Journal of Education and Practice
ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)
Vol.13, No.31, 2022

The Effect of Blended Learning on the Achievement of Students in the Basic Stage in Mathematics from the Point of View of Their Teachers in Salt Education

Manal Mousa Mahmoud Al-Deisi
Jordanian Ministry of Education
Email ID: manalaldisi77@gmail.com

Abstract
This study aims at identify the impact of blended education on students' achievement in the basic stage in mathematics from the point of view of their teachers in the education of Salt. The study used the descriptive survey method, and to achieve this, the researcher designed a questionnaire that consisted of (23) items, divided into three areas. It was applied to the study sample, which amounted to (159) male and female teachers. The results indicated that the impact of blended education on the achievement of students in the basic stage in mathematics from the point of view of their teachers in the education of Salt, in the collection of fields came to a medium degree. The results also showed that there were no statistically significant differences in the impact of blended education on the achievement of students in the basic stage in mathematics from the point of view of their teachers in the education of Salt due to the variable of gender and educational qualification.
Keywords: blended learning, mathematics teachers
DOI: 10.7176/JEP/13-31-05
Publication date: November 30th 2022

INTRODUCTION

The global community is witnessing rapid and remarkable progress, especially with the advent of the information age, the rapid communications revolution, and the ensuing tremendous development in all areas of life, forcing those in charge of the educational field to develop the programs of their educational institutions; To keep pace with the continuous technological development, and to reconsider the teaching-learning process, its objectives, and its averages; This allows the student to benefit from the use of educational technologies in the teaching-learning process .The great development in the averages, methods and applications of education contributed to directing the educational process towards the effort of the learner mainly with the aim of motivating him and advancing his abilities and creativity, and a new form of learning emerged, including e-learning, which has become an organized and designed education according to certain standards that enable the teacher to pay attention to all the elements and components of the curriculum from the objectives The content, averages, and information delivery, in addition to the different methods and sources of education. E-learning is based on the interaction between students and the teacher in the content of the scientific content (Asiri, 2016).

Also, the use of modern electronic technologies and media in the teaching and learning process is no longer a luxury, but rather a necessity imposed by the tremendous technological developments added by the information age and e-learning. And the tasks required of both of them, and the teachers, learners and the rest of the educational system are facing more challenges than before: New, large and rapidly changing challenges that impose on everyone more knowledge and the ability to develop themselves to keep pace with the times so that the individual learns to know and learn to work and to participate with others until he has an entity and an entity that meets His demands (Abu al-Rish, 2013).

The recent trends of educational technology have contributed to the emergence of new and advanced systems of teaching and learning, which had the greatest impact in bringing about positive changes and developments on the way students learn and the methods and methods of communicating scientific information to them, as well as on the content and form of the prescribed curricula in line with these trends.(Fu, Pei-wen, 2006). Among the systems produced by recent trends in educational technology is the so-called e-learning, which depends on the use of computers, the Internet, and various interactive media of various kinds in the teaching process (Salama, 2015).

Blended learning is an educational method that supports e-learning and addresses its shortcomings. Therefore, e-learning and traditional education complements each other through blended learning. That is, blended education depends on the teacher and the traditional lecture using the modern tools and technology used in e-learning (Al-Zahiri, 2014).It is worth noting that blended education seeks to achieve the best educational goals; Through its use of modern educational techniques, but it does not dispense with the reality of traditional education, where the success of blended education depends on a set of elements available in traditional education, given that traditional education achieves many tasks indirectly or invisible, where traditional education depends on collective attendance. For learners in the classroom, this reinforces the importance of joint work (Al-Siddiq,

2011).

This motivates learners towards learning by creating a state of happiness, competitiveness and intellectual excitement, which generates them with a desire to increase knowledge that is easy to obtain through blended education (Al-Arini, 2012). Achieving the highest efficiency in the educational process must include a major role for the teacher and the classroom in which the averages, mechanisms and methods of e-learning are adopted. E-learning cannot replace traditional education, but rather to work on improving it. To achieve this, what has become known as "blended education" appeared. Which is considered a process that integrates modern averages and traditional roles in the educational process, and technological educational averages have emerged capable of raising the efficiency of education, due to the need to introduce technology in education and preserve the traditionalism of the educational process. 2012).

