



**OBSTACLES TO TEACHING MATHEMATICS AT THE
PRIMARY STAGE FROM THE POINT OF VIEW OF
EDUCATIONAL SUPERVISORS**

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ABSTRACT

The aim of the research is to identify the obstacles to teaching mathematics in the primary stage from the point of view of educational supervisors in the schools of the second Iraqi city of Rusafa. In the light of the results of the study, the researcher recommended the need for good planning and preparation of training programs for mathematics teachers, and concerted efforts to overcome these obstacles, especially those related to mathematics books and evaluation methods.

KEYWORDS

Mathematics, obstacles, educational supervisors, the primary stage.

Introduction

The primary stage is one of the most important stages in the educational ladder, and it is the main pillar in building a child's personality. In it, he acquires information, experiences, skills, trends, habits, values, and concepts that help him in the integrated growth and understanding of the spirit of the times and prepare him to keep pace with the society in which he lives. It is also the first step on the long path of the student, which today does not end at a certain limit, but rather continues in his life throughout it. . from here; We find the interest of developed countries in the primary stage and their endeavor to support it with various means and capabilities, to enable it to exercise its constructive role effectively. Mathematics in the primary stage represents the firm support and solid foundation for an integrated mathematical building that the student uses through the educational stages that follow this stage, in addition to its importance to the student in his daily life in particular, and for all sciences in general (Al-Khudaydi, 2015, p. 204).

Mathematics is one of the most important knowledge that humans have to study since childhood. it develops several aspects of the human personality; Such as the mental and cognitive aspect, through the development of the mind's capabilities in thinking, enhancing understanding, and acquiring problem-solving skills, as well as skills of linking, analysis, interpretation, logic, and others. Nor is it an abstract science, nor a science separate from the rest of the sciences. Rather, it is deeply and firmly linked to many sciences and knowledge. Mathematics represents the language of science; Because most of the sciences such as physics, chemistry, astronomy, and statistics, and mathematics issues are an essential part of many topics in them, and this is what requires the learner to possess some basics in mathematics in order to be able to absorb other science subjects (Farajallah, 2020, p. 7)

however, the importance of mathematics and its development cannot be done as required in light of the obstacles that face the teacher and the student while going into the classroom, and this prompted the researcher to investigate what are the obstacles facing mathematics and prevent it from being understood and received optimally.

Research Problem:

Paying attention to the obstacles facing supervisors in teaching mathematics is an important matter due to the great role of mathematics in life, due to its association with different fields of knowledge and its basic contributions to the renaissance and advancement of nations. Identifying the difficulties or obstacles that prevent the achievement of the desired goals is the first step towards development or progress. Unless these obstacles are overcome, teaching mathematics will remain far from achieving its short or long-term goals (Nawaja and Manasra, 2019, p. 362).

In order to ensure that this was achieved, it was necessary to search for the obstacles facing teachers and educational supervisors in teaching mathematics in the primary stage, and the cause of the failure of this educational process as a result of the multiple obstacles that prevent primary students from understanding mathematics properly, and prevent them from benefiting from these curricula optimally and hinder their ability to employ it in practical life, and thus a failure to reach the desired goals of learning it, and in the light of the foregoing, the researcher raises the following problem in the following questions:

- Are there any obstacles to teaching mathematics at the primary stage from the point of view of educational supervisors in the schools of the second city of Rusafa, Iraq?
- Are there any obstacles to teaching mathematics at the primary stage from the point of view of educational supervisors in the schools of the second city of Rusafa, Iraq, according to the number of years of experience?

Research Importance:

- Determining the difficulties facing educational supervisors and the obstacles that make it difficult for them to provide mathematics in the required manner for primary school students.
- This study attempts to be a scientific addition and an essential step to the subject of teaching mathematics, with an attempt to revive and nurture awareness of the importance of overcoming obstacles, and to draw the attention of the Ministry of Education in the Iraqi state to the importance of that.
- This study may open horizons for future studies concerned with the education processes in mathematics in Iraq.

Research Aims:

- Determining the obstacles to teaching mathematics in the primary stage from the point of view of educational supervisors in the schools of the second city of Rusafa, Iraq.
- Determining the obstacles to teaching mathematics in the primary stage from the point of view of educational supervisors, according to the number of years of experience.

