



ISSN: 2350-0328

**International Journal of Advanced Research in Science,  
Engineering and Technology**

**Vol. 5, Issue 8 , August 2018**

# **The reasons for the low level of achievement in the mathematics of students in the basic stage minimum from the point of view of teachers in the province of Amman**

**Mohammad Saleh Alkaraki, Salleh Abd Rashid**

Student, School of Human Development and Techno communication, Universiti Malaysia Perlis, Malaysia  
Full Professor, School of Human Development and Techno communication, Universiti Malaysia Perlis, Malaysia

**Abstract:** The present study aimed to identify the causes of low achievement in mathematics among students in the basic stage from the point of view of teachers in the light of variables such as gender, academic specialization, scientific qualification and experience. For this purpose, a questionnaire was prepared to measure the reasons for the low achievement of students in mathematics, which consists of (28) items, each of which is one of the possible causes of low achievement in mathematics. The study procedures were applied to a sample of (150) teachers who represent 65% of the original population of this study, which is defined by the teachers of mathematics in the basic lower grades (grades 1-4) in the public schools in Amman. After analyzing the necessary data, the study showed the following results: 1. The teachers' estimates showed that the five most important reasons for the low achievement in mathematics among the students of the basic stage were in the following descending order: - Health impairment affects students' achievement of mathematics- Behavioral problems affect the performance of students achievement in mathematics- Lack of self-interest in the study leads to low level of student in mathematics- Lack of sense of belonging to the school pays to lack of interest in the study- Lack of knowledge of teachers of modern educational and psychological theories lead to poor performance of students 2. While teachers' estimates showed that the five most important reasons for low achievement in mathematics among students in the basic basic stage were the following ascending order: The overcrowding of students leads to low student achievement- Lack of modern equipment and means leads to low student achievement- The low social status of the family drives students to not pay attention to the study- The increase in the quorum of the teacher of the quota affects the low level of student achievement- Non-specialization teacher in mathematics affects the low level of the student. 3. There are statistically significant differences between the levels of teachers' estimates for reasons of low achievement of students in mathematics in the lower basic stage depending on the gender variable in favor of male teachers.

**KEYWORDS:** Amman, Behavioral problems, Health impairment, Mathematics

## **I. INTRODUCTION**

The low level of educational achievement is a major problem that must be solved. It is a problem of dimensions, in terms of psychological and educational problem. On the other hand, it is a social problem that is primarily concerned by psychologists, educators, social workers and parents. Many educators, parents and students have taken the interest and thought of them as the primary source of hindering the growth and progress of a renewed life (Teng et al., 1999). The problem of low achievement is one of the most important problems that impede modern school and transform it into the performance of its mission (Kulkami, 2012). The time has come for this problem to get its attention due to its serious negative effects on the school and society. The problem is in almost every semester, where there is a group of students who are unable to follow the other colleagues in the collection and absorption of the curriculum, this group often turns into a source of disturbance and disturbance, which may disrupt the educational process within the classroom or the general disorder of the school (Bandura et al. 2001).

The subject of low achievement is a delicate and sensitive subject that relates to the future of children and their social and professional lives and their psychological stability or disturbance in childhood and youth. This requires a



ISSN: 2350-0328

# International Journal of Advanced Research in Science, Engineering and Technology

Vol. 5, Issue 8 , August 2018

comprehensive and insightful view of all aspects of the family, social, economic and political factors that interact with each child's psychological preparations, One that is far from random judgments and fanatic attitudes "such as the misconception of some teachers and parents that low achievement is linked to stupidity and mental retardation," while the objective view of Delay in children should be based on a clear and objective understanding that takes into account all aspects and factors surrounding the student and the educational process and analysis in order to put the real causes of this delay.

## II. RESEARCH PROBLEM

The problem of the study focuses on the causes of low academic achievement in the students of the basic basic stage from the point of view of a sample of teachers in Amman, in light of some variables related to the teacher: gender, scientific qualification, specialization and years of experience (Johnson & Mortimer, 2002).. The problem of low level of students in mathematics is a problem of importance because of its negative effects on the educational system in particular and on society in general because it leads to repetition, and repetition leads to the return and then leakage (Buser, Niedexle&Oosterbeck, 2014). To identify this problem, it was formulated as a specific question as follows: What are the reasons for the low academic achievement in the mathematics of students in the lower elementary stage from the point of view of teachers in Amman?