STUDY PROBLEM AND QUESTIONS:

The education process is evolutionary, and continues to grow and change with the development of educational experience and the development of accelerated technology and its tools. It is imperative for teachers to be ready to adapt to these developments, especially electronic in the educational process that educators are constantly looking for the best and most important techniques, methods and averages to provide an interactive learning environment. It attracts attention and encourages the exchange of opinions and experiences, as blended education is one of the models capable of providing an educational environment that works to achieve integration between theoretical aspects on the one hand and practical aspects on the other. This indicates the need for school teachers to use blended learning. As the researcher works as a mathematics teacher, she noticed that traditional learning no longer meets the needs of students and their educational development. Hence, the problem of the study is the impact of blended education on the achievement of students in the basic stage in mathematics from the point of view of their teachers in the education of Salt, by answering the following questions:

The first question: What is the effect of blended learning on the achievement of students in the basic stage in mathematics from the point of view of their teachers in the education of Salt ?

The second question: Are there any statistically significant differences at the significance level ($\alpha = 0.05$) in the effect of blended learning on the achievement of students in the basic stage in mathematics from the point of view of their teachers in the education of Salt, due to the variable of gender: (male, female), and qualification variable Scientific: (Bachelor, Postgraduate)?

THE IMPORTANCE OF STUDY:

The importance of the study includes two aspects,what is the theoretical and scientific importance, we explain them as follows:

THEORETICAL IMPORTANCE: as it is one of the few studies that dealt with a vital topic, in which those in charge of the educational process and decision makers in the Ministry of Education and Higher Education in order to raise the level of the educational process of learning, through blended education, which is considered one of the latest and most effective educational methods, as it is hoped that the study Enriching the local scientific library with an educational scientific material that constitutes a starting point for future research that will benefit the educational process.

SCIENTIFIC IMPORTANCE: it examines a modern educational method that would contribute to raising the level of educational outputs in Jordan, and benefit educators, supervisors and school administrators in identifying the obstacles facing the employment of blended education to address them by learning to develop the educational process.

OBJECTIVES OF THE STUDY:

The study aims to achieve the following:

1. Detecting the impact of blended learning on students' achievement in the basic stage in mathematics from the point of view of their teachers in the education of Salt.
2. Detecting the effect of the gender variable, the educational qualification, on the impact of blended education on the achievement of students in the basic stage in mathematics from the point of view of their teachers in the education of Salt.

TERMINOLOGY OF STUDY:

Blended Learning: A method of teaching that relies on mixing the usual methods of learning with e-learning, and audio-visual aids, with the aim of improving and improving the teaching and learning process (Ahmed, 2011).

Procedurally, it is a method used by mathematics teachers based on integrating multimedia learning with non-multimedia traditional teaching methods to achieve educational outcomes, as multimedia was limited in this way in this study to a set of training activities.

Mathematics teachers: the group of male and female teachers who teach mathematics, and procedurally

defined by the researcher as the group of male and female teachers who teach mathematics in the schools of the Directorate of Education, Salt.

THE LIMITS OF THE STUDY:

This study was limited to:

- Objective limits: the effect of blended learning on students' achievement in the basic stage in mathematics from the point of view of their teachers.
- Human limits: Mathematics Teachers.
-Spatial limits: Directorate of Education and Education Salt
- Temporal limits: This study is limited to 2022

THEORETICAL FRAMEWORK AND PREVIOUS STUDIES :

Blended learning is an essential building block for the modern school that provides students with both flexibility and comfort, by combining face-to-face and online learning, averaging that learning is both in the classroom and on the Internet, where the online component becomes a natural extension of traditional lessons. Thus, blended learning is a flexible method of course design that supports the integration of the course's amenities completely online without loss and the different time of learning, and provides some complete face-to-face communication, and the result is a more powerful educational experience than traditional learning or e-learning (Al-Ghamdi, 2007).

