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The Benefits of Technology Use in Classroom Instruction

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Abstract

This study deals with the role of technology use in the classroom and it influences on the student learning.

In specific, this research examined the influence of technology integrated into active learning on students' learning depends on teachers' expertise and their perspectives. Furthermore, the research explored particular kinds of technology that be enabled to be used in classroom. The research purpose was to make learning interesting and joyful with using technology and active learning. There is emphasizing on the learning value and the importance of education.

The research results indicated that the technology is very significant and important to students to gain more understanding, motivating creative learning and making students participate while learning. The researcher used a descriptive method that describes the participants, apparatus, and procedure which were used for this study and created a survey to collect the data.

Keywords: *Technology, Classroom, Learning, Teaching, Active, Instruction, Education, Students.*

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1. Introduction

Using Technology these days is very important in education because the technology has become a significant part of our life and also makes the life less complicated.

Technology makes our life easier, interesting, and enriched (Page, 2002). These benefits are brought into the classroom by teachers to assist teaching in content fields.

When technology integrated with active learning strategies then it will develop teachers' instruction and help students to be successful in school. An important point is we need to make education valuable and interesting by integrating technology.

In these days education becomes more interesting, student interaction and participation is higher, and the creativity is increased (Coorey, 2016). The research paper presented kinds of technology which used in the classroom, their possibility to be integrated into active learning strategies and their effect on student learning.

In order to make learning better, the education should be an active, reachable, and interesting, such as through the constructivist approach which based on the student taking an active role in the learning.

Through active learning, students integrate their existing knowledge into new information, which in turn increases students' engagement (Coorey, 2016).

This study explored how the using of technology affects students' learning outcomes and pursued some strategies including technology which promoted teaching method. The researcher collected data from teachers' experiences and perspectives.

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1.1 Research Questions

Education constructs the basics for our future by preparing and equipping the next generation. Technology is enjoyable to all students and provides teachers and students the access to ultimate amounts of information.

The researcher wants to take this research to Saudi Arabia to benefit the education system there. This paper discusses the technology using in the classroom by current classroom teachers. The study aims to answer the following research questions:

- What is the perceived impact of technology on students' learning by classroom teachers?
- What are some specific ways technologies is used in the classroom to support the instructional process?

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2. Review of Literature

These days technology reaches students and teachers in everywhere, that allows students and teachers to communicate with each other all of the time.

And also, technology can present a real life to classrooms and expand students' knowledge by let them to use the Internet and search for extra information.

Furthermore, technology has the ability to stimulate learning over multiple techniques used in teaching, such as presenting through Prezi or other innovative programs (Safar, 2015).

The role of the teacher has a heavy impact in the students' education and achievement, Barr and Parrett (2003) indicated that "Teacher quality is the most influential factor in student achievement" (p. 15). The role of the teacher is very significant and might influence the way of the students learning, by stimulating their thinking and inspiring them.

In the past, the traditional teaching methods were taught for students based on lecturing, testing, and holding discussions and these ways are not effective learning methods on their own.

Learning through the use of lectures is a necessary component of education, but lectures should be interesting and attractive in order to get students thinking at a deeper understanding about what they learn (Eide, Goldhaber, & Brewer, 2004).

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2.1 Active Learning Approach

It is a teaching method that students cooperate and support each other and also they are responsible for their own learning. Active learning may surprise students by allowing them to discover what they are capable of doing (Meyers & Jones, 1993). Active learning approach will let students to build a strong and respectful friendship between each other. Furthermore, they will discover their strengths, different abilities; interests and they will overcome any obstacles that face them.

Through this approach the students will keep the information they have learned for a long period compared with traditional teaching methods.

2.2 Types of Classroom Technology

Recently some kinds of classroom technology become more common because of the important and usefulness of using it such as tablets, laptops, iPods, computers, interactive storybooks, digital microphones, and mobile devices.

There are some programs which enable students to learn reading, writing and listening. They can take notes, draw, record voice or video; take photos and present projects, etc. And also teachers can communicate with students and parents through some apps to be assure that learning outcomes are achieved.

The main types of Classrooms technology can be summarised as following:

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- **Interactive storybooks**

It is new technology which makes reading more interesting and reachable for everyone in everywhere.

- **Digital Microphones**

one of the most effective means to make speech understanding better in the presence of background noise (Wolfe, Duke, Schafer, Jones, Mülder, John, & Hudson, 2015, p. 440).

- **Technology Based Activities**

This approach enhances students to be more excited about learning by using different and interesting activities.

- **Journaling, 21st century-style.**

To improve students' writing skills it is useful to use this technology tool.

- **Talk about TED**

Video documentaries which are given by experts who are professional in their field.

- **Memory posters**

There is a free website *Poster My Wall* which enable students to make memory posters. And it is an interesting and colorful program that allows students to create their own background with their own style and also it allows students to upload their own picture (Julie, 2016).

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- **Compliment word clouds**

It is electronic images that have many words which related to each other and integrated to make a beautiful design.

- **Mixbook scrapbook**

Students can make a creative book with all the pictures they have been taken during the school year. They can work individually or in groups to summarize the great moments of the year (Julie, 2016).

3. Method

The researcher used a descriptive method that describes the participants, apparatus, and procedure which were used for this study.

The research was made at a public elementary school located in a small city in the state of Virginia in the United States. The school name remains anonymous for confidentiality purposes.

