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# The Impact of Using Telegram Poll on the Mathematics Achievement of the 5th Grade Primary School Pupils and their Trend toward it

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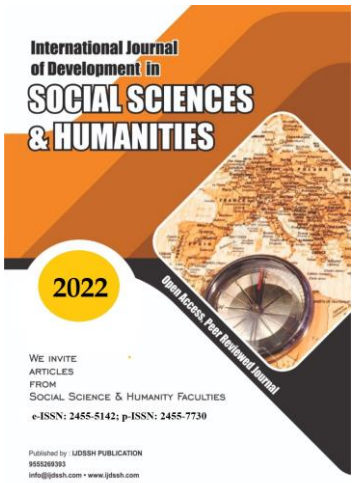

**ABSTRACT**

The development of technology and spread of smart phones everywhere, led to the development of teaching methods. Also, due to COVID-19 pandemic, educational institutes have been closed, therefore the use of media social has become a necessary part of learning process. The current study aims to identify the impact of using Telegram Poll on the Mathematics achievement of the 5th grade primary school pupils and their trend toward it. This paper had adopted a quasi-experimental research. It was conducted at Balqees primary school in Al-Amara, Iraq. In order to achieve these aims, a test and a questionnaire have been constructed. The questionnaire consists of (8) items. While, the test consists of (7) questions. The validity of the test and the questionnaire have been found. The sample was a randomly chosen, one class as an experimental group and another as a control group. The findings of the current study reveal that the experimental group outperformed the control group in Mathematics achievement test. Also, the pupils' trends of the experimental group were positive toward learning Mathematics.

**Keywords:** *Telegram, Mathematics, Achievement, Trend*

## INTRODUCTION

Recently, technology is used common in various fields of human life. People use computer and smart phones enormously. Accordingly, the applications of these devices have made new chance to improve the reach and quality of education (Salehpour, 2018: 80). As well as, technology and social media have made changes in teaching field and facilitated to access any information across the internet (Almansour, 2022: 163). In 21st century, other basic improvements have happened in information technology, where the most people have portable devices such as: (IPads, smart phones, pagers etc.) and they use them everywhere (Alahmad, 2020: 1275).

On the other hand, the importance of Math appears. Aghaei & Ahmadi (2017: 68) indicated that the modern mathematics does not depend on traditional calculation. The aim of mathematics is promoting the pupils' mind. Also, their parents always think carefully about teaching their children mathematics to make them more successful in the future life. Yeh et al. (2019: 9) and Li & Schoenfeld (2019: 1) mention the importance of math as a basic subject because science and technology depend on logical reasoning and arithmetic. For this

reason, educational authorities assert pupils' proficiency in computational skills. So, it strives to provide everything for improvement learners' levels in Mathematics.

Unfortunately, the way Math is sometimes taught has led some people to doubt this valuable role it plays and at worst, it has made other people to have a negative trend towards it (Rudhumbu & Rudhumbu, 2018: 63). Sometimes, the methods of teaching can be making learners feel boring (Shirinbakhsh &Saeidi, 2018: 119) , thus it effects on levels of learners and their academic performance. Makkar & Sharma (2021: 2652) cited that the most pupils' achievement in Mathematics tests declining due to adoption of the traditional methods, so the integration of traditional learning and e-learning is necessary to enhance learning process.

Heidari et al. (2018: 144) indicates the benefits for using a communicative modern media in educational purposes because it can economize time, effort, and money. In addition, it can minimize the boring of learners

From the above, the impact of Math and social media on daily life can be realize. People need Math to calculate numbers in their jobs, buy and sell things, astrological calculation, and so on, they use internet and technological applications every minute of every day.

This paper aims investigate:

1. The impact of using Telegram Poll on the fifth grade pupils' achievement in Mathematics.
2. Measuring the fifth grade pupils' trend toward Mathematics.

These aims can be achieved by answering the following questions:

- Is there a significant difference at the level of statistical significant ($\alpha$= 0.05) between the mean score of the experimental group that used Telegram Poll and the control group that did not use Telegram poll in achievement?
- Is there an effect of using Telegram on pupils' trend toward Mathematics?

## REVIEW OF LITERATURE

### Mobile Learning

Mobile Learning (m-learning) refers to the ability of learners to reach educational content, which means digital learning resources, on smart phones, iPod, laptop, mobile phones etc. (Kumar& Raja, 2019: 97). El-Sofany (2020: 6) points out that the importance of M- learning that learners and teachers can use it everywhere and anytime

by mobile devices. So, it gives flexibility of teachers to choose the suitable learning materials that meet learners' needs. Furthermore, m-learning is a new model of learning teaching. Also it is not like traditional e-learning. In addition, it is featuring much less expensive than laptop (Valk et al. 2010 cited in Chen, 2017: 460). Using the applications in cell phones help learners to exist at the core of the learning / teaching process, thus learner can construct her/ his own learning (Criollo- C et al., 2021: 13). This is what noticed in this century where the learner is consider as a digital native (Makkar & Sharma, 2021: 2651).