Blended education describes a natural development of e-learning, integrating between regular education in the classroom, and e-learning in its various forms. Eryilmaz 2015). What has been achieved in the field of education, is integrating the e-learning method with other methods of education, as it is a mixture of traditional teaching strategies and methods and virtual teaching strategies. (Hindawi and Saeed, 2010).

The concept of blended education emerged from ancient roots, most of which refer to the blending of education and its strategies with various averages. It has been called by different names, including blended or blended education, blended education, in addition to blended education. The reason for its multiple names is due to the different views on the nature of this education. As blended education is the integration of regular education and e-learning, by using e-learning tools and methods correctly, according to the requirements of the educational situation (Al-Zahiri, 2010).

There are many definitions of blended education according to different knowledge of it. Salama (2015) defined it as "an educational strategy that depends in providing content on the marriage between the use of modern technology in education, and the usual methods that teachers have written, to create an attractive and interactive learning environment between the teacher and students, and between the students themselves. in order to better achieve the desired educational goals.

Al-Murshidi (2007) defines blended education as "an educational system that takes advantage of all available technological capabilities and media, by combining more than one method and a learning tool, whether electronic or traditional, to provide a good quality of learning that suits students' characteristics and needs on the one hand, and suits the nature of the course." and educational goals that it seeks to achieve.

By looking at the previous definitions of blended education, the researcher believes that it is a combination of regular education methods with e-learning in one framework, through the use and employment of modern communication tools and mechanisms such as computers, networks, the Internet and smart devices, in order to improve educational outcomes and achieve educational outcomes (Kebualemang, 2017).

Ahmed (2011) indicates that blended education contains multiple elements that can be combined to obtain this type of education, namely: e-mail, web pages, voice chats, computer and computer programs, forums, video conferencing, regular classes, and virtual classes, including Augmented Reality.

Blended learning is based on the ideas of the behavioral school by emphasizing the role of the stimulus in response events and providing appropriate reinforcement and feedback (Lin, 2017). Blended education helps the student to participate in the learning process, by focusing on discrete activities that are carried out in an individual manner connected to the computer, which provides opportunities for repetition for the student, especially when learning skills as an incentive to continue learning and correct its course, whether by notifying the student of this by the teacher during face-to-face communication Or his inner sense of the success of what he has done as a result of his interaction with websites and computer software, or while working separately, where he is the positive role player, and blended education benefits from the interesting, interesting and diverse characteristics offered by the computer to maintain student communication and increase his motivation towards learning constantly. (Al-Fahed, 2015).

Blended education, like other applications and other teaching methods and methods, is not free from obstacles. There is not enough experience for some students in dealing with electronic tools such as computers, Internet networks and smart devices. There is a shortage of cadres or employees with expertise for this type of education, and the lack of scientific models for mixing e-learning. In regular education, and the inconsistency of

the devices and tools available with students with the devices and tools that they teach in educational institutions, as they differ in terms of speed and equipment, and the validity of the methodological content (Yusof, A., Daniel, 2011), and among those obstacles is the low level of skill and experience in some Students deal with technological innovations, the Internet and its derivatives, the low level of actual participation of curriculum specialists in the manufacture of blended electronic courses, the high financial cost, the malfunctions faced by the Internet and communications networks, the lack of enthusiasm and poor qualification of some teachers, and the lack of smooth transition from regular education to Blended education, and the limited time to apply this type of education (Al-Arini, 2012).

BLENDED LEARNING FEATURES:

-Shifting from a lecture method of teaching to a student-centered education.

Increasing interaction between the student and the teacher, the student, the student and the content, the student and external sources.

- Increase access to information.
- Integrated training and collection of assessment mechanisms for the student and the teacher (Al-Atiyat, 2012).

Requirements for the application of blended learning, including the following:

1. Providing computer laboratories, and placing information networks at the student's reach
2. Providing the teacher and learner with the necessary skills to use multimedia.
3. Providing the appropriate educational curricula for this form of education.
4. Teachers become leaders and guides to teach their students through their use of computers and their applications, local and global information networks, and the production of appropriate and diverse educational materials for teaching (Al-Araini, 2012).

