

The Impact of Technology on Students Learning in Primary School

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Abstract

This study aimed to see the impact of technology on increasing students' motivation to learn. The study raised two fundamental questions: Does technology affect students' motivation to learn from the teachers' point of view? To what extent are teachers using technology in their classes? The researcher prepared a questionnaire consisting of 32 questions, then presented it to the research sample, which included 205 teachers from various educational stages in the Kingdom of Saudi Arabia. Response analysis showed that the correct use of technology in education increases students' motivation to learn. The researcher concluded that the majority of teachers see the effectiveness of technology in increasing student learning with some obstacles, such as lack of availability, ignorance of its use, or lack of faith in its role from some. The researcher recommended that teachers should continuously read about modern technologies and activate them in the classroom to explain lessons and assess students. Training courses for educational technology must be provided and provided in schools.

Key Words: technology, classroom, TPACK, Multi-literacy, Saudi Arabia Educators,

ملخص

تهدف هذه الدراسة لرؤية تأثير التكنولوجيا على زيادة تحفيز الطلاب على التعلم. أبرزت الدراسة سؤالين رئيسيين: هل التكنولوجيا تؤثر على تحفيز الطلاب للتعلم من وجهة نظر المعلمين؟ إلى أي مدى يستخدم المعلمون التكنولوجيا في فصولهم؟ أعد الباحث استبانته تحوي اثنان و ثلاثون سؤالاً، ثم قدمها لعينة البحث و التي تتكون من مائتان و خمس معلم و معلمة من كافة المراحل الدراسية المختلفة في المملكة العربية السعودية. تحليل النتائج أظهر أن الاستخدام الصحيح للتكنولوجيا يزيد دافعية الطلاب للتعلم. توصل للباحث لأن معظم المعلمين و المعلمات يرون تأثير التكنولوجيا في زيادة دافعية التلاميذ مع وجود بعض العوائق مثل قلة توفرها و الجهل باستخدامها و عدم إيمان البعض بدورها في التحفيز. كما أوصى الباحث المعلمين بضرورة القراءة المستمرة عن التكنولوجيا الحديثة و تفعيلها في غرفة الصف لشرح الدروس و مساعدة الطلاب. و أضاف يجب أن تقام دورات تدريبية للتكنولوجيا التعليمية في المدارس.

الكلمات المفتاحية : التكنولوجيا، غرفة الصف، نموذج TPACK، معلمي المملكة العربية السعودية

Introduction

What is Technology? The term technology comes from the Greek word techno, meaning art and craft, technology is the use of science in solving problems also it means a technical method of doing something. Technology makes life easier for humans. Modern digital technology, such as cinema, television and computers started in the 1900s. At the same time, educational technology rises too. According to the Greek definition, mentioned above, technology has always been at the introduction of human education and it pushes educational capabilities to new levels.

Educational technology has a huge range of tools that we can see in our school today. These tools create the pathway to motivate and engage students to learn. Many tools like Computers, tablets, mobile devices, Whiteboards, Interactive flat panel displays, Virtual classroom and Learning management system support and enhance collaborative and social learning.

Are there benefits of using Educational technology with students in the classroom? Many Teachers and educators observe how students interact with technology. They notice that the students are interested and engaged while using educational technology games on an iPad, and Interactive flat panel displays. I believe this motivation becomes clear when you compare non-technology methods with technology methods. More than that educational technology encourages many things like individual learning and collaboration. Also, it improves knowledge retention (Savvidis, 2016).

Technology's importance in the classroom is evident now more than ever. One reason is the benefit of building strong relationships between student-student, student-teacher, and teacher-parent. Another benefit of technology is it helps relationships last over time and distance. A third benefit is it helps students learn about people's differences and develop empathy towards those differences.

While studies have found that literacy teachers believe technology should be integrated into curriculum and instruction (McGrail, 2006; Hutchison & Reinking 2011; Ruday et al., 2013), much still needs to be learned about teachers' beliefs and knowledge of the best ways to integrate technology into the curriculum (McGrail, 2006; Ruday et al., 2013) (p.49, as cited in Boche, 2019).

Educational technology is important for our country, Saudi Arabia, because 'The Human Capital Development Vision' is a basic program in the 2030 vision. Technology will help with local and global demands. I hope my research will contribute to this vision to bring modern and innovative technology trends, which will benefit the future of Saudi Arabia.

Literature Review

The purpose of this literature review is to provide evidence of the importance of using technology in the classroom and the benefits for children academically and socially. Additionally, the Vision 2030 provides for the development of all sectors of the state, the most important of which is the education sector. This can only be achieved by developing the three essential parts of the educational process: the teacher, the student, and the curriculum.

In this research, I discuss the significant points related to the development of education and researched the modern uses of educational technology tools and the extent of their impact on the students in the primary grades, which are the students I have taught for thirteen years. I will discuss two theories involved with teaching with technology; one is multiliteracy and the other is the Technological Pedagogical Content Knowledge (TPACK) Model.

As technology advances, there is an urgent need for a new understanding that reflects the technology changes and its broader capacity to effect change in the classroom. Teachers must learn the necessary tools and techniques to make learning meaningful, and meaningful use of technology to support education. Technology requires renewed thinking and knowledge because it is not static. (Boche, 2019)

Multiliteracies

New London Group; 1990 defines Multiliteracies as “an approach to literacy theory and pedagogy” They further extend the definition to, “This approach highlights two key aspects of literacy: linguistic diversity, and

multimodal forms of linguistic expression and representation.” (New London Group, 1996).

