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**TEACHERS' PERCEPTIONS OF TECHNOLOGY USE IN THE CLASSROOM**

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**Abstract:** All levels of education seem to be highly affected by the presence of technology in the classroom. The overall impact of technology in education is discussed and researched both in developing and developed countries especially in the last decade. There are different opinions on this matter, but it is definitely unavoidable as a process. We want it or not, learners/pupils are closely connected to technology and we can't change it. Undoubtedly, developing and developed countries discuss technology from different viewpoints and angles. This is due to the costs that technology includes. For instance researchers and tech moguls in the developed parts of the world discuss about artificial intelligence and how to incorporate it into education, while developing countries still discuss about having or not computers in the classroom. This tells a lot about the different level of technology use in different countries around the world. Since Macedonia is still a developing country, the focus of the paper is mainly whether we should or shouldn't use technology in all levels of education. The paper aims to offer opinions of teachers regarding technology in the classroom. The pros and cons of technology in the classroom are constantly being changed but regardless of everything, technology is part of modern teaching and teachers should find a way to balance between traditional teaching and modern one. This research is a qualitative one conducted through a survey. The tool used was a questionnaire sent out via email to 40 teachers of different educational institutions, elementary schools, high schools and colleges too; in Macedonia, Kosovo and Albania. There are 10 closed-ended questions. Few of the following questions are part of the questionnaire: How do they (teachers) assess technology in general?, Do they see it as helpful or harmful in their job?, Do they believe technology in the classroom enhances lifelong learning?, etc. The data are presented in charts and tables. The results aim to give a general opinion of teachers of the region about this important issue in education. As a trademark of the last two decades, technology is welcome in developing countries but at the same time there is a huge need of financial support as the main source of providing technology. Moreover, a lot of trainings, professional development of teachers and a lot of technical support is also truly necessary.

**Keywords:** technology, developing countries, teachers, teaching.

**INTRODUCTION AND LITERATURE REVIEW**

Technology and its effects in the educational environment have been discussed a lot by many researchers and scholars especially in the last decade. Notwithstanding the presence of technology earlier but the last decade has witnessed loads of quick changes in the world of digitalization and technology. There are some developed countries in the world where technology is involved in every part of education and its evolving even more. This is closely related to the spread of technology in the everyday life of people of all ages, but young people mostly. They are surrounded by technology and have become dependent of it. The fact that society is surrounded by technology tells us that society itself encourages the incorporation of technology in education. Supporting this idea, Mikre (2011), points out that "Because Information and Communication Technologies provide both students and teachers with more opportunities in adapting learning and teaching to individual needs, society is, forcing schools aptly respond to this technical innovation". Of course, when we say technology it does not mean computers only but many types of devices. Undoubtedly, mobile devices are the most used technology device among young people. According to Pew Research Center as of January 2017, 95 % of Americans use a mobile phone, while 75% of them are Smartphone users and connected to the internet. This shows the wide spread of mobile devices which are now used in classrooms for educational purposes too. Unfortunately, there are no official statistics about the number of mobile users in the Balkans, which would give us a hand in the study.

However, since Macedonia, Kosovo and Albania are developing countries the access to technology is different. In addition, because of financial limits the only devices used for educational purposes in schools in this region are the computers. It is a huge challenge to incorporate technology in education when there are financial obstacles. The will of teachers to use technology is not enough if there is no financial support from the school and necessary preparations. Mikre (2011), thinks that there is already a huge gap of differences between developing and developed countries. If the challenges will not be met there will be further deepening of the differences. Meenakshi (2013) believes that it is very important for developing countries to invest in incorporating ICT in education because

of the beneficial impact and results. Furthermore, he states that it is good to start by implementing ICT tools from an early age- primary education. According to him “At the primary level, young minds are enlightened to accept new ideas, show creativity, develop critical thinking and above all, enable themselves to absorb surrounding information for informed decision-making at any later stage in life” (2013). Aware of the tough challenges, Klopfer et al., claim that “Adopting and integrating technology-based instructional strategies has a long history of challenges, but with it has come a great understanding of how to achieve success with them” (2009). According to them, technology and education are closely related and if we don’t use them together we as teachers might cause a disconnection “[b]etween the way students are taught in school and the way the outside world approaches socialization, meaning-making, and accomplishment” (3). On the other hand, Gorder (2008) indicates that “Effective integration of technology is the result of many factors, but the most important factor is the teachers' competence and ability to shape instructional technology activities to meet students' needs” (63). He believes that teachers don’t use technology in an effective way. In order to fully incorporate technology in the classroom there is a long way of training and practicing to be done.