Study Hypotheses:

- **The first hypothesis:** There are statistically significant differences between the respondents' answers about the obstacles to teaching mathematics in the primary stage from the point of view of educational supervisors in the schools of the second Iraqi city of Rusafa.
- **The second hypothesis:** There are statistically significant differences between the respondents' answers about the obstacles to teaching mathematics in the primary stage from the point of view of educational supervisors in the schools of the second city of Rusafa, Iraq, according to the number of years of experience.

Search Limits:

- **Objective Limitations:** This study focused on examining the obstacles to teaching mathematics in the primary stage from the point of view of educational supervisors.
- **Spatial limits:** The application of the study was limited to a number of government schools for the primary stage in the schools of the second city of Rusafa, Iraq.
- **Human limits:** The current study was limited to educational supervisors affiliated to the Iraqi Ministry of Education.
- **Time limits:** This study was conducted during the academic year 2022/2023 AD.

Previous Studies:

Arabic Studies:

1. A study (Al-Omari, 2022) entitled: Difficulties in teaching mathematics courses for the primary stage through the Madrasati platform from the point of view of female teachers in Al-Makhwah Governorate in the Kingdom of Saudi Arabia for the academic year 1443 AH.

The study aimed to identify the difficulties faced by female mathematics teachers in the primary stage before, during and after the class through the Madrasati platform in the Kingdom of Saudi Arabia. The study population consisted of all female mathematics teachers of the primary stage in Al-Makhwah Governorate, and the sample was selected using a simple random method and its number reached 66 female teachers. The results showed that there were no difficulties before the class through the Madrasati platform. Because the platform is characterized by the ease of logging in and using it to prepare, prepare lessons, etc., with an average score of 1.63. There are also some difficulties during the lesson through the Madrasati platform, with an average of 2.93, the most prominent of which was the difficulty of ensuring that the student understood the lesson, as well as the difficulty of giving all students the opportunity to participate during the lesson through the Madrasati platform. also; There are difficulties after the class on the Madrasati platform, with an average score of 3.82, represented in the difficulty of ensuring that the student solves the assignment, or the test on her own and without the intervention of a family member. The teachers presented a number of solutions, including: that the time allotted for the class be increased on the Madrasati platform, and that the academic content of the courses be reviewed by specialists; In addition, the Ministry of Education provides educational applications in a free and safe way for download through the Madrasati platform.

2. A study (Khalil, 2020) entitled: Obstacles to teaching and learning mathematics in preparatory programs from the point of view of students and their teachers at Imam Muhammad bin Saud Islamic University.

The aim of this research is to identify the obstacles to teaching and learning mathematics in preparatory programs from the point of view of students and their teachers at Imam Muhammad bin Saud Islamic University. The descriptive survey method was used.

The results showed that the highest axes of obstacles to teaching and learning mathematics are the evaluation axis, followed by the nature of mathematics axis, then the mathematics book axis, then the learning environment axis, then the student axis, then the teacher axis. It is related to the students' estimates of the obstacles of teaching and learning mathematics on the axes of the nature of mathematics, the learning environment and the mathematics textbook on the one hand, and between the estimates of mathematics teachers for the obstacles due to the variable of gender or academic qualification on the other hand.

Foreign Studies:

3. Study (Wondem, et la, 2023) entitled:

Institutional Setting and Its Influence on the Teaching of Mathematics: Implications to Implementing Reform Vision in Mathematics Education in Ethiopian Schools.

Current initiatives in mathematics education call for the establishment of a continuing professional development program for teachers in Ethiopian schools. However, implementing such programs requires first an understanding of the school environment and the area in which the participating teachers work.

This study applies the theory of communities of practice as a framework and qualitative coding of data to understand the dynamic school environment and its implications for the teaching practices of mathematics teachers. The results reveal that the school environment does not sufficiently promote visions of reform, but rather maintains the practice that is supposed to change. The current situation includes a system of accountability loosely linked to visions of reform, the absence of reform-minded and experienced school leaders to guide teachers, and a lack of educational materials that can For educators to refer to for new reforms. This paper proposes a possible configuration of the school setting to foster an environment that promotes mathematics teaching towards reform goals.