IMPORTANCE OF BLENDED LEARNING:

- It combines the advantages of electronic averages with the advantages of traditional education.
- It provides the opportunity for the student to explore the content, view it, and study it at anytime and anywhere.
- It improves the outcomes of the educational process in a better way.
- It focuses on the student's active role in obtaining learning through the combination of individual and cooperative activities and projects.

-Its ability to increase the effectiveness of learning (Al Dhaheri, 2014)

DIMENSIONS OF BLENDED LEARNING:

1. Live face-to-face events: They are events in which the educational process is led by the teacher, and the learners participate, and this method cannot be dispensed with because of its impact on the learners in terms of: attracting their attention, instilling confidence in them and others.
2. Integrating online education with traditional education: Blended learning combines online learning patterns and traditional classroom education.
3. Electronic and traditional cooperation: Blended learning provides collaborative environments, where learners and the teacher can cooperate electronically through internet conferences, which supports the communication factor during the learning process, and achieves knowledge sharing.
4. Diversity of forms of education strategies: In this type of education, various educational forms and strategies are employed, such as virtual education, distance learning e-learning methods, and traditional classrooms.
5. Integrating formal education with non-formal education, where e-learning is combined with traditional face-to-face education through educational websites.
6. Integrating the traditional educational book with the electronic pages: where the learner studies from the paper book, and follows the Internet pages supported by sound, image, movement, and others (Al-Fahed, 2015).

PREVIOUS STUDIES:

Al-Murshidi and Al-Rabei (2017) conducted a study aimed at knowing the effects of blended education on the achievement of second-grade students and their motivation towards biology. The study chose the experimental design with partial control, and an achievement test consisting of 50 items was prepared. The study also prepared a measure of motivation in biology that includes 46 Paragraph, and the study was conducted in Basra Intermediate School for Girls, and the study sample amounted to 77 students, and the study concluded that there are statistically significant differences between the two study groups in favor of the experimental group, and the study recommended the need to adopt blended education in teaching biology for the second intermediate grade because of its positive effects in raising the level of achievement and motivation towards the material.

(Chiang & Tseng, Lin 2017) conducted a study aimed at discovering the educational effects of blended education on the achievement of middle school students and their attitude towards mathematics, and followed the descriptive analytical approach through the mathematics achievement scale, and to achieve the objectives of

the study that combines traditional education and education through a program A model for online education, an experiment was conducted by doing two groups, one before the test and the other after it.The results showed a positive effect on the learning outcomes in addition to their attitude towards mathematics in the blended learning environment. The preliminary results indicated that male students with high ability were the most motivated to learn in the blended learning environment. Blended learning, as students gave positive feedback on the use of the Moodle math educational program after witnessing blended learning.

Al-Fuhaid (2015) conducted a study aimed at knowing the reality of the use of blended education by science teachers in the secondary stage, and the degree of availability of material equipment to assist in its application and the obstacles to its use in teaching in the Qassim region. The study sample consisted of (200) teachers and supervisors, and the researcher used a questionnaire as a tool. For data collection, the results showed a high approval of the sample members (supervisors and teachers) in the axis of the importance of using blended education in teaching natural sciences, while the approval of the sample members was moderate in the axis of the degree of its use. Teaching science was moderate among teachers, and low among supervisors. As for the obstacles to its use, teachers see that they are found in a high way, while supervisors see that they are moderately present.

Al Dhaheri (2014) conducted a study in Jeddah that aimed to identify the importance of using blended education in Islamic education subjects, and to identify the degree of availability of requirements for the use of blended education in the subject's courses, and the degree of obstacles to its use in Islamic education subjects for the intermediate stage. The study sample reached (227) A teacher of Islamic studies in the middle school was chosen by the random method, and an intentional sample of (59) Islamic education supervisors. The availability of blended education requirements in Islamic education subjects was weak, while the obstacles to using blended education in Islamic education subjects were moderately available.