A study in 1999 by Schacter, based on few stages shows that technology impacts student’s achievements in positive and negative aspects. Schacter believes that when students receive computer based instructions they learn more and quickly. He also states that new generations of learners develop more positive attitudes when they have computers included in their teaching-learning process. However, he also mentions some negative findings related to the impact of technology. This makes students acquire easily what is presented and even remember it longer. He believes that technology will always be in service to learning as long as important details are considered. The latter include the nature of learners, learning environment, technology capacity and professional competency. Still, if the learning objectives and aims are unclear, technology is less effective or ineffective and its use is diffuse. Schacter also lists possible ways for changes in education which should be considered by policymakers and governors. Those attempts are such as class size reduction, early childhood education, new methodology and different teacher trainings. Besides all these possibilities and changes, the eyes of the educators and legislators are turned to technology. He adds that the learning environment is becoming needier of computers and technology, especially because young learners are growing up in a computed world and environments. In addition to that, he writes that many factors play a role in concluding whether technology is negative or not. Few of these are student’s population, the educator’s role, software design, the level teacher’s preparation etc.,

Marshall (2002) claims that technology in education is a way to learn things you can’t learn in other forms, and get to places you have never been. According to him, “[e]xtensive research into learning with technology provides conclusive evidence that people can, and do, learn from educational technologies” (7). He also adds that any form of technology presented with a purposeful content helps students learn new things or attach the information to what is already learned.

Cope and Ward (2002) state that more experienced teachers find technology less helpful and they are not eager to use it in their classroom. This is maybe due to the lack of enough preparation on how to properly use it. There are teachers who use technology because they are obliged to, mostly because of administrative reasons. According to Mundy et al., teachers are not really prepared for the quick changes in the classroom. Their study reveals that according to students, many teachers use technology once a week only. These teachers have not gone under necessary professional trainings and this makes them be in doubt about their role in the classroom when technology is used.

As previously mentioned, there are scholars and teachers who argue about the positive role of technology in education. Psychogios et al. (2008) think that technology can leave a negative impact on education, especially in lifelong learning. This is because of the created “conceivable problems of adaptation” met in the educational process (431). Moreover, they add that students or trainees are not ready to be part of this technologically controlled environment. The reasons behind this are: adaption of the students to a new way of learning; high level of self-discipline and motivation. These elements are closely related to the “traditional perceptions of certain teachers, and the general negative attitude towards changes” (433). Their study shows that “man-to-man communication” is more fruitful than the involvement of technology (435). Similarly, Subrahmanyam et al. (2001), see possible harm in using technology in education. According to them, young learners create unreal life settings and can’t manage to make the difference between learning and entertainment. It is hard for them to “survive” in an environment where there is no technology because they consider it a must have component in their everyday life. So, according to them, if students are surrounded by technology at home, outside and at school they will not be able to function without the presence of it.

**PURPOSE AND METHODS**

The purpose of this study is to show the views of teachers in Macedonia, Albania and Kosovo related to the technology use in the classroom. Their answers present their perceptions on the effectiveness of technology, the necessity to use it in education and the impact of its presence in the classroom. It does not include observations but personal perceptions which are taken from their answers in the survey.

The research question of the study is:

*“Do teachers see technology helpful in the teaching process?”*

A questionnaire consisted of 10 questions was sent to teachers via email following a snowball technique. It was anonymous and the discussions of the answers are below. Few teachers shared the survey to other teachers in different institutions and the answers were automatically sent online.

**DISCUSSIONS**

The teachers who took part in the survey work at different schools and different places but their job is the same anywhere they teach. Their answers show their general opinions on few issues concerning technology in the classroom and its impact. It is hard to come to conclusions with only 40 teachers and few general questions with yes or no answers, but it still gives an overview of this over-discussed topic in the last few years.

The age of teachers is not important when all of them do the same job but it was included in the survey just to see if there is any type of correlation with the answers. Only 5 participants, (12.5%) were younger than 30 years old. Twenty seven participants, (67.5%) were aged between 30-40 and the rest, 8 of them (20 %) were over 40 years old. From the results, 24 teachers, 60% of the participants in the survey use technology in the classroom, contrary to 40% of them who don't. Due to time limitations of conducting the survey we don't know the reasons behind not using technology in the classroom by this 40 %. Of course there is room to think that these teachers don't want to use technology in their classroom but there is also possibility that there is lack of technology in their teaching environments. It is important to bear in mind that not all teachers in all schools of all different levels of education have the same access to technology. According to Wajszczyk, “Access to an adequate and satisfactory ICT infrastructure is one of the most significant factors that contribute to the successful and effective utilization of IT in all subjects and for all learners” (11). So, if the schools in the region do not offer teachers appropriate conditions of technology oriented classroom, they can't expect teachers to incorporate technology in the classroom with their own expenses.

Technology can't really be used nowadays if there is no internet connection. In the question “Is your classroom environment connected to internet?”, 17 of the participants, 42.5% said yes and unfortunately, 23 of them, 57.5% of them chose no as an answer. The previous answers and these ones match and this means that almost all of them who use technology in the classroom are also connected to the internet. This can also be an indicator that those who don't use technology maybe don't have access to internet and this limits them with technology use.

