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المشكلات التي تواجه معلمي الرياضيات في تدريس الإحصاء

Problems facing mathematics teachers in teaching statistics

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الملخص

يتناول هذا البحث التحديات التي يواجهها معلمو المدارس الابتدائية عند تدريس الإحصاء في محافظة قلقيلية، فلسطين. بلغ عدد المشاركين الإجمالي 140 معلمًا، وتم استخدام المنهج الكمي من خلال استخدام الاستبيان لحل مشكلة البحث والإجابة على الأسئلة البحثية، وبلغت نتائج الدرجة الإجمالية لعينة الدراسة تجاه تأثير مشاكل المنهج على تدريس الإحصاء من وجهة نظر معلمي المرحلة الابتدائية في محافظة قلقيلية 62.6%، وهذا يشير إلى أن معدل الموافقة كان كبيرًا، وبلغت نتائج الدرجة الإجمالية لعينة الدراسة تجاه تأثير مشاكل أساليب التدريس على تدريس الإحصاء من وجهة نظر معلمي المرحلة الابتدائية في محافظة قلقيلية 76.6%، وهذا يشير إلى أن معدل الموافقة كان كبيرًا. لا توجد فروقات إحصائية ($\alpha \leq 0.05$) بين الآراء حول المشاكل التي يواجهها معلمو الرياضيات عند تدريس الإحصاء، استنادًا إلى الجنس، والمؤهل الأكاديمي، وسنوات الخبرة.

تظهر نتائج البحث أنه يجب على المعلمين تطوير خطة جديدة تشمل أساليب تدريس حديثة تعتمد على التجربة والتطبيق للتواصل السليم للأفكار التعليمية وتطوير خطة استراتيجية لتدريس الإحصاء، عرضة للتغيير التدريجي لبعض المشاكل في المنهج الحالي لجميع الفصول التعليمية في المدرسة.

الكلمات المفتاحية: المدارس الأساسية، الرياضيات، تدريس الإحصاء، محافظة قلقيلية.

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Abstract

This paper discusses the most significant challenges that primary school teachers face when teaching statistics in Qalqilya governorate, Palestine. The total number of participants is 140 teachers and we utilized the quantitative approach by using the questionnaire to solve the research problem and answer the research questions. The results of the total degree of the study sample's towards the influence of curriculum problems' on teaching statistics from primary stage teachers' perspectives in Qalqilya governorate reached 62.6% and this indicates that the approval rate was large, and The results of the total degree of the study sample's towards the influence of teaching pedagogies' problems' on teaching statistics from primary stage teachers' perspectives in Qalqilya governorate reached 76.6% and this indicates that the approval rate was large. There are no statistical differences ($\alpha \leq 0.05$) between the views about the problems math teachers face when teaching statistics, based on gender, academic qualification, years of experience.

The results of the research show that teachers must develop a new plan to include modern teaching methods based on experience and application to properly communicate educational ideas and develop a strategic plan for teaching statistics, subject to gradual change of some problems in the current curriculum for all educational classes in the school.

Keywords: Primary schools, Mathematics, Teaching Statistics, Qalqilya Governorate.

Introduction

Mathematics has become one of the most important subjects, since it's the language of science and technology that cannot be ignored. The majority of students, however, have negative attitudes toward this critical subject. Experts attribute such negative emotions to the fact that many students are embarrassed when dealing with numbers, or even simple mathematical cases in real life situations and in schools. As a result, students to avoid studying this subject or performing any mathematical tasks (Kilpatrick, 2020).

Also it is a vital field of knowledge in human's life, and it is highly connected to other fields of knowledge that rely on it. Furthermore, mathematics organizes humans' lives, their relationships and treatments as well as prepares them to face the present and the future, so it is impossible to den cannot be denied that mathematics is strongly associated with human beings' lives. Obviously, mathematics is one important factor for developing

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societies, because it is completely concerned with scientific skills and advanced communications. (Alajmi, 2021).