The term was coined in response to two significant changes in globalized environments: the proliferation of diverse modes of communication through new communications technologies such as the internet, multimedia, and digital media, and the existence of growing linguistic and cultural diversity due to increased transnational migration (Cope & Kalantzis, 2009; Wikipedia, 2009).

According to (New London Group, 1996) Multiliteracies recognizes both the increasing cultural and linguistic diversity in the new globalized society as well as the new text forms from multiple communicative technologies.

Literacy, then, “is more than reading, writing, speaking, listening, and viewing as traditionally defined. It is more useful to think of literacies, which are social practices that transcend individual modes of communication” (NCTE, 2018, n.p.).

New London Group (1996) also argue that Multiliteracies pedagogy initially recognized the complex integration of four factors: situated practice, overt instruction, critical framing, and transformed practice. Situated practice is “constituted by immersion in meaningful practices within a community of learners” (Boche, 2019).

It is important to move beyond simply focusing on technology and literacy, and instead expand both understandings and applications of literacy to literacies or multiliteracies, as espoused by New London Group (1996), that view literacy as continuous, new, supplemental, and enhancing or modifying established literacy teaching and learning rather than replacing traditional practices (Rowse et al., 2008) and relate specifically to the types of literacies

students interact with on a daily basis (Boche, 2019). Literacy and technology, act in conjunction with each other through socially constructed practices (Myers, 2006).

Multiliteracies includes teachers' knowledge of the interplay between literacy and technology and how their practice supports learning within the larger multiliterate world (Boche, 2019).

Technological Pedagogical Content Knowledge (TPACK Model)

Quality teaching includes technology, pedagogy, and content and does not isolate them from each other (Boche, 2019). Technological pedagogical and content knowledge (TPACK) (Mishra & Koehler, 2006; Koehler & Mishra, 2009) is built off Shulman's (1986) idea of pedagogical content knowledge, which integrates pedagogy and content (Boche, 2019).

According to Boche (2019), TPACK is more focused on technology and how the teacher uses it to reach instructional goals but is less concerned with the social and contextual nature of technology (Jacobs, 2013).

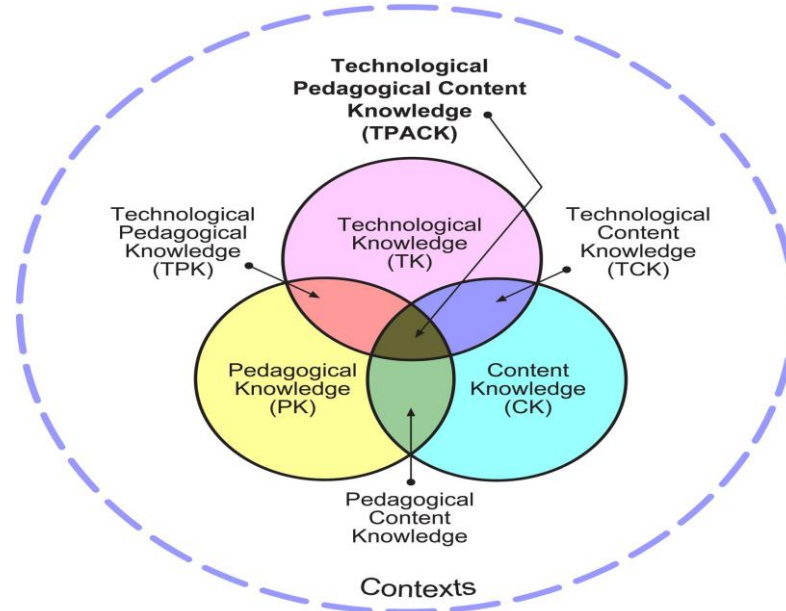


Figure 1. *TPACK Model*

Pedagogical Content Knowledge (PCK)

Mishra and Koehler described Pedagogical Content Knowledge (PCK) as “knowing what teaching approaches fit the content, and likewise, knowing how elements of the content can be arranged for better teaching” (Hutchison & Woodward, 2014). This type of knowledge involves understanding of what makes concepts easy to learn, how concepts can be best represented, and of what learners bring to the learning situation (Hutchison & Woodward, 2014).

Technological Content Knowledge (TCK)

Mishra and Koehler described Technological Content Knowledge (TCK) as an understanding of how technology is interlinked with content interchangeably, which includes knowing how content is increasing in importance as a result of technology application. They describe Technological Pedagogical Knowledge (TPK) as knowledge of various technologies and their

capabilities and learn how teaching can change as a result of using various technologies (Hutchison & Woodward, 2014).

The TPACK framework can especially be utilized in situations where new technologies are constantly being introduced (Boche, 2019).

Challenges of Technology in Teaching with Children

Boche (2019), reported technology integration is commonplace in today's school contexts as more and more schools are moving to 1:1 implementation and online learning platforms. This presents unique challenges for different content areas, particularly literacy, as teachers and administrators sometimes do not know whether to focus on literacy, technology, or the interplay between the two.

Paciga et al. (2019) mentioned that some people argue that digital technologies should have a very limited role in early childhood contexts, as the use of digital technologies will come to supplant, rather than supplement, key learning opportunities such as hands-on experiences or social interaction (e.g., Campaign for a Commercial-Free Childhood, Alliance for Childhood, & Teachers Resisting Unhealthy Children's Entertainment, 2012; Cordes & Miller, 2000; Miller, 2005).

Families and educators need to be vigilant about children's overall time spent with screens in the absence of social interaction, or with low-quality content. This view is often not shared by current educational curricula, which privileges written and oral modes of expression and meaning making. Multimedia digital technologies, with their rich array of possibilities for expression, disrupt such a paradigm (Paciga et al., 2019).

