potential to mediate students' learning in a multitude of creative

ways and to open up many potential dynamic zones of proximal development. Using technology in creative student centered ways means, for all ELLs, being one or more step removed from relegation to silence and non-participation at the back of the classroom.

### **LITERATURE REVIEW**

Over the years, various researchers have written extensively on the contribution of technology towards English language teaching and learning. Whereas, the history of technology in education can be traced to Modern library introduction and pencil in the 1600s, the 1800 which marks the revolution of technology saw the introduction of chalk and slates (which is still used in the global south till date), the calculating machine and typewriter. The 19th century sees the introduction of projectors, radio, mimeograph, slide ruler, videotapes, Photocopier, computers and the ending of the century witnessed the introduction of internet and the interactive white board, whereas the 21st century welcomes social networks, smart phones and 3D technologies.

The 21st century marked the era of globalization which makes learning a foreign language of utmost importance. English, being the language behind most technological and scientific developments, economies, administration, literary works and popular entertainment comes first (Graddol, 2006). Teaching English Language has been there for a long period of time and its significance is ever increasing which lead (Graddol, 1997) in his study suggesting that by 2000 English learners will reach a billion and doubled a decade later. Considering the wide spread and advancement of English language around the globe, English is considered as the first language in countries like Nigeria, India and in some places as the second. English language teaching has always been related to technology (Shinghal, 1997). During the past decades, laboratories were being used for teaching and learning English language at various institutions. The laboratories were equipped with radio cassette player, a headphone and a microphone. Despite the fact that these laboratories are a positive step but the process was most of the time found boring and tedious by students (Shinghal, 1997).

### **Role of a teacher in technology implemented classroom**

In a conventional classroom, the role of a teacher as the only source of knowledge is to provide his students TRUE knowledge and to prove their understanding, the students give feedback to the teachers through reporting. The scenario found in a modern classroom now is completely different. Students conceptualize their ideas, work as a team to solve the problem.

It is not easy for the teachers to manage classrooms now that the lessons are more student centered and multidimensional, where information flows from various directions (Tomei, 2002). It is of vital importance that teachers make their students ready to use computers and concurrently manage other tasks like conducting magazine and book research, gathering data and information from observations, videotapes and so on.

### Some Innovative Technologies:

**Second Life (SL):** Developed by Linden Labs 2003, is a risk free and relaxing computer based online social networking platform design in 3D that provides users with the chance of designing avatars to act as them. SL is gradually being noticed as an optional platform for real life circumstances like teaching and learning (Guzel & Aydin, 2016). SL is now the latest environment for learning languages, students are presented with the opportunity to avoid psychological difficulties brought about by conventional classrooms (Aydin, 2013). Using SL in English learning classes has contributed positively in grammar and task achievement even surpassing conventional classroom sessions. (Guzel & Aydin, 2016).

**Smart Phones:** Mobile phones such as smart phones, tablets and so on, come with powerful functions almost equal to that of personal computer but because of the portability people often use them more than the computers. With an estimated 4.61 billion mobile phone users around the world in 2016 with the number said to increase by 4% in 2017 and 10% by 2019 (statista, 2013), one cannot argue that the future of learning is with the phones. Various researches have proven the efficiency of mobile learning. Although high usage of mobile phones by students have shown fall in grade point average (Lepp, Barkley & Karpinski, 2014), learning using mobile phones on the other hand, have shown an increase in academic performance, increase of rate of task accomplishment and rate of learning goal achievements (Chen, Chang & Wang, 2008).

**Social Media:** Social media has the advantages of allowing students, researchers and people in general interact and communicate in ways that ignore institutional limits. To prove this, in September 2012 students of journalism at Northern Carolina Agriculture and Technical State University utilized cell phones and social media to cover a convention in Charlotte North Carolina. The course did not just enable the students to acquire constructive and great understanding of the work, but also presented them with old and upcoming theories in communication and ideas related to social media in the modern world. Social media applications like Facebook and Twitter have millions of subscribers around the world and the number is increasing. Among

the users of these social media are the university students which help them to communicate interactively with the community and university colleagues and teachers for scholarly educational learning purposes.

Tobi, Ma'on, & Ghazali (2013) state that the ubiquity of online social network undertook a research to find out if the use of social media has a significance on both the social and mental strength of Malaysian students. The researchers found that it had a good positive influence on the health of the students.