Al-Arini (2012) conducted a study in the city of Riyadh aimed at identifying the reality of mathematics teachers' use in the middle school of blended learning skills. The study sample reached (92) female teachers. The blended learning skills of mathematics teachers in the middle stage have a low degree in the planning, implementation and evaluation stage, in addition to the presence of statistically significant differences between the circles related to the use of mathematics female teachers in the middle stage at a low degree in the planning, implementation and evaluation stage, in addition to the presence of statistically significant differences between the circles Related to the use of mathematics teachers in the intermediate stage of blended learning skills for the benefit of experienced women, as well as those who have obtained electronic training courses.

METHOD AND PROCEDURES:

This chapter deals with a description of the methodology used in the study, as well as a description of the study population, a description of the study tools and methods for verifying their validity and reliability, as well as the study's variables (independent and dependent), the procedures used in their implementation, and the statistical treatment of data analysis. Here is a detail of that:

STUDY APPROACH:

Due to the nature of the study, the researcher used the descriptive approach to reveal the study population, sample and study procedures to find out the effect of blended education on the achievement of students in the basic stage in mathematics from the point of view of their teachers in the education of Salt, in order to suit it for the purposes of the study.

STUDY COMMUNITY:

The study population consisted of all (267) mathematics teachers who work in the schools of the Directorate of Education, Salt, for the first semester of the academic year 2022/2023.

THE STUDY SAMPLE:

The study sample consisted of (159) male and female mathematics teachers in the schools of the Directorate of Education, Salt, who were selected by stratified random method.

TABLE NO. (1): DISTRIBUTION OF THE STUDY SAMPLE ACCORDING TO ITS INDEPENDENT VARIABLES

Variables	variable levels	Frequency
Gender	Male	67
	Female	92
Qualification	BA	117
	Postgraduate	42
Total		159

STUDY TOOL:

The questionnaire included several areas that reveal the impact of blended education on students' achievement in the basic stage in mathematics from the point of view of their teachers in the education of Salt. The researcher presented it to a group of arbitrators with expertise in the field of educational technologies, curricula, teaching, measurement and evaluation, and the researcher extracted Cronbach's alpha stability coefficient by displaying the scale to a sample outside the original study sample and then re-displaying it again with a specific time difference.

AUTHENTICITY OF THE TOOL:

To ensure the validity of the tool, it was presented in its initial form to a group of arbitrators with expertise and specialization in educational techniques, curricula, teaching methods, measurement and evaluation, and asked them to express their opinion on the extent to which the paragraph is related to the field under which it falls, the integrity of the language and clarity of averageing, either with approval, modification or deletion for lack of In light of the arbitrators' suggestions and opinions, the researcher made the necessary adjustments to the paragraphs of the tool, and to calculate the consistency of validity, the researcher extracted the Pearson correlation coefficient for the paragraphs with the domain to which they belong and the total score of the scale, after distributing the study tool to a pilot sample. It consisted of (30) male and female mathematics teachers in the schools of the Directorate of Education, Salt, who were excluded from the original study sample.

STABILITY OF THE STUDY TOOL:

To ensure the stability of the two study tools, Cronbach's alpha equation was used, where the questionnaire's overall reliability coefficient reached (0.85), which are good values for the study's objectives.

TABLE NO. (2): RELIABILITY COEFFICIENT VALUES FOR THE STUDY TOOL DOMAINS

Domains	Number of paragraphs	Cronbach's alpha
Educational	13	0.85
Environmental	5	0.82
Educational	5	0.88
Total score	23	0.85

It is clear from the results of Table No. (2) that the values of the reliability coefficient of the resolution domains ranged between (0.82 to 0.88), and these values are considered good to achieve the purposes of the study.

STUDY VARIABLES:

Independent variables

-Gender has two levels: (male, female)

- The academic qualification has two levels: postgraduate studies, BA.

Dependent variable: It is the response of the study sample to the study tool (the questionnaire).

PRESENTATION AND DISCUSSION OF RESULTS:

Results related to answering the study questions: What is the effect of blended education on students' achievement in the basic stage in mathematics from the point of view of their teachers in Salt Education? To answer this question, the arithmetic averages and standard deviations of the responses of the sample members were calculated, and Table (3) shows the results.