Benefits of Using Technology in Teaching with Children

Technology contributed fundamentally to the reduction of the knowledge gap between students with a high knowledge background and students with a low knowledge background (Neuman et al., 2011). According to Cviko et al., (2012), correct use of digital resources showed excellent results for student's outputs, elementary classes in learning reading and writing skills, unlike using traditional sources. On other hand, technology may impact children on attention and socialization but using high-quality digital resources is essential in preparing all young children for long-term academic success (Paciga et al., 2019). Additionally, studies show that when given the opportunity, children make conscious decisions about the ways in which they express different meanings, and that these choices reflect their identities in the classroom, family background, and cultural heritage (Kucirkova, 2017). This supports the use of benefits for teaching and learning.

The verbal interaction between adults and children with digital tools produced new learning of the language. Based on the ideas of Roseberry, Hirsh-Pasek, and Golinkoff (2014). "Some studies have demonstrated that these effects may be long-lasting, as they are associated with academic achievement 10 years beyond early childhood" (Paciga et al., 2019). Also, Digital sources have an important advantage that rarely appears in traditional sources, which is their multimodal capacity. As Paciga et al. (2019) study found:

“According to the multimodal perspective, children make meaning using multiple modes (texts, pictures, words, gestures, movements, or production of artifacts), and all these modes complement one another as children seek to interpret their world and convey their understanding” (p.

4)

Guidelines for Educators

As mentioned above technology may have an impact on children’s attention and socialization, therefore educators should follow research-based guidelines. According to Paciga et al. (2019, p. 5), they suggest the following guidelines to support all children; 1) Review and select high-quality digital resources that align and support creativity and imagination, 2) Provide meaningful opportunities for learning with and digital resources, children should be actively engaged with the content and collaborating with one another, not just memorizing facts, 3) Blend use of digital and non-digital resources, and 4) Build a home-school connection. Schools could provide training for parents on how to keep their children safe using technology and ways schools are using technology. Lastly, schools and school districts can develop their own guidelines that match the context of their learners based on the research.

Methodology

The purpose of this research is to answer the research questions, "What are the Teacher Perceptions on the Use of Technology of students learning?" and "What are the Teacher' relationships towards technology in the Classroom in Saudi Arabia?" The researcher created an online survey in Arabic and English for teachers currently teaching in Saudi Arabia. The researcher is in The KHBRAT Program, which is also known as Building Leadership for Change through School immersion (BLCSI) at the University of Central Florida (UCF).

Participants

A total of 205 educators in Saudi Arabia were invited to participate in this study. This sampling of teachers was selected from educators currently teaching in Saudi Arabia. These participants were chosen as the researcher has access to Saudi Arabia educator groups through WhatsApp and Telegram and Twitter.

All participant data was collected in June of 2020. A total of 205 educators were approached, 88 are first-grade teachers (42.9%). This comprised of 68 Language and literacy teachers. A total of 205 educators comprised one hundred and 77 City School teachers (86.3%), 26 Village School Teachers (12.7%), and two Rural School teachers (1%).

Instrument

The instrument consists of 32 questions developed by the researcher. The survey used in this study consisted of four sections, with the first section was the introduction. The second section has ten questions that gathered demographic information of the participants. Sections 3 used the 5-point Likert (interval)

scale items of strongly agree, agree, neutral, disagree, and strongly disagree. Sections 4 used the 5-point Likert (interval) scale items of always, often, sometimes, rarely, and never. Section 3 asked respondents about teacher perceptions on the use of technology on student learning, while section 4 asked respondents about the teacher's relationship with technology in the classroom. A copy of the instrument can be found in Appendix A.

Procedures

The researcher sent a text to educator groups in Saudi Arabia through WhatsApp, Telegram, and Twitter with a link for an online survey in Google Forms. The survey has 32 questions for educators on their perceptions of the Use of Technology of students learning and their relationship with technology in the classroom. A text was sent asking educators to participate in a survey for his capstone project. The introduction to the survey states:

“My name is Mohammed Alanazi, and I'm a student at the University of Central Florida in the USA. I'm working on my project about The Impact of Technology on Students Learning in Primary School (The First Grades). If you please complete this survey, *I would appreciate it very much. Thank you in advance.* “

Data Collection and Analysis

Google online software, Microsoft Excel, and IBM SPSS Statistics were used to analyze the participant's responses to questions 1-9, 11-27, and 30-31. Questions 10 and 32 are a short answer response. Questions 28 and 29 are a checkbox response.

Results and Interpretation

The main purpose of this study is to teachers' viewpoints regarding the use of technology in for instruction and student use of technology. This section discusses the results from 205 Saudi Arabian 1st-12th school teachers.

Teacher Perceptions on the Use of Technology of Students Learning.

- Interaction, Enjoyment, and Enthusiasm for learning. The teachers' perceptions regarding the use of technology in the classroom increase students' interaction and enthusiasm for learning: the responses participant's responses for question 11 showed that 94.7% (194) of the educators strongly agree and agree that the use of technology in the classroom increases students' interaction and enthusiasm for learning. In comparison, 2% (4) disagree that the use of technology increases students' interaction and enthusiasm.

For Question 13, “the use of technology in education increases the enjoyment of learning for elementary students,” 60.5% (124) educators strongly agree with the statement, while 1% (2) objected, and 7.8% (16) took a neutral stance.

-The individual differences between students and visualize abstract concepts.