By the end of 2019, all the educational institutions in all countries around the world were closed or open partially (Elfahal et al, 2021: 2). Therefore, the teachers need to use the mobile devices and internet to connect with their pupils when the schools were closed because COVID-19. Further, these devices allow pupils to receive educational information wherever they are. Thus, teachers and students/ pupils used all applications are useful, free that can loaded various kinds of data (pdf, word, excel and so on), and permit to do examinations. One of these application is Telegram.

**The Telegram Application**

Telegram considered as one of the widest used application in social media which help teachers, learners and their parents to get more valuable information (Sasikala et al. 2021:6431). On August 14/2013, the telegram application appeared with iOS operation system and then Android on October 20/ 2013. It continuously offers new features that can attract users. Therefore, it is considered as the most innovative services (Kechil et al. 2019: 157). In addition, it fast in sending messages and easy to use when in comparison with similar apps. Also, it supports stickers that teacher need to motivate, rating and easing stress of their pupils during teaching process. For instance, a sticker with a thumb up refers to well done, good job etc.(Owusu-Mensah et al, 2020: 101).

Iksan & Saufian (2017: 21) state that Telegram can give learners the option to use it through any kinds of communication devices (tablets, laptops, iPods etc.). Likewise, groups of telegram allow all members to act as admin and they can add other members to these groups. The other feature of telegram that it is free and it does not have any annoying advertisements (Wahyuni, 2018: 47).

**Teaching Mathematics**

Teaching Math is a process of interaction and communication between teachers and their pupils for successful learning (Suryati & Adnyana, 2020: 134). The importance of teaching Math appears in follow: acquisition of basic knowledge, the main skills, and essential trends (Aghaei & Ahmadi, 2017: 72).

Every teacher knows his/her main role to motivate their pupils for studying Math, understanding the arithmetic, using them in daily life and creating positive trend toward it. He/ she believes that task is not easy and needs to use all available to success this task.

To attain these points (Ibid: 72) explain that the teacher should attend to carefully provide a good learning environment, focus on all academic content in textbook, share pupils to solve daily problems, think about their trends toward Math, give pupils enough time to answer question and divided pupils into group work.

**Concept of Trend**

Trend defines as a feelings, emotions and ideas toward educational subjects. Thus, trend can assist the learners to express if they have a positive trends toward these subjects or not (Abidin, 2012 cited in Mujid, 2019: 17). It refers to tendency, behaviors and emotions toward things or objects, whether these feelings are positive or negative. These trends play main role in process learning. If the learner had a negative trend toward a subject he will hate this subject. Then he will academic fail and vice versa.

Further, Hussein (2017: 163) indicate that the main role of trend in persuading learner's intention and motivating to use e-learning. Because the positive trend creates a good environment for learning and encourages learners to study very well.

**Previous Studies**

Olisama et al (2018) in their research examined social media to improve students' learning ability in Mathematics. The sample included (204) students in five public secondary schools. This study reached that the use of social media has a positive side, as well as a negative side, and students can benefit if they used social media appropriately. Also, it helps students to better understanding of Math concept that not understood inside classroom and made them more self- reliant.

Gaya et al. (2020) looked for the impact of social media on students' performance in three universities in Nigeria. With a view to realize this aim they used a descriptive survey and they distributed questionnaire to (350) students who were chosen by a stratified simple random sampling. The study concluded that students

are addicted to social media (Facebook, Instagram and WhatsApp). Therefore, this study recommended to use these applications for supporting educational purposes and found a new platforms to improve academic activities and enhance students' performance.

Suryati and Adayana (2020) tried to know the effect of Telegram on mathematics outcomes of the second semester students majoring in informatics engineering. They used a quasi-experimental research. The sample of this study consisted of (4) classes that chosen randomly then equally divided into experimental group and control group. The findings showed that the experimental group outcomes who taught with telegram better than the control group outcomes who taught traditional method.

Marban et al. (2021) investigating how primary and secondary students have interacted social media during COVID-19 pandemic. The sample included (3179) students from the Gaza. The findings displayed that there were not significant differences among groups attributed to gender, age, and type of school. However, there were a significant differences among groups attributed to the educational level of students' parents and their economic status. In general, there is positive response toward digital learning.

