

# The Effect of Teaching Mathematic Supported by Microsoft teams on the Students' Mathematical Skills in a College Course in Jordan

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## Abstract

The aim of this study is to investigate the effect of Teaching mathematic supported by microsoft teams on student's mathematical Skills in a college course in Jordan. This study was conducted as experimental design experimental and control groups were composed of 80 Students of mathematic principles course from first semester in the 2021-2022 educational year in the Hashemite University. The subject of the study was three units (algebraic operation, percentages change, graph of lines and curves) of textbook, The control group using a traditional white board and the experimental group was taught using by microsoft teams. An achievement test as a pre- test and post- test was used to investigate the success of both groups. The effects have been evaluated through the usage of the software SPSS. Findings and outcomes disclosed that the experimental crew out per fashioned the control team with recognize to their achievements. The microsoft groups regarded to have vast results on the achievements of students as a result. These findings exhibit that the usage of teaching mathematic supported via microsoft teams has effective consequences on the student's mathematical skills. These results are supported by using some different researcher's findings.

**Keywords:** Teaching Mathematic, Microsoft Teams, Mathematical Skills, College Students.

## INTRODUCTION

COVID-19 pandemic had required universities in Jordan to include E-learning, microsoft groups one of this case, gaining knowledge of has focused on how the instructors incorporate new technological know-how in their teaching to engage students at their quite several homes. platforms through which college students are taught during the pandemic. Microsoft groups is a collaborative platform completes with file sharing, on-line meetings, and many extra elements which may want to be beneficial for far off learning. Remote getting to know occurs when the learner and teacher are separated through distance, consequently, can't meet in a traditional school room setting. Park and Kim (2020) teacher presence and its outcomes on gaining knowledge of in online classes, the result shows that interactive conversation method with the use of teaching aids that are used in online studying allows sturdy relationships between students and teachers and supports the expectations of instructor

involvement of students, which sooner or later will increase pupil participation and pleasure in on-line classes.

Martin and Tapp (2019) affirmed that taking benefit of sources at their very non-public group is vital for an online teacher. These authors stated the teachers of who used a differ of tools, such as Microsoft Teams, Canvas, Blackboard and Moodle, in e-learning, they have awards reward to their.

Buelow, Barry and Rich (2018) surveyed 417 university college students on how to information online students' learning engagement. such as discussions and interactive assignments which are no longer only "fun" for students however additionally combine preceding learning and join to cutting-edge societal issues

Sareen and Nangia (2020) carried out a have a look at about in India on the frame of thinking and challenges confronted through school Faculty members in on-line instructing in the

course of COVID-19, adopted the descriptive survey and the pattern dimension comprised 3550 Faculty members. The stop result verified that instructors possess a favorable and first-rate attitude in the course of e-learning. But they lack perceived efficacy in remote teaching, so that they can feature higher in the normal classroom.

Todd (2020) carried out a learn about on US teachers 'perceptions of the shift from classroom to online teaching, adopted the survey lookup design. Result posted those challenges encountered with of teachers the of Microsoft groups blanketed troubles with Internet , devices issues, on line examination, stimulating activities, student absence, readability troubles and issues with evaluation.

Ismail and Fakhri (2020) carried out a learn about on the perception of e-learning platforms (Moodle, Microsoft teams and Zoom platforms) on Skills during COVID-19 pandemic and published that the use of Microsoft teams and Moodle were effective in instructing and learning. Tsai (2018) expects Microsoft businesses to trip the quickest enlarge in the subsequent two years. forty-one percentage of company's layout to use Microsoft organizations globally by using the use of the supply up of 2020, whilst Microsoft Team has seventy-five million customers through way of April 2020. Microsoft groups has been adopted with the aid of a variety of colleges to.

streamline the e-learning process. Also, physical, and psychological elements in the Microsoft teams surroundings should both encourage or the students' mindset to and ordinary overall performance, These factors and other social factors in faraway gaining knowledge of influence on the values which college students and instructors share in education, and they have to consequently also be viewed alongside the technological tools, there are several outcomes the impact of the use of technology in the lecture room to pupil achievement. Even though research have shown that has a fine have an impact on specially attitudes towards lessons, motivation, and self-sufficiency appreciation of students. (Zandvliet, 2003 as referred to in Adewole-Odeshi, 2014).

Among many science solutions being used via way of instructors for far off teaching and gaining knowledge of is the Microsoft teams' platform, the shortage of search for on its use for

far off learning, this study about is established on assessing the effectiveness of Microsoft teams as used by of teacher e-learning.

there are now no longer many searches the impact of Teaching mathematic supported with e-learning microsoft companies on student's Mathematical Skills in a university route in Jordan. This study aims to explore the effect of the use of the microsoft groups in mathematics teaching in Students' Mathematical Skills in a College Course in Jordan

## Method

Experimental design, Pre-test/post-test is used and applied to student groups. Groups are divided into experimental group and controlled group (Karasar, 2005, p. 87)

In this research, college students in the principles of mathematic courses from first semester in the 2021-2022 educational year in the Hashemite University had been determined as experimental and controlled group. Both groups consist of forty students and totally research consists of eighty Students. The experimental group used to be treated with microsoft groups use and the manipulate crew was treated with typical whiteboard use with equal unit of textbook Students of 40 in each group had been positioned into two equal A and B groups primarily based on their ratings in pre-test through random assignment. Group A dealt with as controlled and B as experimental crew in this pre-test post-test research design, educating mathematic supported by means of microsoft groups used to be considered as independent variable, whereas the based variable was the Students' Mathematical Skills.