According to the results of Question 12, “The use of technology helps to consider the individual differences between students as each student spends the time necessary to learn individually.” Most respondents agreed and strongly agreed with the statement 72.2% (148), 16 teachers disagreed and strongly disagreed with the statement while 41 remained neutral.

For Question 14, overwhelmingly, 87.3% (179) teacher respondents agreed or strongly agreed that Technology helps the student visualize abstract concepts. while 2.5% (6) objected, and 10.2% (21) took a neutral stance.

-Access to technology for students. Regarding technology enables students to learn all the time, from anywhere, via mobile devices in Question 15, 88.2 % (181) educators believe that technology enables students to learn all the time, from anywhere, while 2 % (4) disagree, and 1% (2) strongly disagree, and 8.8% (18) remain neutral.

According to the results of Question 16, “Technology facilitates access to more educational resources.” Most respondents agreed and strongly agreed with the statement 94.1% (193), 4 teachers disagreed, and 1 teacher strongly disagreed with the statement while 7 remained neutrals.

-Using technology to improve reading and writing skills. According to the results of Question 17, “Technology contributes to developing reading and writing skills through the use of electronic educational games.” Most respondents agreed and strongly agreed with the statement 63.9% (131), while 15.6% (32) objected, and 20.5% (42) took a neutral stance.

Concerning Q18, “Technology contributes to developing writing skills by using the keyboard instead of the stylus.” According to the responses, 42.9% (88) teachers strongly agree and agree with the statement, while 11.2% (23) of teachers strongly disagree, 24.9% (51) disagree, and 21% (43) stated in a neutral stance.

The survey question 19 asked teachers if the technology contributes to developing writing and learning skills through word processing applications and which helps students to correct spelling errors and correct grammar in a sentence

automatically, almost half respondents agreed and strongly agreed with the statement 52.5% (108), 17.6% (36) teachers disagreed, and 15 teachers strongly disagreed with the statement while 46 remained neutral.

For Question 20 “Technology contributes to making the materials easy to learn using various programs to help students learn different topics easily.”, overwhelmingly, 88.7% (182) teacher respondents agreed or strongly agreed with the statement, while 1 teacher strongly disagree, 2 disagree, and 9.8% (20) stated in a neutral stance.

Based on teachers’ responses to a set of questions on the Use of Technology of Students Learning, the use of technology in education increases the fun and enthusiasm of students to learn and participate, which leads to an increase in motivation to learn. It also contributes to taking into account individual differences but using them to learn writing skills is not an essential and highly effective thing.

Teachers’ relationship towards technology in the Classroom.

-The use of technology among teachers. According to the results of Question 21, “I use educational technology in teaching.” Most respondents Always and Often with the statement 73.6% (151), while 2.4% (5) respondents Never, and 24% (49) respondents Sometimes and Rarely.

Concerning Question 22, “I use the Internet to send and receive homework for students.” According to the responses, 22% (45) of teacher respondents Always and Often with the statement, while 35.1% (75) of teacher respondents Never, and 42.9% (88) respondents Sometimes and Rarely.

For Question 23 “Technology and its use in teaching my students are essential and indispensable,” overwhelmingly, 65.4% (134) teacher respondents

Always and Often with the statement, while 3.4% (7) teacher respondents Never, and 31.2% (64) respondents Sometimes and Rarely.

The survey Question 24 asked teachers if they use technology to daily assess my students and monitor their grades in the classroom, According to the responses, 38.5% (39) of teacher respondents Always and Often with the statement, 16.6% (34) teacher respondents Never, and 44.9% (92) respondents Sometimes and Rarely

-Communication with parents via technology. For Question 27 “I use technology (communication programs such as WhatsApp, etc.) to communicate with parents.”, nearly the half, 52.6 % (108) teacher respondents Always and Often with the statement, while 15.1% (31) teacher respondents Never, and 32.2% (66) respondents Sometimes and Rarely.

-Teachers' knowledge of technology and training. The teachers' perceptions regarding having the ability and knowledge to use educational technology: the responses participant's responses for question 30 showed that 85.8% (176) of the educators answered: Always and Often. In comparison, 1% (2) respondents Never, and 13.1% (27) respondents Sometimes and Rarely.

For Question 31, “I make sure to attend training technology education courses” overwhelmingly, 65.4% (134) teacher respondents Always and Often with the statement, while 3.9% (8) teacher respondents Never, and 30.7% (63) respondents Sometimes and Rarely.

-Availability of internet and technology in the classroom. For Question 25, “Internet service is available within the classroom.” According to the responses, 22.5% (46) of teacher’s respondents Always and Often with the

statement, while 43.4% (89) of teacher's respondents Never, and 34.1% (80) respondents Sometimes and Rarely.

In Figure 2 the top three techniques chosen by educators as technology techniques they use in the classroom are Projector, Presentations, and Laptop.