Media has been a part of teaching English for quite a long time (Solanki, 2012). Media such as Books, Newspapers, TV, Radio present teachers and students with practical and creative ideas (Nawaila & Bicen, 2019). Choosing the right media to be applied to a particular class can be tasking, but when done right, not only does it motivate, encourage, excite and make learning interesting and fun but hardly leaves anybody untouched (Biagi, 1996). Various studies have been conducted to show the integration of media into classrooms for instance, considering media as the frequently used in classroom. Tafani (2009) conducted a research that tries to answer the question how can media and classroom media presentation aid students in speaking and retention. She found out that media helps in visualizing teaching, increasing students understanding, fluency and accuracy.

**Chat/Messages:** Almeida d'Eça (2002) has defined chat as "a two-way synchronous form of computer mediated communication (CMC), a dialogue in real time as we keyboard or speak our words, an online conversation between two or more people by means of a computer". In USA alone, 4.1 billion messages are sent per day (Goldman, 2014), and 368 billion in china (Chi & Wang, 2008). Making chat the most preferred means of communication by far.

Gonzalez (2003) in his work where he classified educational chats and went ahead to confirm that chats can be used to develop teachers event planning, student tutoring and web 2.0 tools exploration. Chats are underutilized means for teacher development and language learning. Lots of knowledge constructions take place through chat that teachers need to be aware of considering the emphasis constructionist give to collaboration and learning via social interaction (Von Glasersfeld, 1989), chats are the perfect place for this type of learning.

### Technology and Teaching

Technologies have been in language teaching and learning for ages dating back to the period of blackboard and radio (Kazemi & Narafshan, 2014), but for learning using advance technologies to be successful, they

should be properly integrated into the curriculum (Stanley, 2013). Lots of teachers are found to possess positive attitude toward technology, although they are equipped with little technological knowledge (teachers being digital immigrants) which according to (Kazemi & Narafshan, 2014) is enough to start applying technology in classroom. But most of the teachers prefer using it for personal reasons and at the lowest level. Different teaching methods apply to different language learning situations. Some methods are good for Business English, some for distance education and test, some for interpreting, listening and reading.

Modern instructors now have duties and challenges. The English Teaching method has definitely been changed with the current technologies. Indeed, technology presents such a significant number of alternatives for making teaching more productive and interesting. It is an important linguistic and social changer.

Nomass (2013) presented in her research the role of technology in learning and teaching English language. She went further to enumerate techniques and approaches which can serve as an aid to students in enhancing their learning abilities while utilizing technology.

### **Factors Affecting the Usage of Technology**

To begin with, teachers need computer skills to start thinking of putting the modern technological gadgets in our classrooms. Although computer courses exist in our curriculum, it's not sufficient. More consideration ought to be put on courses that will train students on how to apply the internet and computer in the classroom. The greatest hindrance to applying technology in English classes are the limited resources, teacher's skills, feeling and attitude towards ICT and the type of application and software available (Mumtaz, 2000).

Most of the teachers teaching English as a second language are ill equipped with out dated books that even natives will find complicating and students only study to pass examinations not to use it outside and the medium of communication during instruction is mostly not English (Cui & Wang, 2008).

Teachers mostly take to using ICT either if the institution forces them to or there is abundance of ICT resources or the teachers are well equipped in ICT skills (Mumtaz, 2000). He went on to say that teachers do not want to use technology because they either lack the ICT skills, lack the sufficient manpower, device shortage or time and funding issues. In any case, Davis (2000) stated that schools are adjusting to accommodate societal needs of technology and to accommodate the ever increasing need of resources.

## **METHODOLOGY**

In discovering the trends in research work done by researchers, in tracing the contribution of innovative technology towards learning English language, and laying a foundation for future researches, quantitative content analysis was employed. Quantitative content analysis was chosen because it aids in summarizing many research papers and presenting a strong and justifiable generalization in the field of research (Ozciner, 2009). The study was based on research papers obtained from the EBSCO and Science Direct database website when a search was conducted using the phrases like "learning and technology, English language teaching and technology, application of technology to teaching, current innovative technologies in ELT".

Two hundred and forty-six journal articles were found of which only fifty met the criteria of being written in English with full text open access and relevant to research key words. Years of publication between 2000 – 2017 were considered because of their being recent and accessible. To measure the trends, the data collected will be analyzed by statistical package for social sciences software (SPSS) and descriptive analysis.