## Test Construction

The check consists of (100) questions primarily based on the three chosen chapters of the Textbook which had been made through of faculty member. Those have been divided into three sections. Section A and B consist of 35 questions each whilst area C of only 30 questions seem at items Table1.

The researcher developed fifty (50) questions of each part i.e Section A, B and C. solely hundred (100) questions out of one hundred and fifty (150) questions selected, 35 for part A and B each and 30 for area C.

Table1 *Category and distribution of marks of Test*

| S.NO  | Test Designing            | No. items of test |
|-------|---------------------------|-------------------|
| 1     | Fill in the blanks        | 35                |
| 2     | Choose the correct answer | 35                |
| 3     | True or false             | 30                |
| Total |                           | 100               |

Table1, Category and distribution of marks test, fill in the blanks 35, Choose the correct answer 35, True or false 30 Total 100. Data was once collected via a faculty member.

The treatment involved the following activities:

1-solve linear equation, teacher solve the equation to students on the microsoft teams and asked them to resolve another of it.

2- line and curves sketch, teacher asked students by many examples to line and curves sketch (by math lap application), on microsoft teams.

3- percentages change, teacher asked students by many examples to percentages change, on microsoft teams.

These three things to do lasted for 9 days (4 weeks)' time distribution unfold over for one month. The controlled group was given the study using common whiteboard, and the experimental group study by microsoft team

### Data Analysis

I collected data by achievement checks (pre-test and post-test) was once tabulated, analyses and interpreted. The amassed information was analyses through mean rating frequencies and t-test evaluation by way of using computer software MS-Excel and SPSS

Table2 *Mathematical Skills of Students before treatment (Pre-test)*

| Group        | N  | M     | SD    | SE Mean | t      | P    | Effect size |
|--------------|----|-------|-------|---------|--------|------|-------------|
| Experimental | 40 | 41.50 | 11.49 | 1.82    |        |      |             |
|              |    |       |       |         | 0.177* | 0.86 | 0.098       |
| Control      | 40 | 41.10 | 11.30 | 1.79    |        |      |             |

\*Significant

Table2, reflects the details of college students of both experimental (N=40), (M=41.50), (SD=11.49) and (SE=1.82) and control (N=40), (M=41.10), (SD=11.30) and (SE=1.79) groups with value of t=0.177 and p=0.86. Although the attainment used to be slightly greater in terms of

the imply for the experimental group, there was a higher variance and the impact measurement 0.098 calculated because of the difference of math skills between experimental and control corporations was once concluded not to be statistically vast (as  $p > 0.05$ ).

Table3 *Mathematical Skills of Students after treatment (Post-test)*

| Group        | N  | M     | SD    | SE Mean | t      | P    | Effect size |
|--------------|----|-------|-------|---------|--------|------|-------------|
| Experimental | 40 | 74.7  | 8.96  | 1.41    |        |      |             |
|              |    |       |       |         | 5.984* | 0.00 | 0.56        |
| Control      | 40 | 59.57 | 13.24 | 2.09    |        |      |             |

\*Significant

Table3 offers the small print of college students of both experimental (N=40), (M=74.70),

(SD=8.96) and (SE=1.41) and manage (N=40), (M=59.57), (SD=13.24) and (SE=2.09) groups

with price of  $t=5.984^*$  and  $p=0.000$ . The difference of math skills success ratings of experimental and control was once statistically significant (as  $p < 0.05$ ). The impact

measurement of 0.56 on attainment for the experimental group was once therefore significant.

Table4 *Difference of Experimental groups before and after treatment*

| Group                   | N  | M     | SD    | SE Mean | t      | P    | Effect size |
|-------------------------|----|-------|-------|---------|--------|------|-------------|
| Experimental (pre-test) | 40 | 41.50 | 11.49 | 1.82    |        |      |             |
| Experimental(post-test) | 40 | 74.70 | 8.96  | 1.79    | 14.43* | 0.00 | 3.29        |

\*Significant

Table4 depicts the students' important points of experimental (pre-test) (N=40), (M=41.50), (SD=11.49) and (SE=1.82) and experimental (post-test) (N=40), (M=74.70), (SD=8.96) and (SE=1.79) groups with value of  $t=14.43^*$  and  $p=0.000$ . The distinction of math capabilities of

both pre and submit experimental rankings is statistically large (as  $p < 0.05$ ). The impact size of 3.29 represents the impact of the microsoft teams on the experimental group's Mathematical Skills.