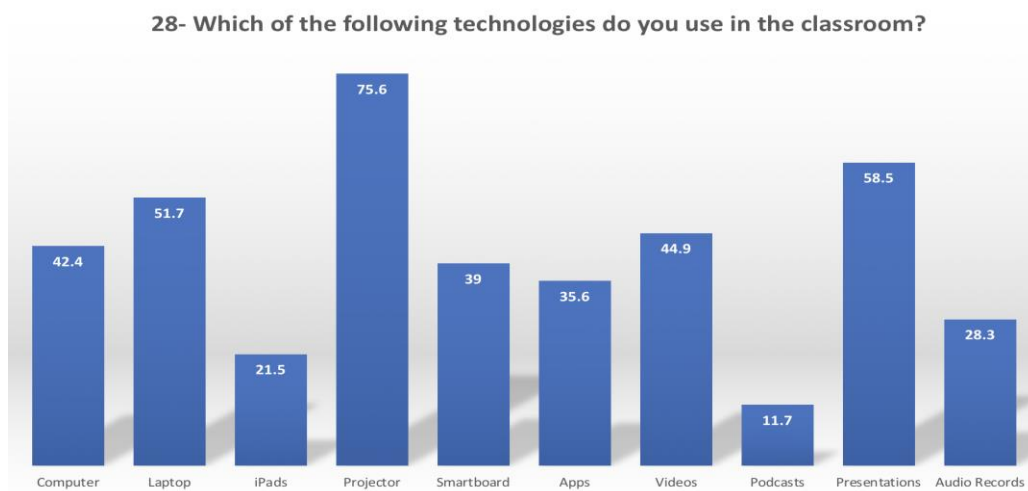


Figure 2. *Technology used in classroom*

In Figure 3 the top three techniques educators would recommend to have in the classroom are educators as technology techniques they use in the classroom are Smartboard, Projector Computer.

29- Which of the following technologies would you recommend in the classroom?

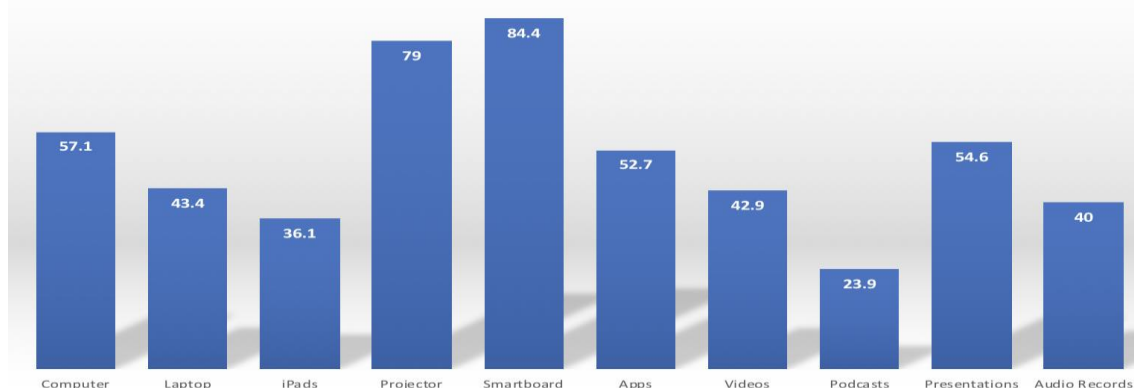


Figure 3. Recommended Technology for classroom

Based on teachers' responses to a set of questions on their relationship towards technology in the Classroom, the majority of educators use technology in education and believe in its importance and note the increased achievement of students using it. Teachers use technology to present lessons, but they have very little use in sending assignments or daily assessments, and they do not use them frequently in communicating with parents. Through the survey, the teachers expressed a great desire to join the training courses.

-Written Responses. In the survey, question 32 provided a space that depends on the educators' opinion. Based on teachers' notes that monitored, which numbered 57, it was divided into categories: Category 1 had 27 notes that take a neutral stance that the educators have no additives other than the word "thank you" or "no addition". Category 2 had 3 that the educators stated that Instructional techniques are essential and positive to increase student learning.

Category 3 had 5 responses that the use of educational techniques is essential in the first grades of student learning. Category 4 had 3 responses that the educators must use technology correctly to achieve goals. Category 5 the number of responses reached 8, that Educational technologies are not available in some schools and must be provided. Category 6 had 4 that the Teaching techniques are useful, but traditional methods are indispensable for teaching reading and writing. Category 7 the number of responses reached 26, and they demand to provide more training courses in the use of educational techniques. Category 8 had 2 responses that Parents are unaware of the importance of educational techniques.

Recommendations

Based on the researchers' results and the literature on the use of technology in the classroom the recommendations are the following:

Reading about new teaching techniques. Teachers must periodically review all new technology-related because it is continuously evolving, and they must know its importance in their teaching.

Use of technology for evaluation. Technology facilitates and organizes the teacher's work, so it provides a service for teachers and students. Many evaluation monitoring applications facilitate work and be an excellent alternative to paper records.

Training Courses. There should be more training courses related to education technology and enable all teachers to enroll in it.

Availability of internet and technology. Schools must be prepared to become more technical, providing them with all available educational technologies, and providing the Internet.

Conclusion

This study indicates the impact of technology on improving learning. Kingdom of Saudi Arabia has half a million teachers at least, and the government yearly pay billions to education. This study specifically addressed the teacher's perceptions of the Use of Technology of Students Learning and their relationship with technology.

The teachers overall have strong positive beliefs on the use of technology as a powerful tool for education because it increases the fun and enthusiasm of students to learn and participate, which leads to an increase in motivation to learn. It also contributes to taking into account individual differences. Besides, the survey supported the majority of educators using technology in education, and they believe in its importance and note the increased achievement of students using it. Teachers usually use technology to present lessons. There were still some issues or concerns about teachers' ability to use technology in first grades and about the availability of technology.

While technology has led to pivotal to support teachers and students globally in the 21st Century as well as the 2030 Vision, we need to realize the importance that teachers and schools need to learn how to gather and assess the right kind of technology. Educators need to feel they are providing their students with technology that will enable learning success. Additionally, teachers and schools need a logical, balanced and reflective technology plan that will support high quality and effective teaching and learning for all our students.