## III.IMPORTANCE OF THE STUDY

The importance of this study comes from the theoretical and practical aspects as follows:

- A. To identify the reasons for low academic achievement in mathematics in the lower elementary stage from the point of view of teachers and teachers in Amman.
- B. To provide those concerned with a descriptive survey of the causes of low achievement in mathematics specifically to address this problem and find what is necessary in dealing with it.
- C. Providing the library, researchers and other scholars with a study that represents a descriptive reference to the reality of these students who do not have the ability to develop their athletic abilities alone.
- D. The results of this study may be useful for supervisors and educational and social supervisors in their professional dealings with the teachers and directing them towards achieving the desired educational goals.

## IV.OBJECTIVES OF THE STUDY

This study aims to:

1. To identify the reasons for the low academic achievement in the mathematics of students in the basic stage minimum from the point of view of teachers in Amman.
2. Identifying the relative ranking of the reasons for low achievement in mathematics among students in the basic basic stage from the point of view of teachers in Amman.
3. Identify the fundamental differences between the levels of teachers' estimates of the reasons of low academic achievement in the basic stage students in Amman according to the variables: gender, scientific qualification, specialization and experience

## V.STUDY QUESTIONS

The study sought to answer the questions verse:

- a) What are the reasons for the low level of academic achievement in mathematics among students in the lower elementary stage from the point of view of teachers in Amman?
- b) Are there statistically significant differences between the levels of teachers' estimates of the reasons for the low level of achievement in mathematics among students of the basic basic stage in Amman according to the gender variable?
- c) Are there statistically significant differences between the levels of teachers' estimates of the reasons for the low level of achievement in mathematics for students of the basic basic stage in Amman according to the variable of the scientific qualification?
- d) Are there statistically significant differences between the levels of teachers' estimates of the reasons for the low level of achievement in mathematics for students of the basic elementary stage in Amman according to the variable of the academic specialization?



- e) Are there statistically significant differences between the levels of teachers' estimates of the reasons for the low level of achievement in mathematics for students of the basic basic stage in Amman according to the variable years of experience?

**VI.DETERMINANTS OF STUDY**

The results of this study are determined by the following aspects:

- Human Determinants: The results of this study are determined by a sample of the teachers of the lower elementary stage in Amman to estimate the reasons for the low achievement of students in mathematics.
- Spatial determinants: This study was conducted in public schools in Amman.
- Temporal determinants: This study was conducted in 2017.

**VII. PREVIOUS STUDIES**

- A. (Cross, 2009): The study found that there are a number of reasons, the most important of which are: the lack of preparation for learning mathematics among students, the lack of use by teachers of exciting and attractive methods in teaching mathematics, bad experiences and negative attitudes that It is carried out by students about mathematics and mathematics teachers, and the difficulty of concepts related to mathematics and not presented well.
- B. (Gazeley& Dunne, 2008): The results showed that classroom interaction has a positive effect on the level of students' achievement. The more successful the teacher is in providing an effective classroom environment and building effective social relationships, the higher the level of student achievement.
- C. (Gorard& Smith, 2008): identify the reasons leading to low achievement in mathematics among students in the basic stage in Britain and formed the study sample (2312) students from different British government schools. The study found that the overall success rate in mathematics was very low and that there were no statistically significant differences in the level of achievement in mathematics due to the variables of grade, sex and race. As for the reasons for the low achievement in mathematics, the results showed that the most important of these reasons is the lack of use of modern and advanced methods in teaching and carrying the student negative attitudes on mathematics.
- D. (Barkins, 2002): The aim of the study was to determine the impact of the use of computer-aided teaching in the teaching of grades 7 and 4 and the extent of absorption of students in the two grades (68) students from the seventh grade and 64 students from the seventh grade. The study concluded that there are no statistically significant differences due to the trend towards mathematics and computer. The computer-learned group achieved higher achievement in mathematics. And there are significant differences in achievement according to the gender variable in favor of males.

**VIII. STUDY METHODOLOGY**

In this study, the descriptive analytical method was applied in order to identify the reasons for the low achievement of students in the basic stage in mathematics from the point of view of teachers.