There are 30 teachers at this school with the breakdown per grade level as following: five kindergarten teachers, six first-grade teachers, six second-grade teachers, five third-grade teachers, five fourth-grade teachers, and three fifth- grade teachers. The participants for this study included 10 of the teachers at this school. All the teachers are female and their age between 25 to 45 years old. A few of the teachers have been teaching for only one year, but most of them have taught two years or more.

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The researcher made a survey to collect the data on the teachers' actual technology using in their classroom. It was created by using Google forms. The survey has a total of 10 questions that examine the range of technology using while teaching in order to enhance learning and show the impact of technology using in the classroom.

The survey contains diverse kinds of questions such as 2 open-ended questions and 8 multiple-choice questions.

4. Results

The researcher received completed surveys back from 10 teachers, and the following are the results:

- Most of the teachers felt that using of the technology in the classroom is important and the rest of the teachers felt that it is very important.

- Fifty percent of the teachers use technology for all instruction, data collection, communication with parents and colleagues. And forty percent of the teachers use technology with instruction; and 10% of the teachers use technology in communication with parents.

- Most of the teachers use technology through math, reading, writing, science, and social studies but a few of the teachers use technology through listening, fine arts, and speaking.

- The majority of the teachers use technology three times or more during the day and the rest of the teachers use the technology twice a day.

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- The majority of the teachers used the Internet during classes. The second most of them used digital whiteboards which is kind of technology. Tablets and laptops are divided randomly between always, often and sometimes, and there are a few of teachers who do not use them. The majority of teachers used interactive storybooks through some classes, but a few of them never used it. Digital microphones and mobile devices received the response "sometimes" from the majority of the teachers, but a few of the teachers have never used them. An iPod is the least used kind of technology. The majority of the teachers have never used it, while a few of the teachers responded that they used it sometimes. A computer is the other least used kind of technology. The majority of the teachers have never used it, while a few of the teachers always used it during classes.

- Fifty percent of the teachers see the technology impacting students' learning in very positive way and 40% of the teachers see it as just positive but 10% do not see an impact on student' learning.

- Only 8 teachers' replayed to give a brief explanation about previous answer of how do you rate the use of technology on students' learning? and their responses were as the following:

  - Teacher 1: "I can track student's growth and they are motivated to work more."

  - Teacher 2: "It allows for faster data collection, informed instruction, and helps students to see/hear information more clearly when things are projected on the screen."

  - Teacher 3: "Technology allows me to model an activity for my students."

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- Teacher 4: "Students are engaged and often receive immediate feedback to what they are doing. When used in whole group instruction it allows for me to tap into many learning styles.... movement, visual, audio."

- Teacher 5: "It has pros and cons."

- Teacher 6: "By using certain Apps and web sites, I can have every student working at his or her own pace at the same time. It makes it easier to differentiate and to engage everyone. They love using iPads. They do more maths simply because it is on an iPad."

- Teacher 7: "I consider technology to have a positive effect when it allows my students to do something they could not have done without it."

- Teacher 8: "Students are able to find resources that they need to complete assignments. Students are becoming more competent on the devices."

• The majority of the teachers who surveyed consider technology assists maintain or increase students' engagement. Eighty percent of the teachers see that the technology develops students' learning outcomes. Eighty percent of the teachers disagree that technology has no impact on the students' engagement. Sixty percent of the teachers disagree that using technology during instruction is a distraction and waste time.

• 50% of the teachers agree that "Students learn more with this format of teaching than in a traditional lecture". Most of the teachers agree that "Technology in the class supports students to have a better understanding". Most of the teachers agree that "Technology keeps students engaged during

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lectures and makes classes more fun and interesting". 50% of the teachers agree that it "Creates a good relationship from teachers to students and students to students", while a few of the teachers disagree with this statement. The majority of the teachers agree that "Technology leads to creative learning".

• The direct instructional uses connect directly to teacher instruction and student learning in the classroom. The indirect instructional uses include uses of technology that support learning, but not within the classroom, like communication between teachers and parents.

5. Discussion

The surveys were analyzed regarding the advantages of the technology use in classroom, the results suggest: 10 teachers felt that technology is very significant because it has a positive effect on students' learning outcomes. Furthermore, Technology makes teaching and learning easy, flexible, fun, and enjoyable. And also the results suggest such as: (a) Students may learn better by integrating technology into teaching, (b) Technology in the classroom assists students to improve their understanding of content, (c) Students keep participation by using technology within classroom, (d) Good relationship will be happen between teachers and students, and (e) Creative learning will happen through the technology.

The teachers used technology in instruction for approximately all the subjects and also they used it to communicate with students and parents. The results confirm that

technology is a good tool for education and learning. These results were confirmed what was discussed in literature review.

From the results, it is obvious that the 10 teachers surveyed used some kinds of technology in the classroom like: Internet, digital whiteboards, interactive storybooks, tablets, laptops, digital microphones and mobile devices. It is noted that most of the teachers never used an iPod or computer in the classroom which let the researcher wonder how the teachers choose the kind of technology in their classroom and why they don't use the other kinds of technology.

5.1 Limitations

There were some limitations that affect the results of the research. First of all, the research was done in one school and that limited the population size. Furthermore, we cannot generalize the findings on all teachers because the research was done with teachers only and that limited the findings to one particular opinion (i.e., teachers). It will be a good if it takes a longer time, larger and various numbers of populations when the research will be done.

5.2 Contributions to Research

It is noted that learners should not be forced to learn because they like to feel free and want to take their choice to get engaged in learning by themselves.

In spite of the importance of technology on students' learning, there are some families who do not have any kind of technology in their home. And also if the user is new in using the technology then it could be one of the problems that we will face it.

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