### **Procedure**

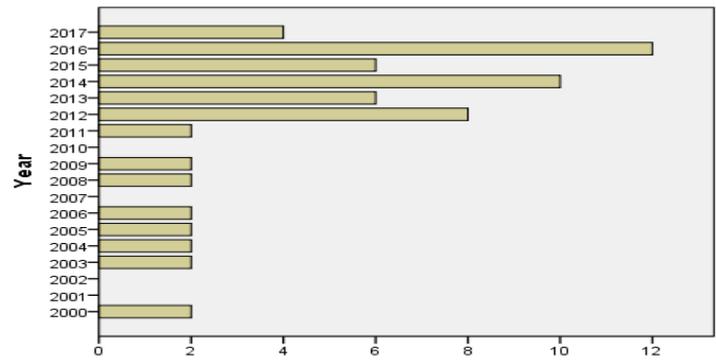
To answer the research questions, data collected for this study was presented and analyzed in both tabular and graph format by SPSS descriptive statistics.

#### *1. Distribution of Papers in Terms of Year of Publication*

According to the findings, much attention was not given to technology in teaching English language until 2012, which can be linked to the increase in the mobile phone ownership and computers (Table 1). No researches were found for the years 2001, 2002, 2007 and 2010 which might be because the papers during those years were not indexed to the website considered for this research. The year 2016, has the highest number of studies (12), although we cannot conclude on what will happen by the end of 2017 (Figure 1).

**Table 1.** The distribution of papers in terms of years of publication

Year	Number	Percentage %
2000	2	3.2
2001	2	3.2
2002	2	3.2
2004	2	3.2
2005	2	3.2
2006	2	3.2
2008	2	3.2
2009	2	3.2
2011	2	3.2
2012	8	12.9
2013	6	9.7
2014	10	16.1
2015	6	9.7
2016	12	19.4
2017	4	6.5



**Figure 1.** The distribution of papers in terms of years of publication.

2. Distribution of Papers in Terms of The subject and Country

According to Figure 2, Turkey is the only country to record researches in the entire four contexts, although less attention was paid to the attitude of teachers and students. Considering the high smart phone penetration in Turkey and Saudi Arabia (Aldhaban, Daim & Harman, 2015). It was rather surprising that smart phone usage received little attention in both Saudi Arabia and Turkey. Venezuela and China, on the other hand, recorded the highest percentage of using smart phones technologies in teaching, which was not a surprise considering the level of smart phone penetration and their population (Wang and Cui, 2008).