**IX. POPULATION AND SAMPLING****- Population**

The study population consists of all teachers and teachers of mathematics in the basic elementary stage (from the first to the fourth grade in the public schools in Tulkarem governorate, which are 230 teachers and teachers studying in 65 schools, 31 male schools, 27) for girls and 7 for mixed schools, which are distributed according to gender, qualification and specialization variables as shown in the following table:

**Table 1: Distribution of the study population**

Variable	the level	the number	percentage
Gender	Male	110	%47.8
	Female	120	%52.2
Qualification	Diploma	100	%43.5
	BA	130	%56.5

Specialization	Mathematics	160	%69.6
	Other Specializations	60	%30.4

**- Sample**

The sample of the study consisted of (150) teachers and teachers of mathematics for the primary stage in the secular schools in Tulkarm Governorate, representing 65% of the original society of the study. They were randomly selected according to the gender variable and the scientific qualification Study specialization and years of experience, and they are distributed according to independent study variables as shown in the following table:

**Table 2: The study sample**

Variable	the level	the number	percentage
Gender	Male	72	48%
	Female	78	52%
Qualification	Diploma	65	43%
	BA	85	57%
Specialization	Mathematics	104	69%
	Other Specializations	46	31%
Years of Experience	Less than 5	70	%46.7
	10-5	50	%33.3
	15-11	18	%12
	More than 15	12	%8

**X.STUDY TOOL**

The tool of the present study consisted of a questionnaire prepared to measure the reasons for the low achievement of students in mathematics from the point of view of teachers in the lower basic stage. The process of constructing this questionnaire went through the following procedural steps:

1. An open question was asked about a sample of the teachers who were teaching mathematics in the lower elementary stage in the public schools in Amman, consisting of (53) teachers and teachers: What are the main reasons behind the low achievement of students in mathematics?
2. After analyzing the responses of these teachers to the previous question, the researcher provides a number of reasons presented by the teachers as reasons that lead to low level of achievement of students in mathematics, where the number of these reasons (37) reasons have been formulated and organized to represent the study tool in its initial form.
3. The items of the tool were presented to specialists in the Arabic language to express their linguistic and expressive remarks. The researcher benefited from these observations when formulating the tool in its final form.
4. The items of this tool were presented to a group of arbitrators of (5) arbitrators of university professors who study at the University of Jordan in different educational disciplines. After analyzing the observations of the arbitrators, (9) items were deleted for repeating the subject or for not fitting the subject of the tool.
5. Thus, the study tool includes the final form of (28) items, each of which is a possible cause of the low achievement of students in mathematics, which is answered by the researcher according to the five-dimensional Likert (very large, large, average, very few) The response on this scale gives a score of 5 degrees in case of a very large response, and one in response. Very little. The high score on the instrument indicates an increase in the effect of factors on low student achievement, while low score is an indicator of The level of the effect of factors on student achievement, where the total grade is p Z This tool between (28-140).

**Table 3: Cronbach's Alpha value (n = 150)**

Variable	Element	Stability coefficient
Cronbach's Alpha	.78	

**1- Statistical processing**

In order to process the data statistically, the computerized statistical package program in social sciences was used by using the following descriptive and analytical statistical treatments:

- Arithmetical averages, standard deviations and percentages.
- Test (t) for independent operations.
- Unilateral analysis of variance (One Way Anova)

## 2- Testing hypotheses

Results related to the first question: What are the reasons for the low level of academic achievement in the mathematics of students of the basic stage minimum from the point of view of teachers in Amman?

To answer this question, the statistical averages and standard deviations of teachers' responses were calculated in the sample of this study to estimate the reasons for the low level of achievement of students in the basic basic stage according to the gender variable. The (T) test of two independent groups was used to verify the significance of the differences between these averages and the results in the following table:

Table (5): The results of T-test to gender variable

Gender	No	Mean	St.D	T	Sig.
Male	71	3.74	0.35	2.75	0.03
Female	78	3.48	0.33		

Table (5) shows that there are statistically significant differences between the arithmetical averages of teachers' estimates of the reasons for the low level of achievement in mathematics among students of the lower basic stage according to the gender variable in favor of the male teachers. In other words, the male teachers showed higher estimates compared with the teachers for the different reasons behind the low level of achievement in mathematics.

- Results related to the third question: Are there statistically significant differences between the levels of teachers' estimates of the reasons for the low level of achievement in mathematics for students of the basic basic stage in Jordan according to the variable of scientific qualification?