Statistics plays a crucial role with its wide-ranging applications in various scientific fields such as psychology, economics, finance, sociology, geology, physics, chemistry, astronomy, genetics, and agriculture. It is considered one of the important branches of mathematics due to its extensive practical applications. Statistics is used in data collection and analysis to study phenomena and problems. It also aids in organizing data through tables and graphs, providing a quick and accurate understanding of the phenomenon or problem. Statistical data processing helps in understanding the impact and dimensions of the phenomenon or problem. Despite its importance, students often do not benefit from learning statistics due to the use of traditional teaching methods that focus on superficial understanding through the presentation of abstract information. These methods do not help in building meaningful understanding or provide sufficient practical applications and experiences from the external world and surrounding environment. To overcome these challenges, math projects such as applicable math and community math projects have been advocated in different parts of the world to make real-life applications the central focus of math curricula. This shift aims to overcome the abstract nature of math by using teaching methods based on problem-solving activities, real data, and the need to focus on developing statistical intuition, which is often lacking due to the emphasis on abstract computational procedures (Abu Alhamad, 2021).

This paper discusses the most significant challenges that primary school teachers face when teaching statistics in Qalqilya governorate since it observed that the majority of students struggle to master statistics, particularly when traditional teaching methods are used. This has increased the problems of teaching statistics to teachers.

Thus, we have focused on the problems of teaching statistics that face teachers in the governmental schools particularly in the primary stages. Therefore, we aimed at investigating the causes for these barriers that represent the following points: the current curriculum, traditional teaching methods and other barriers that may relate to students themselves.

Objectives

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1. To identify the influence of curriculum problems on teaching statistics.

2. To illustrate the influence of teaching pedagogies' problems' on teaching statistics from primary stage teachers' perspectives.

3. To demonstrate the influence of students' barriers on teaching statistics from primary stage teachers'.

4. To examine if there are any statistical differences at ($\alpha \leq 0.05$) in the influence of problems facing mathematics teachers in teaching statistics subject from primary stage teachers' in accordance to the variables of sex, academic qualification and years of experience?

Research Importance

The theoretical significance of the study derives from the importance of the study topic which is the problems facing statistics teaching and the lack of the researches that deals with this topic of teaching statistics in Palestine.

Also it has a practical \ operational significance because it seeks to help educational policy makers, curricula designers and educationalists in Palestine to pay attention and provide information on the problems facing teachers in teaching statistics.

Methodology

choosing an appropriate research methodology is critical methodology is a critical component of any research study. All methods used by a researcher during a research study are termed as research methods, which includes the theoretical procedures, experimental studies, numerical schemes, and statistical approaches. Its help the researchers in collect samples, data and find the research. Particularly, scientific research methods call for explanations based on collected facts, measurements and observations and not on reasoning alone.

Research methodology is a systematic way to solve a problem. It is a science of studying how research is to be carried out. Essentially, the procedures by which researchers go about their work of describing, explaining and predicting phenomena are called research

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methodology. It is also defined as the study of methods by which knowledge is gained. Its aim is to give the work plan of research.

Quantitative research is based on the measurement of quantity; the process is expressed or described in terms of one or more quantities. The result of this research is essentially a number or a set of numbers.

In addition, the quantitative research using statistical methods often begins with the collection of database on a theory or hypothesis or experiment followed by the application of descriptive or inferential statistical methods.

In this study, we utilized the quantitative approach by using the questionnaire to solve the research problem and answer the research questions.

Data Collection

The research depended on two basic types of data (primary and secondary date):

Primary Data: In this research, the primary data obtained from a structural questionnaire, which conducted with primary stage teachers in Qalqilya governorate, since this research aimed to describe and analyze their perspectives, then the distributed questionnaires was collected and analyzed by making statistical analysis using SPSS computer software.

Secondary Data: this data was used to introduce the related study of the research, and was obtained from several sources, for example books, journals, reports, internet websites, and many other resources and references that were available and related to the research title. Literature review was introducing to help in preparing the research and classified the purpose of it which focused in the problems facing mathematics teachers in teaching statistics subject.

Research Instrument

The researchers created a questionnaire designer in two parts. The questionnaire is used to collect and acquire primary data that will be analyzed to achieve the research objectives. The questionnaire was designed into two languages (Arabic and English), the Arabic version to be distributed on participants because it's the native language of Palestine, and then translated it to the English version to be used in the research content.

The questionnaire was consisted of three main parts:

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The first part of the questionnaire contained a description of the research objective and significance these sections also reassured participants about the confidentiality of the information, and encouraged them to complete the questionnaire.

The second part was designed to collect demographic information about respondents which included (gender, education, and experience years). Finally, the third part consisted of 24 items constructed in close-ended statements designed based on the five- Likert scale (5= strongly agree, 4= agree, 3= neutral, 2= disagree, 1= strongly disagree).