TABLE (3) ARITHMETIC AVERAGE AND STANDARD DEVIATION OF THE RESPONSES OF THE SAMPLE MEMBERS TOWARDS BLENDED LEARNING

No.	Paragraphs	arithmetic average	standard deviation	Rank	Degree
10	Using a blended learning strategy helps save time and effort	2.98	1.16	1	Medium
8	Using a blended learning strategy provides feedback to the learner	2.90	1.09	2	Medium
9	The use of the blended learning strategy contributes to the learners' acceptance of the educational material	2.82	1.13	3	Medium
12	The blended learning strategy builds the learner's self-confidence	2.81	.99	4	Medium
13	A blended learning strategy helps learners with learning disabilities achieve a greater understanding of what they are learning	2.80	1.00	5	Medium

No.	Paragraphs	arithmetic average	standard deviation	Rank	Degree
6	The use of the blended learning strategy increases the degree of interaction between the teacher and the learner	2.68	1.04	6	Medium
2	The use of the blended learning strategy develops the learners' ability to understand the educational materials	2.68	1.01	6	Medium
7	The use of the blended learning strategy provides the learner with different learning resources	2.67	1.05	7	Medium
1	The use of the blended learning strategy increases learners' motivation towards learning	2.63	1.12	8	Medium
4	A blended learning strategy helps take into account individual differences among learners	3.63	1.15	8	Medium
5	Using a blended learning strategy helps learners retain information	2.54	1.07	9	Medium
3	Using a blended learning strategy helps develop learners' self-learning skills	2.54	1.07	9	Medium
11	The use of a blended learning strategy encourages learners to participate in educational activities	2.53	1.03	10	Medium
	The overall degree of the field	2.71	2.87	-	Medium

Table (3) shows that the arithmetic averages ranged between (2.98 -2.53), where paragraph No. (10) States, “Using the blended learning strategy helps to save time and effort” came in the first place, with an average of (2.98), and the researcher was consoled. This is because the use of blended learning helps the teacher to plan a lesson and to set the goals that he seeks to achieve directly, and this in turn helps the teacher to save time and effort in preparing and preparing for the lesson, while paragraph No. (11) Reads: “Using the blended learning strategy encourages learners to participate in educational activities, “in the last rank, with an average of (2.53). The researcher attributes this to the fact that the culture of partnership and cooperation among learners is not widely applied in classrooms because teachers are not encouraged to do so.

DOMAIN: ENVIRONMENTAL

TABLE NO. (4) THE ARITHMETIC AVERAGE AND STANDARD DEVIATION OF THE RESPONSES OF THE SAMPLE MEMBERS TOWARDS BLENDED LEARNING

Rank	Paragraph	Arithmetic average	Standard deviation	Degree
15	The school has ready-made educational software	2.38	.30	Medium
18	The school provides educational websites on the Internet	2.37	.41	Medium
14	The school provides an internet network available for different learning situations	2.33	.45	Medium
16	The school provides smart panels in the classroom	2.31	.52	Medium
17	The school provides technical support through specialists in computers and the Internet	3.30	.55	Medium
	Total degree	2.63	.47	Medium

Table (4) shows that the arithmetic averages ranged between (2.38-3.30), where paragraph No. (15) states that "the school has ready-made educational software" in the first place, with an average of (2.38), and the researcher attributed this to the fact that The availability of software in the school greatly helps the practice of blended education by teachers and facilitates obtaining the desired goal, while paragraph No. (17) and its text “The school provides technical support” through specialists in the computer and the Internet “ranked last with an arithmetic average of (3.30) To a medium degree, the researcher attributed this to the fact that most schools often do not have access to the Internet due to network faults, and that specialists are often in the center of the directorate, and their tours of schools are restricted most of the time.