In order to answer this question, the statistical averages and standard deviations of teachers' responses were calculated in the sample of this study to estimate the reasons for the low level of achievement of students in the basic basic stage according to the variable of the scientific qualification. The test of two independent groups was used to verify the differences between these averages and the results in the following table:

Table (6): The results of T-test to the scientific qualification

Qualification	No	Mean	St.D	T	Sig.
Diploma	100	3.75	0.32	1.26	0.08
BA	130	3.71	0.33		

Table (6) shows that There are no statistically significant differences between the arithmetic averages of teachers' responses to estimating the reasons for the low level of achievement in mathematics among the students of the lower basic stage according to the variable of their academic qualification. From the Community College Diploma or from the Bachelor's degree holders.

This result can be explained by the fact that teachers of mathematics have a scientific qualification close to the specialization of mathematics such as science, physics or biology, and years of experience have influenced the absence of differences between the different categories of qualifications in teaching mathematics.

- Results related to the fourth question: Are there any statistically significant differences between the levels of teachers' estimates and the reasons for the low level of achievement in mathematics for students of the basic basic stage in Jordan according to the variable of the academic specialization?

In order to answer this question, the statistical averages and standard deviations of the teachers' responses were calculated in the sample of this study to estimate the reasons for the low level of achievement of students in the basic basic stage according to the variable of the study specialization. The test of two independent groups was used to verify the significance of the differences between these averages and the results in the following table:

Table (7): The results of T-test to variable of the study specialization

Specialization	No	Mean	St.D	T	Sig.
Mathematics	160	3.77	0.34	2.45	0.01
Other Specializations	70	3.63	0.38		

Table (7) shows that There are statistically significant differences between the arithmetic averages of teachers' responses to estimating the reasons for the low level of achievement in mathematics among the students of the lower basic stage according to the variable of the academic specialization in favor of teachers with mathematics specialization. In other words, teachers with mathematics specialization showed higher estimates of the reasons for low achievement in mathematics Compared to those of other majors.

This result is logical and natural. It is not unlikely that teachers of mathematics will be better able to understand the real reasons behind the low level of achievement of students in mathematics than teachers of other disciplines.

The results related to the fifth question: Are there any statistically significant differences between the levels of teachers' estimations due to the low level of achievement in mathematics for students of the basic basic stage in Jordan according to the variable years of experience? In order to answer this question, the statistical averages and standard deviations of teachers' responses were calculated in the sample of this study to estimate the reasons for the low level of achievement of students in the basic stage according to the variable years of experience, as shown in the following table:

Table (8): Statistical averages and standard deviations of the responses of Experience

Years of Experience	No	Mean	St.D	F	Sig.
Less than 5	70	3.75	0.32	0.77	0.51
5-10	50	3.70	0.36		
11-15	18	3.71	0.42		
More than 15	12	3.71	0.34		

Table (8) shows that There were slight differences between the arithmetic averages of teachers' responses to estimate the reasons for the low level of achievement of students in the basic basic stage in mathematics according to the variable years of experience of teachers. To find out the significance of the statistical differences between these averages. The above table shows that there are no statistically significant differences between the arithmetic averages of teachers' responses to the estimation of the reasons for the low level of achievement in mathematics among the students of the basic basic stage according to the variable of their years of experience. Minimum number of years of experience for teachers. This result is due to the fact that the majority of teachers have years of experience in the first and second categories, as indicated by the statistics of the study society and its sample, in addition to training and educational programs before and during service, which reduces the gap between the categories of teachers with different years of experience.

## XI. DISCUSSION OF RESULTS

- a- There are statistically significant differences between the arithmetical averages of teachers' estimates of the reasons for the low level of achievement in mathematics among students of the lower basic stage according to the gender variable in favor of the male teachers. In other words, the male teachers showed higher estimates compared with the teachers for the different reasons behind the low level of achievement in mathematics.
- b- There are no statistically significant differences between the arithmetical averages of teachers' responses to estimating the reasons for the low level of achievement in mathematics among the students of the basic stage according to the variable of their academic qualification, meaning that the teachers' estimates are not different due to the low level of achievement in mathematics among students of the basic basic stage, Diploma of Community College Diploma or holder of a Bachelor's degree.
- c- There were statistically significant differences between the arithmetic averages of teachers' responses to estimating the reasons for the low level of achievement in mathematics among the students of the basic stage according to the variable of the academic specialization in favor of teachers with the mathematics specialization, meaning that teachers with mathematics specialization showed higher estimates of the reasons for low achievement in mathematics Teachers with other disciplines.
- d- There are no statistically significant differences between the arithmetic averages of the teachers' responses to the estimation of the reasons for the low level of achievement in mathematics among the students of the basic stage according to the variable of their years of experience, meaning that the teachers' estimates for the reasons of low achievement in mathematics are not different for the students of the basic basic stage Years of experience for



ISSN: 2350-0328

# International Journal of Advanced Research in Science, Engineering and Technology

Vol. 5, Issue 8 , August 2018

teachers. This result is due to the fact that the majority of teachers have years of experience in the first and second categories, as indicated by the statistics of the study society and its sample, in addition to training and educational programs before and during service, which reduces the gap between the categories of teachers with different years of experience.