## METHOD

### Research Approach

In this study, it has been used semi-experimental design, post- test. To identify the impact of using Telegram poll on pupils' achievement in Math the researcher chose two classes randomly; one for the experimental group and the other for the control group. Also, it has been used descriptive research to determine pupils' trend, who taught Math using Telegram poll, toward learning Math.

### Study Sample

The sample of the current study consisted of (34) pupils fifth grade in Balqees primary school in Al-Amara, Iraq. This sample equally divided into two groups (experimental and control).

### Instrument

The researcher used two instruments, the first is post- test ,consisted of (7) questions which the Mathematics teacher in Balqees Primary School was prepared, to probe if there is any significant difference between the experimental and control group in pupils' achievement caused using Telegram poll. While, another is close –end questionnaire which included (8) items which the researcher was prepared. It was distributed to the pupils of the experimental group to know their trend toward Math.

**THE FINDINGS**

In order to answer the first question of this study, it has been calculated the means and standard deviations of the experimental and control groups. Also, the independent samples t-test was used to calculate the impact of the study variable, using Telegram Poll. See table (1)

***Table (1): Independent Sample t-test for the Post-Test Marks***

| Groups | N | Mean | Std. Deviation | t | Sig. | Significant Level |
|---|---|---|---|---|---|---|
| Experimental group | 17 | 83.65 | 22.414 | 2.399 | 0.022 | Significant |
| Control group | 17 | 63.94 | 25.396 | | | |

From the above table, we can notice that the independent samples t- test, t(32)= 2.399, p=0.022 it was smaller than 0.05. That referred to the experimental group outperformed the control group. the results revealed that, there was a significant difference between the post-test marks of pupils in experimental and control groups attributed to using Telegram Poll in teaching Mathematics.

To answer the second question the weighted mean for each items were found out. In this case, the theoretical weighted mean is (2), each item which has a weighted mean equal or more than (2) is accepted. Whereas, the item has weighted mean less than (2) is considered problematic and will be explained separately. Table (2) showed the weighted means for all items of questionnaire.

***Table (2): The Weighted Means of Questionnaire Items***

| Items No. | Item Rank | Items | Weighted Mean |
|---|---|---|---|
| 2 | 1 | Math helps me to buy from market | 2.94 |
| 7 | 2 | Telegram Poll is interesting | 2.88 |
| 1 | 3 | I feel excited in Math class | 2.82 |
| 4 | 4 | I like Math | 2.82 |
| 8 | 5 | Telegram poll helps me to understanding the exercises | 2.76 |
| 6 | 6 | Asking teacher when I misunderstanding | 2.71 |
| 3 | 7 | Mathematical problems are easy | 1.41 |
| 5 | 8 | Solving the exercises takes a long time | 1.06 |
| Average | 2.425 | | |

The findings appears that the average weighted mean is (2.425) which is higher than the theoretical weighted (2). It indicated states that the pupils have a positive trends toward Math class in general. The items () have weighted mean more than (2). But the

items (3 and 5) have weighted mean less than (2). Here, is the justification for that

1. The item (Mathematical problems are easy) comes in the seventh rank which the weighted mean (). This presents the pupils are suffering from difficult Mathematical problems in their book because some pupils become confused and can't recognize what is required of the problems.
2. The item (Solving the exercises takes a long time) comes in the eighth rank which the weighted mean (). All pupils need enough time to preform basic mathematical operations, and most exercise have more than two mathematical operations. As well as, some pupils did not keep multiplication table on heart.

## CONCLUSION

Reached findings revealed that the experimental group is the pupils who used Telegram Poll outperformed the control group pupils in academic achievement post-test. The trigger a shower of confetti in Telegram Poll, which it appears when the pupil chose the correct answer, encourage the pupils to learn Math, thus they got the good marks in test. Also, Telegram connected between school and home and made a good impression on the souls of the pupils. Thus, the pupils had a positive trend toward Mathematics.

## RECOMMENDATIONS

In the light of these findings of this study, the researcher recommended the followings:

1. Emphasizing on the use of Telegram Poll for the fifth grade pupils.
2. Encouraging the Mathematical teachers to blend Telegram App with their teaching methods.
3. Developing a new features in Telegram that fit complex Mathematics.

## SUGGESTIONS FOR FURTHER RESEARCH

The researcher gives the following suggestion for the researchers who are interested in this study field:

1. Conducting a similar study on the other educational grades.
2. Conducting a study investigating the impact of different demographic factors such as gender, environment etc.
3. Conducting a similar study on the other educational subjects.
4. Conducting a comparative study between social media application like WhatsApp, Facebook, Instagram.

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