DOMAIN: EDUCATIONAL

TABLE NO. (5) THE ARITHMETIC AVERAGE AND STANDARD DEVIATION OF THE RESPONSES OF THE SAMPLE MEMBERS TOWARDS BLENDED LEARNING

Rank	Paragraph	Arithmetic average	Standard deviation	Degree
20	My teaching style fits with the blended learning strategy	2.27	.35	Medium
19	I receive the necessary technical support I need to teach with the blended learning strategy	2.29	.42	Medium
22	A blended learning strategy helps me do justice to what education is to some extent	2.30	.44	Medium
23	Using the blended learning strategy helps to present the lesson in an organized manner	2.31	.50	Medium
21	The blended learning strategy helps me achieve the lesson objectives	2.33	.52	Medium
	Total degree	2.31	.42	Medium

Table (5) shows that the arithmetic averages ranged between (2.27-3.33), where paragraph No. (20) states that "my teaching style is compatible with the blended learning strategy" came in the first place with an average of (2.27), and the researcher attributed that Most of the teachers are aware of the usefulness and effectiveness of blended learning when using it in the teaching process because of its importance in achieving the objectives of the lesson, while paragraph No. (21) and its text, the blended learning strategy helps me achieve the objectives of the lesson "in the last rank with an arithmetic average of (3.33) To an average degree, the researcher attributes this to the fact that blended education involves the use of many educational products, means and guides, which allow students the ability to engage in deep learning and transfer the learned skills and knowledge into reality. While the field as a whole got an arithmetic average of (2.31), with a medium degree.

Second: Presentation and discussion of the results related to the second question, which states: "Are there any statistically significant differences at the significance level ($\alpha = 0.05$) in the effect of blended education on the achievement of students in the basic stage in mathematics from the point of view of their teachers in Salt Education, due to the variable Gender: (male, female), and educational qualification variable: (bachelor, postgraduate)?

Gender variable (male, female)

To answer this question, a t-test was used for two independent groups (Independent-Samples-T-Test) to indicate differences according to the variable (sex), and the results of Table (6) show that.

TABLE NO. (6)

The results of the (t) test for two independent groups to indicate the differences towards the effect of blended learning on students' achievement in the basic stage in mathematics from the point of view of their teachers in the education of Salt due to the gender variable: (male, female).

Gender	Number	Arithmetic average	Standard deviation	T value	Indication level
Male	.67	3.65	.65	.021	.112
Female	.92	3.72	.73		

The results in Table (6) indicate that there are no statistically significant differences at the significance level ($\alpha = 0.05$) due to the gender variable (in the effect of blended education on students' achievement in the basic stage in mathematics from the point of view of their teachers in Salt education, due to the gender variable). (Male, female) The researcher attributes the reason for the absence of statistically significant differences. What is required of teachers, whether male or female, with regard to achieving the outcomes of the lessons is also one, that the programs and training courses they receive are the same.

-Qualification variable (Bachelor's degree, postgraduate studies)

To answer this question, the One Way ANOVA analysis was applied to the independent samples for the effect of the educational qualification variable, and the **TABLENO. (7)**Shows that

Qualification	Arithmetic average	Arithmetic average	F	Statistical Indication
BA	3.86	0.49	0.122	0.110
Postgraduate	3.55	0.34		

Table (7) shows that there are no statistically significant differences at the level of significance in the educational qualification variable towards the effect of blended education on the achievement of students in the basic stage in mathematics from the point of view of their teachers in the education of Salt due to the educational qualification variable (Bachelor, postgraduate studies). The researcher attributed this to the fact that the process of appointment as a teacher in the Ministry of Education does not require the academic qualification for a

specific level of bachelor's or postgraduate studies, and teachers in their classes have broad lines of the curriculum that they seek to achieve at the end of the academic year.

RECOMMENDATIONS:

1. Conducting training workshops for teachers and students alike, which help in increasing the effectiveness of blended learning in teaching mathematics
2. Providing technical tools that help to use e-learning and blended in the educational process
3. Designing educational materials based on the blended learning strategy
4. Conducting other new studies with different designs and measurement tools than those adopted in this study.

REFERENCES

-Abu Al-Rish, Elham (2013). **The effectiveness of a program based on blended learning in the achievement of tenth grade students in grammar and the attitude towards it in Gaza**, a master's thesis, the Islamic University, Gaza.