References

- Bill Cope & Mary Kalantzis (2009) "Multiliteracies": New Literacies, New Learning, *Pedagogies: An International Journal*, 4:3, 164-195
- Boche, B., (2019). A critical analysis of technology's impact on teacher's views of literacy learning and teaching: A continuum of understandings. *Journal of Literacy and Technology*, 20(4), 3-10.
- Cordes, C., & Miller, E. (Eds.). (2000). Fool's gold: A critical look at computers in childhood. *College Park, MD: Alliance for Childhood*.
- Cviko, A., McKenney, S., & Voogt, J. (2012). Teachers enacting a technology-rich curriculum for emergent literacy. *Educational Technology Research and Development*, 60(1), 31–54.
- Hutchison, A., & Woodward, L., (2014). A Planning Cycle for Integrating Digital Technology Into Literacy Instruction. *The Reading Teacher*, 67(6), pp. 455-464
- Jacobs, G. E. (2013). Multi, digital, or technology?. *Journal of Adolescent & Adult Literacy*, 57(2), 99-103
- Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge?. *Contemporary Issues In Technology And Teacher Education (CITE Journal)*, 9(1), 60-70.
- Kucirkova, Natalia. (2017). Digital Personalization in Early Childhood: Impact on Childhood (First ed.). *Bloomsbury Academic*.
- McGrail, E. (2006). " It's a double-edged sword, this technology business": Secondary English teachers' perspectives on a schoolwide laptop technology initiative. *The Teachers College Record*, 108(6), 1055-1079.
- Miller, E. (2005). Fighting technology for toddlers. *Education Digest*, 71(3), 55–58.
- Mishra, P., & Koehler, M. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *The Teachers College Record*, 108(6), 1017-1054.

- Neuman, S. B., Newman, E. H., & Dwyer, J. (2011). Educational Effects of a Vocabulary Intervention on Preschoolers' Word Knowledge and Conceptual Development: A Cluster-Randomized Trial. *Reading Research Quarterly*, 46(3), 249–272.
- New London Group. (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review*, 66(1), 60-92.
- Paciga, K. A., & O'Brien, L. M., & Kucirkova, N., & O'Clair, A. O., (2019). Digital Resources in Early Childhood Literacy Development. *International Literacy Association*, 9449, 2-9.
- Roseberry, S., Hirsh-Pasek, K., & Golinkoff, R.M. (2014). Skype me! Socially contingent interactions help toddlers learn language. *Child Development*, 85(3),956–970.
- Rowell, J., Kosnik, C., & Beck, C. (2008). Fostering multiliteracies pedagogy through preservice teacher education. *Teaching Education*, 19(2), 109-122.
- Ruday, S., Conradi, K., Heny, N., & Lovette, G. (2013). "You can't put the genie back into the bottle": English teachers' beliefs and attitudes regarding digital literacies in the classroom. In P.J. Dunston, S.K. Fullerton, C.C. Bates, P.M. Stecker, M.W. Cole, A.H. Hall, D. Herro, & K.N. Headley (Eds.), *Sixty-second yearbook of the Literacy Research Association* (pp. 198-215). Altamonte Springs, FL: *Literacy Research Association, Inc.*
- Savvidis, P. (2016, February 18). *Top 6 benefits of using technology in the classroom*. School Jotter. <https://www.webanywhere.co.uk/blog/2016/02/top-6-benefits-technology-classroom/>
- Wikipedia. (2009, February 13). *Multiliteracy*. Wikipedia, the free encyclopedia. Retrieved June 6, 2022, from <https://en.wikipedia.org/wiki/Multiliteracy>

Appendix A

استبانته بحث حول أثر استخدام التكنولوجيا التعليمية على قدرة طلاب الصفوف الأولية على التعلم بالمملكة العربية السعودية.

A research survey about The Impact of Technology on Students Learning in Primary School (the First Grades) in the Kingdom of Saudi Arabia.

السلام عليكم ورحمة الله وبركاته
أرجو المساعدة والمشاركة بتعبئة هذا الاستبيان بعنوان "بحث حول مدى تأثير استخدام التكنولوجيا التعليمية على قدرة طلاب الصفوف الأولية على التعلم بالمملكة العربية السعودية"، والذي لن يستغرق وقتا كبيرا بإذن الله، مع خالص الشكر والتقدير. المبتعث محمد مقبل العنزي (برنامج خبرات في جامعة وسط فلوريدا – الولايات المتحدة الأمريكية).
My name is Mohammed Muqbil Alanazi and I'm a student at the University of Central Florida in the USA. I'm working on my project about The Impact of Technology on Students Learning in Primary School (the First Grades). If you would please complete this survey, I would appreciate it very much. Thank you in advance.

Section 2 of 4

١ - الجنس؟	
Q1: Gender?	
Female / أنثى	Male / ذكر

٢ - هل أنت معلم/معلمة صفوف أولية؟	
Q2: Are you a first grades teacher?	
No / لا	Yes / نعم

٣ - كم عدد سنوات خدمتك في التعليم؟					
Q3: How long have you been teaching?					
0-5 Years ٥-٠ سنوات	6-10 Years ٦-١٠ سنوات	11-15 Years ١١-١٥ سنة	16-20 Years ١٦-٢٠ سنة	21-25 Years ٢١-٢٥ سنة	26-30 Years ٢٦-٣٠ سنة

٤ - كم عدد سنوات خدمتك بالتعليم في الصفوف الأولية؟					
Q4: How long have you been teaching First Grades?					
None لا يوجد	0-5 Years ٥-٠ سنوات	6-10 Years ٦-١٠ سنوات	11-15 Years ١١-١٥ سنة	16-20 Years ١٦-٢٠ سنة	More than 20 Years أكثر من ٢٠ سنة