The research population consists of primary stage teachers in Qalqilya governorate. Research sample size consist of is (140) respondents, which was collected electronically. Regarding the validity in this research, the reviewed literature formed the references of questionnaire statements. In addition, the conducted interviews extracted many ideas that contained in the questionnaire, then we were reviewed the questionnaire and discussed it with the supervisor to ensure the accuracy of questionnaire questions. We also sent the questionnaire to several experts and arbitrators to get their opinions and recommendations, and discuss repeated questions, charity of the questions, order of the questions, and if the questions are directed the participants towered a specific alternative. Finally, just add that the research results show that the value of Cronbach alpha test is (86.3%).

3.1 Statistical Analysis

Statistical Package for social Science (SPSS) version 20 was used for data analysis. We used the following statistical methods:

1. Frequencies, Percentage, Mean, and Standards Deviation tables: This method performed to describe the research sample.
2. One- Way ANOVA Tests: to test if there are statistical differences between means of three variables or more.
3. Cronbach's Alpha: to test the reliability of the questionnaire.

Descriptive Analysis

In order to obtain the research results, Statistical Package for the Social Sciences (SPSS) software used to analyze the questionnaires. SPSS has been chosen in this research because it has many features and properties which can provide appropriate results, these results lead to achieve research purpose by providing several statistics for each element in the research

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questionnaire. Hence, SPSS is useful to get the causal relationships between questionnaire elements.

According to the questionnaire design, respondents have different personal information; these differences introduce different responses toward problems facing mathematics teachers in teaching statistics subject. The following results show these differences.

Research Problem

The research problem can be formulated through the main question of the study, which is: What are the difficulties that mathematics teachers face in teaching statistics subject from teachers' perspectives in primary schools of Qalqilya governorate\Palestine?

Study

In Ling's (2023) study, the challenges faced by mathematics teachers in teaching sentence-based mathematics problem-solving skills were investigated, along with the approaches used to overcome these challenges. The study employed a qualitative approach, specifically a case study design. Data were gathered through observations and interviews with two mathematics teachers who teach year four students at a Chinese national primary school in Kuala Lumpur. The findings revealed three main challenges: low mastery of skills among students, insufficient teaching time, and a lack of ICT infrastructure. Despite these challenges, the teachers demonstrated creativity and enthusiasm in diversifying their teaching approaches to engage students and improve their skills in solving sentence-based mathematics problems. These findings provide valuable insights for mathematics teachers, helping them better understand the challenges involved in teaching sentence-based mathematics problem-solving and enabling them to deliver high-quality education to their students.

Karali's (2022) study focused on identifying the challenges faced by classroom teachers when teaching mathematics, offering a current perspective on the issue. Using a phenomenological design within a qualitative research framework, the study employed criterion sampling to select participants. Seven primary school teachers (four female and three male) took part in semi-structured focus group interviews, during which they discussed the difficulties they encounter in teaching mathematics. The data gathered from these interviews was analyzed using content analysis. The findings revealed a variety of challenges, including issues related to curriculum density, insufficient lesson hours,

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alignment with central exam programs, reading comprehension, connecting concepts to daily life, student readiness, economic constraints, lack of teaching materials, challenges of distance education, fear of mathematics, peer pressure, and lack of student motivation.

Bromage's (2022) study examines the challenges encountered by both educators and students when teaching and learning statistics in non-mathematics disciplines. The paper aims to identify these challenges and then explores current best practices and trends in designing engaging and effective statistics courses for non-specialists. The study highlights that many of these challenges arise from negative attitudes towards statistics and a lack of motivation to study the subject, often exacerbated by statistics anxiety. However, the study also notes that because these challenges are widespread and have attracted the attention of innovative educators from various fields, there is a wealth of ideas and resources available to statistics teachers looking to enhance their teaching methods and create more effective learning experiences.

Hasan (2021) conducted a study aimed at assessing the effectiveness of a proposed plan to enhance mathematics teachers' positive attitude towards statistics, aligning with the standard criteria for Bachelor's programs in Education faculties. The research involved preparing and modifying a list of 59 criteria for inclusion in the mathematics teachers' preparation program. Additionally, a scale with three dimensions (emotional, educational, and implementation) was developed to measure teachers' attitudes towards statistics. The study was conducted on a sample of 30 third-year students majoring in mathematics at the Faculty of Education, Fayoum University. Results indicated that the proposed plan was successful in fostering a positive attitude among student teachers towards statistics.