Search Terms:

Obstacles to teaching mathematics: It is the deviation of the learner's level in mathematics from the criteria for learning this subject through the student's results in a constructive assessment that is presented while building the foundations of learning according to problem-solving strategies (Nazir and Bouamama, 2019, p. 492).

And he defined it (Asha et al., 2014, p. 220) as: the level through which a group of defects are determined in the basic mental or psychological understanding processes that appear in various forms, such as inattention, inability to acquire knowledge, inability to learn reading, writing and arithmetic, It is measured by the student's mark and his final score.

Theoretical framework of the research:

Mathematics teaching goals:

One of the most important goals of education is the learners' acquisition of sound thinking patterns to face the changes of the era, the most important of which is the tremendous development in science, and the continuous change in theories and discovery.) which requires the development of different methods of thinking, and mathematicians agree that mathematics is a fertile field for the development of diverse thinking abilities of learners, and then that the main goal of teaching mathematics is evident in the contribution of the formation of life The individual and the aspirations that he seeks in his individual and personal future on the one hand, and his follow-up to study mathematics on the other hand, while he is in school, and his planning for his presence, his work and his location after graduation on the other hand. (Al-Oqali, 2018, p. 455).

Obstacles to teaching mathematics:

There are many reasons for difficulties in learning mathematics, and the following is a presentation of some of them:

- Teachers' poor knowledge of teaching objectives, reliance on traditional teaching methods and poor use of modern teaching aids, as well as the preoccupation of some students with other work outside official working hours, which leads to irregular attendance and follow-up of their lessons.
- The nature of mathematics, the content of the textbook, the examination system and its intensity for one semester

The student's hatred of the subject is also one of the causes of problems in teaching mathematics.

- There is not enough time through which learning is done for certain topics in an optimal way, considering that the methods of presenting a subject in a class are not enough time in terms of the influence and neglect of students who are not responsible and who are able to understand in-depth the subject and mathematical skills are considered one of the most important reasons for this phenomenon.
- The length of courses in mathematics at the present time is one of the reasons for the problem of some students with learning difficulties, as some teachers are forced to expedite the teaching of curriculum courses until all units and subjects are completed in any way, ignoring the individual differences among students, which leads to the existence of Such as this group of students (Juma, 2015, p. 890).
- As indicated (Rayani, 2018, p. 225) to some obstacles to teaching mathematics from the point of view of the supervisors, where these obstacles are divided into two types, which are obstacles related to students and obstacles related to teachers, and they can be clarified according to the following:

- **First: Obstacles related to primary school students:**

One of the most important difficulties in learning the developed mathematics subject today is the amount of terminology that is found in it, and the enormity of the content of the subject and thus its large size in proportion to the time scheduled for giving it, in addition to that, the subject of mathematics is one of the subjects that cause fear and awe among students of all ages and levels of intelligence they possess, Also, their weak ability to read scientific matters, and the emergence of causes of confusion such as the Internet, matches and other means of entertainment contributed to their poor mathematical achievement, and the weakness in the main rules and laws governing the subject.

• **Second: Obstacles related to primary school teachers:**

The low ability of teachers to face certain problems facing students and stand in the way of their achievement in mathematics, as well as the weak ability to design for modern teaching methods, lack of access to developments in the advanced educational process, and the maintenance of traditional methods that do not benefit the student in delving into mathematics topics properly and make him a recipient Only, the increase in the number of learners in the classroom, the weakness of the family's follow-up of the learner, the increase in the teaching burdens on the teacher, the inadequacy of some general goals for the age of the learner, the large size of the content in relation to the time of study, the weakness of the school's capabilities, the lack of practical presentations in teaching, and the absence of a guide to help the teacher to benefit from the resources of the environment, the lack of clarity of the role of parents in the continuous evaluation process, the increase in the number of learners in the classroom, the weakness of the family's follow-up of the learner, and the increase in teaching burdens The teacher, the inadequacy of some of the general objectives of the age of the learner, the large size of the content in relation to the time of study, the weakness of the school's capabilities, the lack of practical presentations in teaching, the lack of a guide that helps the teacher to benefit from the resources of the environment, and the lack of clarity of the role of parents in the process of continuous evaluation.