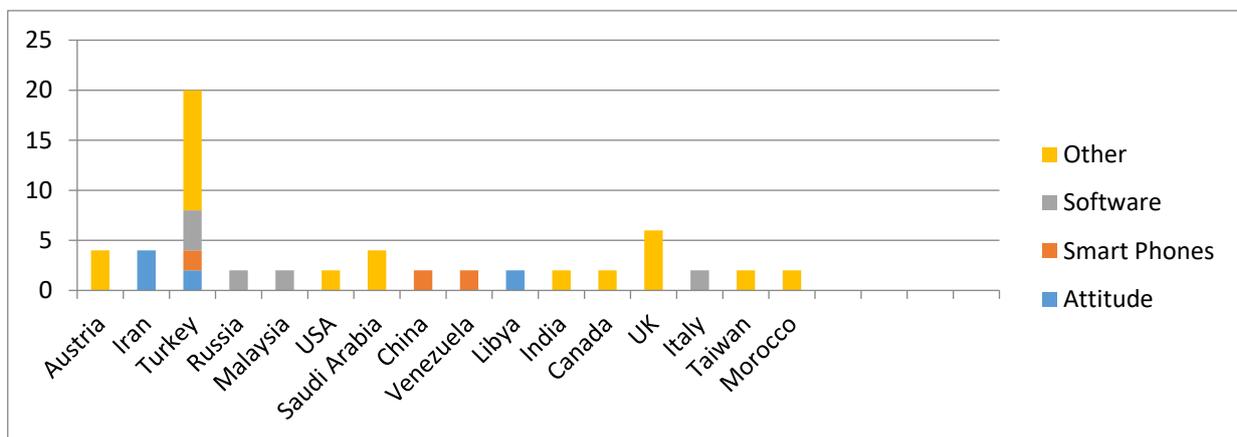


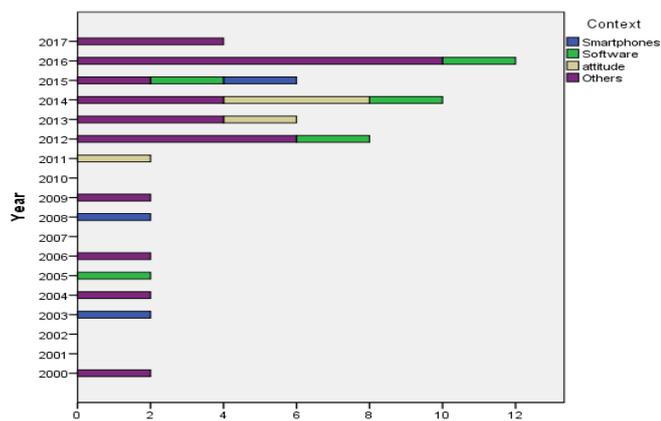
Figure 2. The number of research done in relation to country and context

3. Distribution of Researches in Relation to the Year and Context

So many studies administered from 2012 to 2017 on the OTHER topics discussed in the reviewed papers related to technology usage in teaching English Language like the use of Multimedia and social media networks, effectiveness of technology in teaching and the

historical background of using technology in teaching which can vividly be seen in Figure 3.

The smart phones usage was very low which was a surprise and the attitudes of teachers and students towards utilizing technology in classrooms.



**Figure 3.** The number of research done in relation to year and subject.

#### 4. Studies in terms of Paradigm

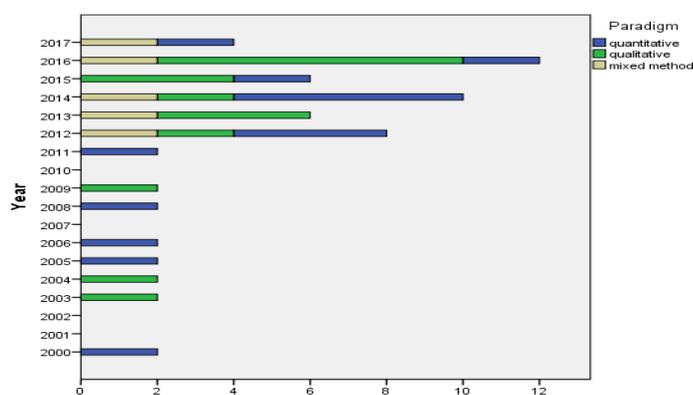
As indicated in Table 2, both quantitative and qualitative methods in the reviewed papers were equally applied in conducting the studies. However the mixed method received less attention by the researchers.

**Table 2.** The distribution of papers in terms of paradigm

Paradigm	Number	Percentage %
Quantitative	26	41.9
Qualitative	26	41.9
Mixed Method	10	16.1

#### 5. Distribution of Papers in Terms of the Year of Publication and Paradigm

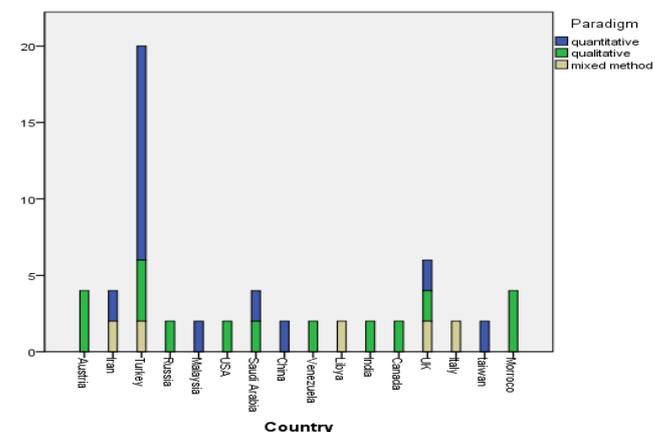
From Figure 4, it can be seen that mixed method was not used entirely in the first twelve years out of which four years did not record any work. Quantitative and qualitative paradigms are evenly distributed across the selected years which is in agreement with Sozibilir & Kutu (2008). The year 2016 recorded the highest number of qualitative research methodology applied in the studies carried out at this period.