Ali's (2020) study aimed to identify the challenges students from non-specialized departments and the Department of Educational and Psychological Sciences face when studying educational statistics. The researcher clearly defined the scope of the study and utilized a questionnaire as the primary tool for data collection. The study adhered to the principles of scientific research methodology, with the final questionnaire comprising 19 items. The findings revealed numerous difficulties encountered by students outside the educational and psychological sciences field in learning educational statistics.

Another study by Estrada, A., Batanero, C., & Díaz, C. (2018) the study examine the assessment of teachers' attitudes using valid and reliable instruments is a preliminary step in organizing formative actions for these teachers. In this paper, researcher

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describe the development of a scale aimed at measuring primary school teachers' attitudes towards probability and the teaching of probability. The components considered in building the instrument, the process of selecting the items, as well as the results of a pilot trial of the instrument are presented. The validity and reliability of the instrument are also discussed, and the preliminary results of a second sample of 232 prospective teachers in Spain is analyzed. Our results suggest that future teachers' attitudes towards probability and its teaching are generally positive in all of the components considered.

Results and Discussion

First Part: Personal Information

The total number of participants is 140, the following table present the characteristics of the participants.

Table (1): distribution of research sample participants

Variable	Characteristics of the Variable	Frequencies	Percentage
Gender	Male	35	25%
	Female	105	75%
Education	Diploma	9	6.4%
	Bachelor	110	78.6%
	Master's degree and above	21	15%
Experience years	Less than 5 years	34	24.3%
	From 5- 10 years	28	20%
	More than 10 years	78	55.7%

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Total	**140**	**100%**

The results of analysis personal information data illustrate the following facts:

1. The percentage of females was more than male, which is form 75% female of respondents and 25% male.
2. The highest percentage of participants have (Bachelor Degree) who form 78.6% of respondents, then (Master Degree and above) who form 15% and the last is (Diploma) with 6.4% of the respondents.
3. The highest percentage of participants have (More than 10 years) experience years who form 55.7% of respondents, then (Less than 5 years) old who form 24.3%, and the last is (From 5- 10 years) with 20% of the respondents.

Second Part: Attitudes towards problems facing mathematics teachers in teaching statistics subject.

- **First question: What is the influence of curriculum problems' on teaching statistics from primary stage teachers' perspectives in Qalqilya governorate?**

The following table presents the answer of the participants in this part**Table (2): Degree of the curriculum problems on teaching statistics.**

No.	Statement	mean	SD	%	degree
1	The difficulty of some topics related to statistics in the mathematics book.	2.94	1.065	58.8	Mid
2	Difficulty of exercises related to statistics in the mathematics book.	2.99	1.099	59.8	Mid
3	The lack of suspense and excitement among students in statistics subject.	3.35	1.059	67	High

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4	Statistics topics in the math book are not sequential from easy to hard.	2.73	.981	54.6	Mid
5	Failure to develop the textbook in accordance with the development of knowledge and developments in the field of curriculum preparation.	3.39	.950	67.8	High
6	There are brief topics in Statistics, and need to be expanded.	3.16	.962	63.2	High
7	Lack of consideration in statistics for individual differences between students.	3.34	.964	66.8	High
Total		**3.13**	**.692**	**%62.6**	**High**

The results of the above table illustrate the following facts:

1. The highest statement was statement number (5) which about “Failure to develop the textbook in accordance with the development of knowledge and developments in the field of curriculum preparation" with 67.8% degree.
2. The lowest statement was statement number (4) which about "Statistics topics in the math book are not sequential from easy to hard." with 54.6% degree.
3. The total percentage of participants about the curriculum problems’ on teaching statistics was high with 62.6% degree.

- **Second question: What is the influence of teaching pedagogies' problems' on teaching statistics from primary stage teachers’ perspectives in Qalqilya governorate?**

The following table presents the answer of the participants in this part

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Table (3): Degree of the teaching pedagogies' problems' on teaching statistics.