Research Framework

Research Methodology:

A descriptive and analytical approach was relied upon to describe the variables presented in the study, and the research relied on the questionnaire as a tool for data collection, where a questionnaire was distributed to educational supervisors of mathematics, and then the SPSS program version /25/ was used in order to analyze the data.

Research Community:

Educational supervisors of mathematics at the primary stage in the schools of the second city of Rusafa, Iraq.

The research sample:

The researcher adopted the comprehensive survey method, and 64 questionnaires were distributed to all educational supervisors of mathematics at the primary stage in the schools of the second city of Rusafa, Iraq.

The validity of the questionnaire:

The questionnaire related to the current research was applied to a sample of individuals chosen randomly from the original study population outside the study sample, numbering (30) individuals, in order to calculate the validity of the internal consistency, and the researcher calculated the correlation coefficients between the degrees that express each paragraph separately. , and the overall resolution score, and Table No. (1) shows that.

Table (1) Correlation coefficient of each of the paragraphs and the total score of the questionnaire to which it belongs.

N	The mathematics curriculum includes dense and complex topics.	Correlation coefficient
1	The mathematics curriculum does not take into account the different levels of thinking among students.	**0.866
2	Classroom exercises in mathematics skills are insufficient.	**0.769
3	Teachers find it difficult to determine the problem that a student suffers from in mathematics.	**0.752
4	Students suffer from a low level of skill in solving mathematical problems.	**0.734
5	The mathematics curriculum includes dense and complex topics.	**0.704
6	Students suffer from weak self-desire to learn mathematics.	**0.709
7	Students' reliance on private lessons reduces their interest in class lessons.	**0.817
8	The number of weekly classes is insufficient to explain the curriculum.	**0.905
9	Students find it difficult to understand mathematical calculations.	**0.857
10	Students suffer from distraction during mathematics lessons.	**0.837
11	Students feel afraid of mathematics.	**0.745
12	The teacher does not do enough preparation before starting to solve mathematical problems.	**0.776
13	The teacher does not rely on appropriate teaching aids to clarify and simplify mathematics.	**0.760
14	The teacher does not take into account the difference in the level of students' mental abilities.	**0.816
15	The arrangement of the mathematics lesson in the daily schedule of lessons is not appropriate for students' concentration.	**0.606
16	Mathematics book topics depend on skills from previous grades that students lack.	**0.835

It is clear from the preceding Table (1) that all of its paragraphs have achieved statistically significant correlations with the degree of the total questionnaire, which indicates that the questionnaire has a high degree of internal consistency.

Resolution stability:

The researcher used Cronbach's alpha coefficient in order to calculate the stability of the scale used in the research, where the value of the alpha coefficient was found for the resolution, and the results showed the following:

Reliability Statistics	
Cronbach's Alpha	N of Items
0.957	16

The results of the statistical analysis showed that the value of the overall stability coefficient is statistically acceptable, and this indicates that all the expressions that were used have stability and enjoy it, and there is no need to remove any of the expressions that were found.

Descriptive stats:

The researcher found descriptive statistics for the questionnaire items, and the results showed the following:

Table (2) Descriptive statistics for the paragraphs

N	Paragraph	Arithmetic mean	standard deviation	Standard error	Probability sig value
1	The mathematics curriculum includes dense and complex topics.	1.7031	.82960	.10370	0.00
2	The mathematics curriculum does not take into account the different levels of thinking among students.	1.7813	.96722	.12090	0.00
3	Classroom exercises in mathematics skills are insufficient.	1.8125	.95743	.11968	0.00
4	Teachers find it difficult to determine the problem that a student suffers from in mathematics.	1.7813	.78617	.09827	0.00
5	Students suffer from a low level of skill in solving mathematical problems.	1.9688	.81589	.10199	0.00
6	Students suffer from weak self-desire to learn mathematics.	1.8125	.95743	.11968	0.00
7	Students' reliance on private lessons reduces their interest in class lessons.	1.8750	.70147	.08768	0.00
8	The number of weekly classes is insufficient to explain the curriculum.	1.7500	.87287	.10911	0.00
9	Students find it difficult to understand mathematical calculations.	1.8750	.82616	.10327	0.00
10	Students suffer from distraction during mathematics lessons.	1.8125	.99003	.12375	0.00