٥ - ماهو الصف الدراسي الذي تقوم بتدريسه حالياً؟			
Q5: What is the class you are currently teaching?			
First Grade الصف الأول الابتدائي	Second Grade الصف الثاني الابتدائي	Third Grade الصف الثالث الابتدائي	Another Grade مرحلة أخرى

٦- ماهي المواد الأساسية التي تدرسها لطلاب الصفوف الأولية؟ Q6: What are the basic subjects you teach to First Grade students?	
Language and religion لغة عربية ودين	Arts OR Sport تربية فنية أو تربية بدنية
Mathematics OR sciences رياضيات أو علوم	I'm not firsts grades teacher لا أدرس الصفوف الأولية

٧- ما هو أعلى مؤهل تعليمي حصلت عليه؟ Q7: What is your highest level of education?			
Diploma Degree درجة الدبلوم	Bachelor Degree درجة البكالوريوس	Master Degree درجة الماجستير	Doctorate Degree درجة الدكتوراه

٨- هل تدرس في مدرسة خاصة أو حكومية؟ Q8: Do you teach at a private or public school?	
Public School / مدرسة حكومية	Private School / مدرسة خاصة

٩- ما نوع المدرسة التي تدرس بها؟ Q9: What type of school do you teach in?		
Rural School مدرسة تقع في منطقة نائية	Village School مدرسة تقع في قرية	City School مدرسة تقع في مدينة

١٠- المدينة أو القرية التي تدرس بها. Q10: What city or village you teach in.		
Rural School مدرسة تقع في منطقة نائية	Village School مدرسة تقع في قرية	City School مدرسة تقع في مدينة

Section 3 of 4

وجهة نظر المعلمين حول استخدام التكنولوجيا لتعليم الطلاب.

Teacher Perceptions On the Use of Technology Of students learning.

يرجى قراءة العبارات التالية واختيار الرد الأفضل الذي يعكس مستوى موافقتك.

Please read the following statements and select the one response that best reflects you level of agreement.

١١- استخدام التكنولوجيا داخل الفصل يزيد من تفاعل الطلاب وحماسهم للتعلم. The use of technology in the classroom increases students 'interaction and enthusiasm for learning.				
Strongly Agree موافق بشدة	Agree موافق	Neutral محايد	Disagree غير موافق	Strongly Disagree غير موافق بشدة

١٢ - استخدام التكنولوجيا يساعد في مراعاة الفروق الفردية بين الطلاب حيث يقضي كل طالب ما يلزمه من وقت للتعلم بشكل فردي. The use of technology helps to consider the individual differences between students as each student spends the time necessary to learn individually.				
Strongly Agree موافق بشدة	Agree موافق	Neutral محايد	Disagree غير موافق	Strongly Disagree غير موافق بشدة

١٣ - استخدام التكنولوجيا في التعليم تزيد من متعة التعلم لطلاب الصفوف الأولية. The use of technology in education increases the enjoyment of learning for elementary students.				
Strongly Agree موافق بشدة	Agree موافق	Neutral محايد	Disagree غير موافق	Strongly Disagree غير موافق بشدة

١٤ - تساهم التكنولوجيا في مساعدة الطالب على تخيل المفاهيم المجردة. Technology helps the student visualize abstract concepts.				
Strongly Agree موافق بشدة	Agree موافق	Neutral محايد	Disagree غير موافق	Strongly Disagree غير موافق بشدة

١٥ - التكنولوجيا تتيح التعلم للطلاب طوال الوقت ومن أي مكان عن طريق الأجهزة المحمولة. The technology enables students to learn all the time, from anywhere, via mobile devices.				
Strongly Agree موافق بشدة	Agree موافق	Neutral محايد	Disagree غير موافق	Strongly Disagree غير موافق بشدة

١٦ - التكنولوجيا تسهل إمكانية الوصول إلى موارد تعليمية أكثر. Technology facilitates access to more educational resources.				
Strongly Agree موافق بشدة	Agree موافق	Neutral محايد	Disagree غير موافق	Strongly Disagree غير موافق بشدة

١٧ - تساهم التكنولوجيا في تطوير مهارات القراءة والكتابة من خلال استخدام الألعاب الإلكترونية التعليمية Technology contributes to developing reading and writing skills through the use of electronic educational games				
Strongly Agree موافق بشدة	Agree موافق	Neutral محايد	Disagree غير موافق	Strongly Disagree غير موافق بشدة

١٨ - تساهم التكنولوجيا في تطوير مهارات الكتابة من خلال استخدام لوحة المفاتيح بدلاً من القلم
Technology contributes to developing writing skills by using the keyboard instead of the stylus.

Strongly Agree موافق بشدة	Agree موافق	Neutral محايد	Disagree غير موافق	Strongly Disagree غير موافق بشدة
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١٩ - تساهم التكنولوجيا في تطوير مهارات الكتابة والتعلم من خلال تطبيقات معالجة النصوص التي تعين الطلاب على تصحيح الأخطاء الإملائية تلقائياً وتصحيح القواعد في الجملة.
Technology contributes to developing writing and learning skills through word processing applications that help students to correct spelling errors and correct grammar in a sentence automatically.

Strongly Agree موافق بشدة	Agree موافق	Neutral محايد	Disagree غير موافق	Strongly Disagree غير موافق بشدة
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٢٠ - تساهم التكنولوجيا في جعل المواد سهلة التعلم باستخدام البرامج المختلفة لمساعدة الطلاب في تعلم الموضوعات المختلفة بسهولة
Technology contributes to making the materials easy to learn using various programs to help students learn different topics easily.