No.	Statement	mean	SD	%	degree
8	Lack of availability of the necessary capabilities to develop modern teaching methods in statistics.	3.89	.559	77.8	High
9	The large number of students in the class, prompts the teacher not to conduct statistical applications in life.	4.02	.608	80.4	Very High
10	The intensity of the curriculum prompts the teacher to use traditional methods of teaching.	4.10	.654	82	Very high
11	The teacher avoided using modern teaching methods in statistics, because it takes a long time.	3.83	.566	76.6	High
12	The lack of courses that increase the effectiveness of the teacher in teaching statistics.	3.71	.573	74.2	High
13	The teaching methods used in teaching statistics are inappropriate.	3.60	.521	72	High
14	The teacher does not employ technology in teaching statistics.	3.73	.536	74.6	High

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15	Not linking the topic of statistics lessons in daily life.	3.84	.540	76.8	High
16	The teacher's failure to employ active learning strategies in teaching statistics.	3.68	.514	73.6	High
Total		**3.83**	**.351**	**%76.6**	**High**

The results of the above table illustrate the following facts:

1. The highest statement was statement number (10) which about "The intensity of the curriculum prompts the teacher to use traditional methods of teaching" with 82% degree.
2. The lowest statement was statement number (13) which about "The teaching methods used in teaching statistics are inappropriate" with 72% degree.
3. The total percentage of participants about the teaching pedagogies' problems on teaching statistics was high with 76.6% degree.

Third question: What is the influence of students' barriers on teaching statistics from primary stage teachers' perspectives in Qalqilya governorate?

The following table presents the answer of the participants in this part

Table (4): Degree students' barriers on teaching statistics

No.	Statement	mean	SD	%	degree
17	Weakness of students in understanding statistics topics.	3.99	.547	79.8	High
18	The weak desire of some students to learn statistics.	3.93	.594	78.6	High

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19	Students feel fear and dread when confronted with topics related to statistics.	3.91	.567	78.2	High
20	Students' willingness to solve any statistical problem is insufficient.	3.87	.577	77.4	High
21	Students' lack of interest in solving mathematics-related exercises.	3.88	.573	77.6	high
22	The poor level of students in mathematics, which affects the comprehension of statistics.	3.99	.642	79.8	high
23	Students rely on memorizing statistics more than understanding them.	3.92	.629	78.4	High
24	Students study statistics only at the time of the test.	4.11	.612	82.2	Very High
Total		**3.95**	**.449**	**%79**	**high**

The results of the above table illustrate the following facts:

1. The highest statement was statement number (24) which about “Students study statistics only at the time of the test" with 82.2% degree.
2. The lowest statement was statement number (20) which about "Students' willingness to solve any statistical problem is insufficient." with 77.4% degree.
3. The total percentage of participants about the teaching pedagogies' problems' on teaching statistics was high with 79% degree.

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Statistical Differences among Survey Respondents

This section outlines the statistical differences between participants in this research according to received data. Independent Samples Test (t-test for Equality of Means) and one-way ANOVA Test are used to explain these differences.

T-test method compares means of qualitative independent variable that has two levels, whereas one-way ANOVA compares means of qualitative independent variable that has more than two levels. In this case, the dependent variables are quantitative.

First hypothesis: There are no statistical differences at (α≤ 0.05) between the views of primary school teachers in Qalqilya governorate \ Palestine about the problems math teachers face when teaching statistics, based on their gender.

The researchers used the T-test for the independent variables and the results as shown in Table below:

Table (5): The results of first hypothesis.

Gender	NO.	Mean	SD	Freedom	T-value	sig
male	35	3.59	.394	138	1.549	0.215
female	105	3.65	.346			

Table above shows that the value of the significance level is (0.215), this value is more than the value specified in the hypothesis (0.05). Therefore, we accept the first hypothesis and say that "There are no statistical differences at (α≤ 0.05) between the views of primary school teachers in Qalqilya governorate \ Palestine about the problems math teachers face when teaching statistics, based on their gender".

second hypothesis: There are no statistical differences at (α≤ 0.05) between the views of primary school teachers in Qalqilya governorate \ Palestine about the problems math teachers face when teaching statistics, based on academic qualification variable.

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The researchers used the ANOVA-test for the independent variables and the results as shown in Table below:

Table (6): The description of the influence of problems facing mathematics teachers in teaching due to years of experience variable.

Years of experience	NO.	mean	SD
Less than 5 years	34	3.59	.353
5 – 10 years	28	3.65	.347
More than 10 years	78	3.65	.368
Total	140	3.64	.358

Table (7): The results of second hypothesis.