11	Students feel afraid of mathematics.	1.8125	.85217	.10652	0.00
12	The teacher does not do enough preparation before starting to solve mathematical problems.	1.6563	.89476	.11184	0.00
13	The teacher does not rely on appropriate teaching aids to clarify and simplify mathematics.	1.7656	.90400	.11300	0.00
14	The teacher does not take into account the difference in the level of students' mental abilities.	2.1563	.91233	.11404	0.00
15	The arrangement of the mathematics lesson in the daily schedule of lessons is not appropriate for students' concentration.	1.6563	.73934	.09242	0.00
16	Mathematics book topics depend on skills from previous grades that students lack.	2.0625	.83333	.10417	0.00

Table No. (2) shows that there are significant differences in the average responses of the sample in relation to the average neutrality of the five-point Likert scale, and accordingly, the answers issued by the research sample on the bars included in the questionnaire have indicated the existence of obstacles to teaching and learning mathematics from the point of view of educational supervisors.

Hypothesis testing:

1. There are statistically significant differences between the respondents' answers about the obstacles to teaching mathematics in the primary stage from the point of view of educational supervisors in the schools of the second city of Rusafa, Iraq, and the average of the scale used (3).

The first hypothesis was told by a One-Sample Statistics test as follows:

One-Sample Statistics				
Obstacles from the point of view of educational supervisors	N	Mean	Std. Deviation	Std. Error Mean
	64	1.8301	.67595	.08449

One-Sample Test						
Obstacles from the point of view of educational supervisors	Test Value = 3					
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
	-13.846-	63	.000	-1.16992-	-1.3388-	-1.0011-

It is noted from the table that the value of $Sig < 0.05$, and therefore we reject the null hypothesis and accept the alternative hypothesis, i.e.: There are statistically significant differences between the answers of the sample members about the obstacles to teaching mathematics in the primary stage from the point of view of the educational supervisors in the schools of the second city of Rusafa, Iraq, and the average of the scale used (3).).

Looking at the value of the total arithmetic mean, we find (Mean = 1.83), which indicates the existence of obstacles to teaching mathematics for the intermediate stage from the point of view of educational supervisors in the schools of the second Iraqi city of Rusafa.

2. There are statistically significant differences between the respondents' answers about the obstacles to teaching mathematics in the primary stage from the point of view of educational supervisors in the schools of the second city of Rusafa, Iraq, according to the number of years of experience.

To test this hypothesis, the researcher did an ANOVA test as follows:

ANOVA					
Obstacles from the point of view of educational supervisors					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.689	2	.345	.748	.478
Within Groups	28.096	61	.461		
Total	28.785	63			

We find that $0.478 = Sig > 0.05$, and therefore we accept the null hypothesis, that is: There are no statistically significant differences between the answers of the sample members about the obstacles to teaching mathematics in the primary stage from the point of view of the educational supervisors in the schools of the second city of Rusafa, Iraq, according to the number of years of experience.

Results:

The practical results of the research show that there are obstacles to learning mathematics prescribed for the primary stage from the point of view of educational supervisors in the Iraqi city of Rusafa II. As the educational supervisors pointed out to the large number of burdens placed on the shoulders of the teacher, the weak professional competence of some teachers, the lack of training courses in their field of work, the lack of equipment and means related to the study subjects, in addition to the presentation of topics in the textbook in a way that is difficult for the student to understand on his own. The number of classes is not proportional to the length of the course, as well as the poor level of motivation among students to accept and attend math classes, and thus the difficulty in drawing their attention and attracting them towards sharing, interacting and expressing their opinions.

Recommendations:

Based on the above, the researcher recommends the following:

- Good planning and preparation of training programs for mathematics teachers.

- Conducting more academic studies to identify difficulties in learning mathematics among students of other academic levels.
- Primary school teachers focus on employing conceptual knowledge in teaching mathematics, and better use of technology in teaching mathematics.
- The researcher recommended concerted efforts to overcome these obstacles, especially those related to mathematics and evaluation methods.

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