Similar results are noticed in another pair of questions, such as: “Does technology increase students' academic achievement?” and “Does technology enhance lifelong learning?”. Twenty eight teachers in the first one, and twenty seven in the second one said yes, while 12 of them in the first one and 13 teachers in the second one said no. Laal, (2011) indicates that lifelong learning can be made a reality through technology. According to him, “With electronic tools, people can learn virtually anytime and anyplace they choose without obstacles .Technology makes learning a private and personal experience and seems to motivate learners.” (441).

There are totally different answers in the question “Does technology improve students' communication skills?”. Only 12 of the participants agreed while 28 of them chose no as an answer. This means that teachers agree that technology increases student's academic achievements and enhances lifelong learning, but communication skills are not positively impacted by it.

Finding and meeting the proper learning styles that fit the learners is a very challenging and hard part of the teaching process. Some teachers maybe find technology helpful here but not all of them do. For instance, in the question “Does it help in finding student's personal learning styles?”, only 11 participants agreed while 29 of them disagreed. Another question in the survey was “Does technology enhance your professional development?” and not so surprisingly, only eleven of them (27.5%) said yes, while 29 of them (72.5%) said no. According the teacher participants in our survey, technology does not help them develop and grow professionally. But, does it interfere in their role in the teaching environment? This is undoubtedly one of the most discussed and researched issues by teachers and educators. Unofficially said, more experienced teachers and older ones are somehow “afraid” that technology might take their place. Wajszczyk (2014), says that the changes in teacher's role are inevitable and irreversible. According to him, “It is no longer sufficient for the teachers to be only an educational authority that transfers the knowledge to the students” (15). He also adds that “[c]ompared with the traditional roles of educators,

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the ICT-based environment does not solely focus upon the dispersal of learning (15)". In the question, "Does technology change the role of the teacher?", 21 participants, (52.5%) agreed while 19 of them, (47.5%) disagreed. Similar percentages are noticed in the question "Can technology reduce the number of teachers employed in the future?", where 19 of the participants said yes and 21 of them said no.

Last, but definitely not least the closing question was "is technology helpful in the classroom", which is at the same time the research question of the study. Out of 40 participants, 26 said yes and 14 of them said no.

## CONCLUSION

As previously mentioned, it is not easy to come to conclusions when a small group of people is included in a survey. According to the answers of teachers in the survey, it seems like they agree with the effectiveness of technology in education. Initially, most of the participants agree technology increases student's academic achievements. Besides this, teachers also think technology enhances lifelong learning which is one of most important aims of learning in general. However, the answers showed that the participants in the survey do not think the same regarding communication skills. They disagree that technology has positive impact in developing communication skills at young people, and if this is true there is definitely more work to be done to find a way how to improve it. Communication skills are the types of skills which are not only important while learners are going to school, but afterwards too. The labor market is looking for people who are good at communication skills no matter the type of job being offered. As expected, teachers agree that technology will change the role of the teacher in the future and will probably reduce the number of the teachers in the future. What is crucial, the majority of participants believe that technology is helpful in the classroom, since this was the point where this research was focused on. It is very important for teachers to accept the fact that technology is not taking their place but it is redefining their roles in the classroom. When the importance of technology is noticed by teachers, it will become easier for them. Technology should be seen as a very effective way to widen educational opportunities. Additionally, there is an immense need for professional development sessions and appropriate trainings which could take the best out of teachers and give the best possible to the learners. Administrators and legislators should learn that it takes time for teachers to integrate technology in the classroom because it takes a long time to plan, learn and prepare. It is all about creating a harmony between the traditional and basic forms of teaching integrated with technology. This will make students more attracted to learning. Regardless of the answers received and conclusions made, there is still need for further research where deeper analysis more concrete conclusions could be made. A larger scope of participants and qualitative interviews would also be better in coming to more fruitful conclusions.

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Appendix

*Table of questions included in the questionnaire*

	Questions	Yes	No
1	Do you use technology in your classroom?	24 (60%)	16(40%)
2	Is your classroom environment connected to internet?	17 (42.5%)	23 (57.5%)
3	Does technology increase students' academic achievement?	28 (70%)	12 (30%)
4	Does technology change the role of the teacher?	21 (52.5%)	19 (47.5%)
5	Does technology enhance lifelong learning?	27 (67.5%)	13 (32.5%)
6	Does technology improve students' communication skills?	12 (30%)	28 (70%)
7	Can technology reduce the number of teachers employed in the future?	19 (47.5%)	21 (52.5%)
8	Does technology enhance your professional development?	15 (37.5%)	25 (62.5%)
9	Does it help in finding student's personal learning styles?	11 (27.5%)	29 (72.5%)
10	According to you, is technology helpful in the classroom?	26 (65%)	14 (35%)