Table5 *Difference of Control groups before and after treatment*

| Group               | N  | M     | SD    | SE Mean | t      | P    | Effect size |
|---------------------|----|-------|-------|---------|--------|------|-------------|
| Control (pre-test)  | 40 | 41.10 | 11.30 | 1.79    |        |      |             |
| Control (post-test) | 40 | 59.57 | 13.24 | 2.09    | 6.713* | 0.00 | 1.50        |

\*Significant

Table5 displays that each group (pre-test) (N=40), (M=41.10), (SD=11.30) and (SE=1.79) and control (post-test) (N=40), (M=59.57), (SD=13.24) and (SE=2.09) with value of  $t=6.713^*$  and  $p=0.000$ . The distinction of math skills of both pre and submit experimental rankings is statistically large (as  $p < 0.05$ ). In this research, However, the effect dimension of 1.50 reflecting the use of the microsoft teams, skill that the control group recorded a decrease effect

on their Mathematical Skills than that for the ordinary whiteboard.

There was proven to be a tremendous difference in the fulfillment of students taught with traditional whiteboard in contrast with the microsoft teams in. If Table 4 is in contrast with Table 5, an effect measurement of 3.29 (after traditional whiteboard use) compared with 1.50 (after microsoft teams use).

## Discussion and Conclusion

Based on these findings, that as the entire the students taught via the microsoft teams gives out-performed about the students taught through the traditional whiteboard use. Thus, the use of microsoft teams in the educating of math can be advocated as likely to be more awesome for instructing mathematic.

The discovering moreover corroborates look up findings of Alameri, Masadeh, Hamadallah, Ismail and Fakhouri (2020) who mentioned that the use of Microsoft groups and Moodle had been each tremendous in educating and getting to comprehend as it enhances Mathematical Skills of the students. faculty members with prior pc and exposure to new applied sciences had a very exquisite.

Todd (2020) discovering that challenges encountered via teachers the utilization of Microsoft Teams blanketed troubles with Internet bandwidth, device issues, arranging online examination, making geared up stimulating activities, student absence, readability of strategies and evaluation amongst others.

The discovering moreover lend credence to National Center for Education Statistics (NCES) (2019) who carried out a learn about on integrating internet net functions in lecture room studying surroundings and its consequences on teaching, student learning motivation, and normal overall performance in Turkey and stated that some of the some of the challenges encountered thru Faculty members in the course of e-learning with the software program of internet included; time, negative network, and low student involvement.

The results were located consistent with Betts (2017) and Buelow (2018), whose lookup supported that the microsoft companies affords progressive resource for math. Communication and Technology World bank (2020) additionally supported the proof that Microsoft agencies support the teaching of students. On the distinct hand, Park, Kim (2020) supported their results that Microsoft groups positively affected students' state of mind and learning.

The result offered from search for question three printed that Faculty members' appreciation of

the effectiveness of Microsoft Teams for lecture room organization is very good. This potential that Microsoft Teams helps to improve lecture room agency which in flip enhances instructing and learning. The discovering validates

Sareen discover out about (2020) the effectiveness of Microsoft Teams for lecture room organization is very good. This potential that Microsoft Teams helps to improve lecture and enhances instructing and learning. hence technology has been introduced into schooling in networking and communication so learning environments are turning into qualitatively and functionally more relevant.

## Conclusion and Recommendations

The emergence of COVID-19 has brought about a massive in education with the advent of new educational norms such as the full adoption of far-flung instructing and gaining knowledge of with the use of microsoft teams and extraordinary on-line applications. It is well worth mentioning that students see the worth of integrating Microsoft Teams into teaching and gaining knowledge of for improved performance.

The adoption of Microsoft Teams leads to effortless interaction between teacher and students enhances excellent lecture room organization which for this reason heightens the effectiveness of the teaching and learning process

However, some of the challenges encountered with the resource of instructors and students in the approach of far off instructing and gaining knowledge of encompass college students frequently browsing different websites, the application now not being consumer first-rate for Faculty members, and lack of students' involvement It is hereby that there must be more awareness given to the effectiveness of the use of Microsoft Teams for e-learning and gaining knowledge of for increased adoption of this software by college. Adequate and non-stop coaching for instructors must be performed on the use of microsoft teams supported effective e-learning. Also, government should intensify their effort in supplying high-quality Internet access/connection to faculty members and students at a low-priced charge as this would enable e-learning to proceed with ease during

pandemic periods when physical learning is no longer feasible.

On a normal basis, colleges interested to get to be given to extremely good e-learning resources, and they must embark on some form of monitoring of the e-learning provided by way of Faculty members. College ought to set clear expectations on how regularly Faculty members will go thru works and assignments by using making sure that they supply comments to students. In addition, authorities help for remote studying applications be targeted extra on student-faculty member interactive platforms.

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