Strongly Agree موافق بشدة	Agree موافق	Neutral محايد	Disagree غير موافق	Strongly Disagree غير موافق بشدة
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Section 4 of 4

علاقة المعلم بالتكنولوجيا داخل الصف.

Teachers relationship towards technology in the Classroom .

يرجى قراءة العبارات التالية واختيار الرد الأفضل الذي يعكس مستوى موافقتك.

Please read the following statements and select the one response that best reflects you level of agreement.

٢١ - استعمل التقنيات التعليمية في التدريس
I use educational technology in teaching.

ALWAYS دائماً	OFTEN غالباً	SOMETIMES أحياناً	RARELY نادراً	NEVER أبداً
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٢٢ - استخدم الانترنت في ارسال واستقبال الواجبات المنزلية للطلاب.
I use the Internet to send and receive homework for students.

ALWAYS دائماً	OFTEN غالباً	SOMETIMES أحياناً	RARELY نادراً	NEVER أبداً
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٢٣ - التكنولوجيا واستخدامها في تدريس طلابي شيء أساسي لا يمكن الاستغناء عنه.
TECHNOLOGY AND ITS USE IN TEACHING MY STUDENTS ARE ESSENTIAL AND INDISPENSABLE.

Strongly Agree موافق بشدة	Agree موافق	Neutral محايد	Disagree غير موافق	Strongly Disagree غير موافق بشدة
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٢٤ - استخدم التكنولوجيا في التقييم اليومي لطلابي ورصد درجاتهم داخل الفصل.
I USE TECHNOLOGY TO DAILY ASSESS MY STUDENTS AND MONITOR THEIR GRADES IN THE CLASSROOM.

ALWAYS دائماً	OFTEN غالباً	SOMETIMES أحياناً	RARELY نادراً	NEVER أبداً
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٢٥ - تتوفر خدمة الانترنت داخل الفصول الدراسية.
Internet service is available within the classroom.

ALWAYS دائماً	OFTEN غالباً	SOMETIMES أحياناً	RARELY نادراً	NEVER أبداً
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٢٦ - لاحظ تحسن في المستوى الدراسي لطلابي عند استخدام التكنولوجيا في شرح الدروس
THE ACADEMIC LEVEL INCREASES FOR STUDENTS WHEN USING TECHNOLOGY TO EXPLAIN LESSONS.

ALWAYS دائماً	OFTEN غالباً	SOMETIMES أحياناً	RARELY نادراً	NEVER أبداً
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٢٧ - استخدم التكنولوجيا (برامج التواصل كالتواتس اب وغيره) في التواصل مع أولياء الأمور.
I USE TECHNOLOGY (COMMUNICATION PROGRAMS SUCH AS WHATSAPP, ETC.) TO COMMUNICATE WITH PARENTS.

ALWAYS دائماً	OFTEN غالباً	SOMETIMES أحياناً	RARELY نادراً	NEVER أبداً
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٢٨ - أي من التقنيات التالية تستخدمها داخل الصف الدراسي؟ اختر كل ما ينطبق:
Which of the following technologies do you use in the classroom? Choose all the apply:

Computer	<input type="checkbox"/>	جهاز الحاسوب	Apps	<input type="checkbox"/>	التطبيقات التعليمية
Laptop	<input type="checkbox"/>	جهاز الحاسوب المحمول	Videos	<input type="checkbox"/>	الفيديوهات
iPads	<input type="checkbox"/>	أجهزة الأيباد	Podcasts	<input type="checkbox"/>	المدونات الصوتية
Projector	<input type="checkbox"/>	جهاز العرض البروجيكتور	Presentations	<input type="checkbox"/>	عروض البوربوينت
Smartboard	<input type="checkbox"/>	السطرة الذكية	Audio Records	<input type="checkbox"/>	التسجيلات الصوتية

٢٩- أي من التقنيات التالية تتصح بتوفيرها داخل الصف الدراسي؟ اختر كل ما ينطبق:

Which of the following technologies would you recommend in the classroom? Choose all that apply:

Computer	<input type="checkbox"/>	جهاز الحاسوب	Apps	<input type="checkbox"/>	التطبيقات التعليمية
Laptop	<input type="checkbox"/>	جهاز الحاسوب المحمول	Videos	<input type="checkbox"/>	الفيديوهات
iPads	<input type="checkbox"/>	أجهزة الآيباد	Podcasts	<input type="checkbox"/>	المدونات الصوتية
Projector	<input type="checkbox"/>	جهاز العرض البروجيكتور	Presentations	<input type="checkbox"/>	عروض البوربوينت
Smartboard	<input type="checkbox"/>	السطح الذكي	Audio Records	<input type="checkbox"/>	التسجيلات الصوتية

٣٠- امتلاك القدرة والمعرفة اللازمة لاستخدام التكنولوجيا التعليمية.

I have the ability and knowledge to use educational technology.

ALWAYS دائماً	OFTEN غالباً	SOMETIMES أحياناً	RARELY نادراً	NEVER أبداً
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٣١- احرص على حضور دورات تكنولوجيا التعليم التدريبية.

I make sure to attend training technology education courses.

ALWAYS دائماً	OFTEN غالباً	SOMETIMES أحياناً	RARELY نادراً	NEVER أبداً
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٣٢- هل ترغب بإضافة ملاحظات حول تكنولوجيا التعليم وتأثيرها على التحصيل الدراسي للطلاب.

Would you like to add notes on educational technology and its impact on student achievement?

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