Differences	Total group	freedom	Mean sum	F- value	sig
All groups	0.082	2	0.041	0.316	.729
Between group	17.778	137	0.130		
Total	17.860	139			

Table above shows that the value of the significance level is (0.729), this value is more than the value specified in the hypothesis (0.05). Therefore, we accept the second hypothesis and say that "There are no statistical differences at ($\alpha \leq 0.05$) between the views

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of primary school teachers in Qalqilya governorate \ Palestine about the problems math teachers face when teaching statistics, based on academic qualification variable".

Third hypothesis: There are no statistical differences at (α≤ 0.05) between the views of primary school teachers in Qalqilya governorate \ Palestine about the problems math teachers face when teaching statistics, based on years of experience variable.

The researchers used the ANOVA-test for the independent variables and the results as shown in Table below:

Table (8): T The description of the influence of problems facing mathematics teachers in teaching due education variable.

Education	NO.	mean	SD
Diploma	198	3.55	.368
Bachelor Degree	110	3.5630	.360
Master Degree or above	21	3.72	.347
Total	140	3.64	.358

Table (9): The results of third hypothesis.

Differences	Total group	freedom	Mean sum	F- value	sig
All groups	0.208	2	.104	.807	.448
Between group	17.652	137	.129		
Total	17.860	139			

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Table above shows that the value of the significance level is (0.448), this value is more than the value specified in the hypothesis (0.05). Therefore, we accept the fourth hypothesis and say that "There are no statistical differences at ($\alpha \leq 0.05$) between the views of primary school teachers in Qalqilya governorate \ Palestine about the problems math teachers face when teaching statistics, based on years of experience variable.

DISCUSSION

Based on the results of the data analysis presented in the previous chapter, the research illustrates the following main results:

Discussing the first question:

What is the influence of curriculum problems' on teaching statistics from primary stage teachers' perspectives in Qalqilya governorate?

The results of the total degree of the study sample's towards the influence of curriculum problems' on teaching statistics from primary stage teachers' perspectives in Qalqilya governorate reached 62.6% and this indicates that the approval rate was large.

We attribute this result to The difficulty of some topics related to statistics in the mathematics book, and There are brief topics in Statistics, and need to be expanded, and Lack of consideration in statistics for individual differences between students, and the presence of non-detailed solutions by placing the output only without explaining the method and steps of the solution, in addition to the existence of the statistics unit often the last unit in the textbook which affects the method of teaching and the delivery of the correct idea to students through the teaching course.

Discussing the second question:

What is the influence of teaching pedagogies' problems' on teaching statistics from primary stage teachers' perspectives in Qalqilya governorate?

The results of the total degree of the study sample's towards the influence of teaching pedagogies' problems' on teaching statistics from primary stage teachers' perspectives in Qalqilya governorate reached 76.6% and this indicates that the approval rate was large.

We attribute this result to the existence of some problems related to the teaching strategies and methods adopted by teachers, including, for example, the large number of students in the class, which pushes the teacher to adopt traditional methods and not to

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apply, in addition to the intensity of the curriculum that the teacher must teach to students in a relatively short time.

Discussing the third question:

What is the influence of students' barriers on teaching statistics from primary stage teachers' perspectives in Qalqilya governorate?

The results of the total degree of the study sample's towards What is the influence of students' barriers on teaching statistics from primary stage teachers' perspectives in Qalqilya governorate reached 79% and this indicates that the approval rate was large.

We attribute the high percentage of problems related to students in the teaching of statistics due to the presence of some reasons, including the lack of preference for the subject by students and consequently neglect of its study, and the poor general level of students in mathematics, which is reflected in the subject of statistics, in addition to the failure to establish students in a correct way that depends on the methods modern and experimental.

Recommendations

Depending on the results of the research, we present a set of recommendations:

1. Teachers must develop a modern plan to include modern teaching methods based on experience and application to properly communicate educational ideas.

2. Develop a strategic plan for teaching statistics subject to gradual change of some problems in the current curriculum for all educational classes in the school.

3. Encouraging teachers to get out of the box while teaching by providing practical and easy examples to students to increase their love for and interaction with the educational material

4. Conducting more studies to confirm the problems facing mathematics teachers in teaching statistics subject for different educational levels and provide practical solutions to it.

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