## XII. RECOMMENDATIONS FOR FUTURE RESEARCH

In light of the results of the study and its discussion, the following recommendations may be proposed:

- Increase the attention to physical health, health and psychological student so that he can concentrate during the study.
- To provide the atmosphere or the school environment to increase students' motivation and increase their level of school affiliation.- Teachers should use attractive methods, methods and educational activities that stimulate students to study and take care.- Doubt parents' attention to the problems of their children and follow-up their collection.- The preparation of training courses and workshops for teachers who study mathematics, especially those teachers who study them from different disciplines to develop their own skills in teaching this article.- Coordination between the higher education leadership, whether in the Ministry of Higher Education or universities, the issue of improvement and continuous development of the process of education in a manner that keeps pace with changes and modern developments.
- Taking advantage of previous international experiences in all countries, which proved to be highly successful on economic, educational and social growth.- Continuing training courses for teachers on the implementation and implementation of the skills of sports education in the work and follow up their performance continuously.

## REFERENCES

- 1) Barkinsi, Ugur. (2002) "Gifted and Talented Students at Risk for Underachievement". **Jornal of Advanced Academics**, 20(2), 274-294.
- 2) Bandura, A., Barbaranelli, C., Caprara, G. V., &Pastorelli, C. (2001). Self-efficacy beliefs as shapers of children's aspirations and career trajectories. *Child development*, 72(1), 187-206.
- 3) Cross, Dionne. (2009). "Creating optimal mathematics learning environments: Combining argumentation and writing". **Interntional Journal of Science and Methematics Education**, 7(5), 905-930
- 4) Gazeley, Louise & Dunne, Mairead. (2008). "Teachers, Social Class and Underachievement". **British Journal of Sociology of Education**, 29(5), p451 463
- 5) Gorard, Stephen & Smith, Emma. (2008). "(Mis)Understanding Underachievement: A Response to Connolly". **British Journal of Sociology of Education**, 29 (6), p705-714
- 6) Cenkseven-Onder, F., Kirdok, O., &Isik, E. (2010). High school students career decision-making pattern across parenting styles and parental attachment levels. *Electronic journal of research in educational psychology*,8(1), 263-280.
- 7) Juntunen, C. L., Barraclough, D. J., Broneck, C. L., Seibel, G. A., Winrow, S. A., & Morin, P. M. (2001). American Indian perspectives on the career journey. *Journal of Counseling Psychology*, 48(3), 274.
- 8) Kerka, S. (2000). Parenting and career development. ERIC digest (Vol. 214). Columbus: ERIC Clearinghouse on Adult, Career, and Vocational Education, Ohio State University.
- 9) Kunnen, S. (2013) The effect of career choice guidance on Identity development. *Educational Research International* Vol 2013 (2013). Article ID901718, p9.
- 10) Leone, F.T.L., and Chou, E.L.(1994) The role of ethnic identify and acculturation in the vocational behaviour of Asian Americans: An integrative review. *Journal of Vocational Behaviour*, 44, 155-172
- 11) Marshall, S. K., Young, R. A., Stevens, A., Spence, W., Deyell, S., Easterbrook, A., &Brokenleg, M. (2011). Adolescent Career Development in Urban-Residing Aboriginal Families in Canada. *The Career Development Quarterly*, 59(6), 539-558.
- 12) Savickas, M. L. (2008). Helping people choose jobs: A history of the guidance profession. In *International handbook of career guidance* (pp. 97-113). Springer Netherlands.
- 13) Soenens, B., &Vansteenkiste, M. (2005). Antecedents and outcomes of self-determination in 3 life domains: The role of parents' and teachers' autonomy support. *Journal of Youth and Adolescence*, 34(6), 589-604.
- 14) Wiseman, M., Dancyger, C., &Michie, S. (2010). Communicating genetic risk information within families: a review. *Familial cancer*, 9(4), 691-703.