- Ahmed, Amal (2011). The effect of the use of blended learning in teaching chemistry on achievement and the trend towards it, and the impact of learning on the survival of secondary school students. ***Journal of the College of Scientific Education, Dar Al-Manthama, 14(3), 112-173***

-Al Dhaheri, Ruqayya (2014). The reality of using blended learning in teaching Islamic education subjects for the intermediate stage in Jeddah. **Unpublished Master's Thesis**, Umm Al-Qura University, Makkah Al-Mukarramah, SaudiArabi.

- Al-Arini, Siham (2012). The reality of mathematics teachers' use of blended learning skills at the intermediate stage, **Unpublished Master's Thesis**, Imam Muhammad bin Saud Islamic University, Kingdom of Saudi Arabia.

-Al-Attiyat, Badour (2012). Effectiveness of using blended learning in developing mathematics achievement for hearing-impaired students at Al-Amal Institutes in the Kingdom of Saudi Arabia. **Unpublished Master's Thesis**, Cairo University, Cairo, Egypt

-Al-Fhaid, Turki (2015). The reality of using blended learning in teaching natural sciences at the secondary level from the point of view of science supervisors and teachers in Qassim region. **Unpublished Master's Thesis**, Umm Al-Qura University, Makkah Al-Mukarramah, Kingdom of Saudi Arabia.

-Al-Ghamdi, Fatima (2007). The effectiveness of a proposed training program based on blended learning to train art education teachers to discover and nurture artistic talents**. Unpublished PhD thesis**, Umm Al-Qura University, Makkah Al-Mukarramah, Saudi Arabia

-Al-Ghamdi, Fatima (2007). The effectiveness of a proposed training program based on blended learning to train art education teachers to discover and nurture artistic talents. **Unpublished doctoral thesis**, Umm Al-Qura University, Makkah Al-Mukarramah, Kingdom of Saudi Arabia

-Al-Murshidi, Imad and Al-Rubaie, Abbas (2017). The effect of using blended education on the achievement and motivation of second-grade female students towards biology, ***Journal of the College of Basic Education for Educational and Human Sciences - Babylon University, 35, October.***

-Al-Siddiq, Mukhtar) (2011). **Blended Education - A New Introduction to Teaching and Learning Methods and Methods**. The World Education Conference and the Challenges of the Twenty-first Century December 6-7, 2011, Sharjah Hall in Khartoum

-Asiri, Ahmed (2016). The effectiveness of an electronic educational unit in geography on academic achievement and the survival of the impact of learning among first-year secondary students, ***Journal of Educational Sciences (2)1***

-Eryilmaz, M. (2015). The Effectiveness of Blended Learning Environments, Contemporary Issues In Education Research, 8(4), 251-.652

- Hindawi, Osama and Saeed, Ahmed (2010). The effect of the different level of integration of learning resources used in blended learning on achievement and motivation towards learning**. *Journal of the College of Education, Al-Azhar University, Egypt, 144(2), 417-445.***

- Salama, Muhammad (2015). The effectiveness of a training program based on the blended learning strategy in providing classroom teacher students with the skills of integrating technology into education, and their attitudes towards it: an empirical study at the Faculty of Education at the University of Damascus, an **unpublished master's thesis**, Damascus University, Damascus, Syria. Unpublished Master Thesis,

-Harvard University, United States of America. Garrison, D., & Vaughan, N.(2008). **Blended learning, EDUCAESE, 4, (7), 1-.21**

-Fu,Pei-wen (2006**). The impact of skill training in traditional public speaking course and blinded learning public speaking course on communication apprehension.**

-Kebualemang, G. &Mogw, A. (2017). An Empirical Investigation into Blended Learning Effiects on Tertiary Students and Students Perceptions on the Approach in Botswana, ***(IJACSA) International Journal of***

Advanced Computer Science and Applications, 8(6), 222-.852

-Lin, W., Tseng, L., & Chiang, J. (2017). The Effect of Blended Learning in Mathematies Course, ***EURASIA Journal of Mathematics Science and Technology Education, 13(3): 741-770*** .

-Yusof, A., Daniel, E., Low, W., & Aziz, K. (2011). Teachers **perceptions on the blended learning environment for special needs learning in Malaysia: A case study**, 2nd international conference on education and management technology, Singapore.