**Figure 4.** The number of research done in relation to year and paradigm.

#### 6. Distribution of Researches in Relation to Paradigm and Country

A significant percentage of the studies conducted in Turkey (16 out of 20) used quantitative method. Both paradigms were evenly applied in UK. On the other hand, we cannot conclude whether certain continent can be said to have preferred certain paradigm as no certain can be traced (Figure 5).



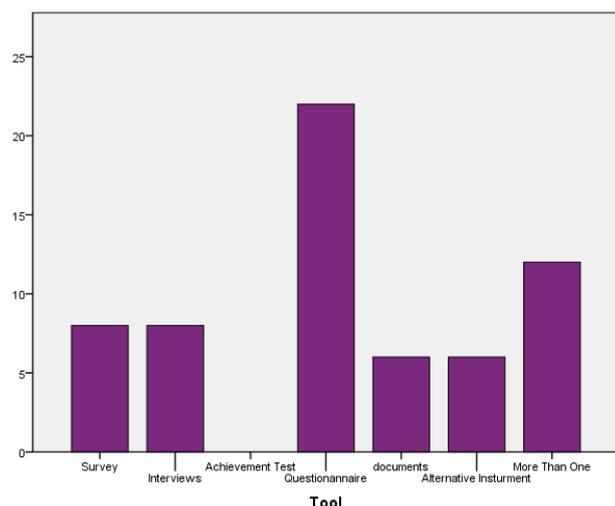
**Figure 5.** The number of research done in relation to country and paradigm

#### 7. Distribution of Papers in Terms of Tools of Data Collection

The quantitative and qualitative paradigm were applied almost equally in conducting the studies. However, the mixed method received less attention which can be attributed to the fact that mixed method has some short comings with mixed data and that you have to go back to qualitative analysis (Malina, Norreklit & Selto, 2010). Attitudes of students and teachers toward teaching and learning with technology during that period received less attention with only 12.9% (Table 4). No research using achievement test was recorded during the period under consideration (Figure 6). Whereas questionnaires were the tool of data collection that received the highest attention as expected because of the ease associated to it and that it gives more standardized information (Marshall, 2005).

**Table 4.** The Distribution of papers in terms of tools of data collection

Tools	Number	Percentage %
Survey	8	12.9
Interview	8	12.9
Questionnaire	22	35.5
Document	6	9.7
Alternative Instrument	6	9.7
More Than One Instrument	12	19.4



**Figure 6.** The Distribution of papers in terms of tools of data collection.

## CONCLUSION

The findings of this study clearly indicated that using technology in teaching and learning English language has been increasing in the last three years. This shows the global tendency toward integrating technologies in the educational institutions across the world. The trends also prove that learning through the implementation of technology is increasingly developing in the modern world.

Normally, the reason for both modern (computer influenced) and conventional classroom is to give room for effective and efficient teaching and learning process. Powerful technological features and functions can offer to its user's great potentials for teaching and learning especially linguistics (Cui & Wang 2008). Technology has nowadays become imperative in the process of learning second languages. The reason that make modern technology even more important is because of the conventional technologies being deemed theoretical, unexciting, unmotivational, slow and teacher centered (Nomass, 2013).

Despite the fact that all the researchers agreed to the massive contributions of technology in teaching English, but one should note that it comes with a cost. It was found that in some researches where there were control and experimental groups, instruction received was not closely matched, therefore proposed that for future research, more care ought to be taken to make sure the controlled groups are not disadvantaged.

Regarding the technological development, we are of the opinion that, in the future, the integration of technological innovation in teaching English will further increase and that student centered methods of teaching will be adhered in the learning process. Less time consuming leading to better competence in communication. Teachers and students should not be using technology just for the sake of it being technology

but rather consider technology as a tool for students' academic advancement and medium of instruction.

## EMERGING ISSUES / FUTURE WORKS

A few years back people felt that computers would replace teachers but yet that has not happened. Teaching and learning using technology is only a fast option for guiding students to solve complex real life problems. However, the sophistication of technology cannot and will not replace teachers. Despite the vast importance of technology in English language teaching, still there is no enough usage of technology at schools. Where the adaptation was found, it was mostly partial not in total (Webb & Cox ,2004). Various researches have shown that students taught with computer outperformed those not taught with computer in terms of retention and fluency, but little is known as to the duration of the gap. Another gap worth note is what motivates the teachers to apply technology to the classrooms.

Further researches are required in the future in order to specifically observe and measure the trends upon utilizing technologies in education all over the world.

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