



Causes of Poor Performance in Mathematics from Teachers, Parents, and Students' Perspectives in Lower Dir

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ABSTRACT

This study explores the underlying causes of low achievement in mathematics by analyzing the perspectives of teachers, parents, and students in District Lower Dir. A sample including 600 participants, was selected through simple random sampling, comprising of 100 female students, 100 male students, 100 female teachers, 100 male teachers and 200 parents (half mothers and half fathers). Supported by a 5-point Likert scale, a structured questionnaire was used to collect data information. It was then analyzed using SPSS. The findings of the study concluded that strictness whilst teaching mathematics was perceived as the main cause of poor performance by students, whereas teachers identified lack of exercises as the key factor. On the other hand, parents pointed to lack of attention as the major cause of poor performance.



Introduction

Education system effects heavily the progress of a nation. As it fosters believes, attitudes and human conducts while preparing citizens for universal challenges. Although many students struggle with mathematics, it plays a vital role in education as it serves as the basis for various scientific and technological disciplines. However, the struggle of students in mathematics cannot be ignored, as it leads to a significant drop in performance and interest at higher levels.

Mathematics is a very fundamental subject. It influences fields such as; physics, statistics, engineering, and economics etc. Mathematics basically provides rational skills. Furthermore, it provides logical reasoning techniques required for scientific advancements. Despite its importance, in many countries, students fail to understand mathematical concepts. And this is mainly due to deficient teaching methods and absence of motivation. The difficulty in comprehending mathematical concepts is aggravated when it is presented by unqualified teachers or taught in an unengaging manner and also have inadequate parental engagement.

Rationale of the Study

The purpose of this study is to explore and identify the underlying causes of low achievement in mathematics in Pakistan, particularly in Lower Dir. By comprehending these issues, one such as, educators, teachers or parents can then implement strategies to improve students' performance. The study also intends to pervade the deficiencies in existing researches on the topic and provide recommendations for better pedagogical practices and parental involvement.

Objectives of the Study

The chief objective of this study is to explore and identify the major underlying causes of low achievement in mathematics by analyzing the perspectives of teachers, parents, and students in District Lower Dir.

Limitations of the Study

Due to the relatively small size of the sample, the findings of the study may not be generalizable to the whole population of Pakistan.

Delimitations of the Study

The focus of the study is on school-going students, their teachers, and their parents. And it is specifically limited to Lower Dir District.

Methodology

Participants

A sample including 600 participants was selected through simple random sampling technique, from Lower Dir, comprising:

- 100 female students (from second grade to matriculation)
- 100 male students (from second grade to matriculation)
- 100 male teachers
- 100 female teachers
- 200 parents (100 mothers and 100 fathers).

Sampling Technique

Simple random sampling technique was used. Such technique was used to ensure fair and adequate representation.

Research Design

Supported by a 5-point Likert scale the study used a descriptive and quantitative research design, to collect data information, alongside, a structured questionnaire (containing both, close-ended and open-ended questions).

Research Instruments

Statistical tools including mean values, standard deviations, frequencies, and percentages were employed to observe and critically evaluate the collected data.

Data Collection and Analysis

Data collection was done through a structured questionnaire distributed among selected schools. The responses were assessed using SPSS, and analysis of the collected data was then done through descriptive statistics to evaluate the findings.

Results and Discussion

The following main causes of poor performance in mathematics were seen:

- **According to Students' Perspective:** Strict teaching methods and lack of motivation adversely effect learning outcomes.
- **According Teachers' Perspective:** Less exercises and insufficient practice in mathematics impede in students' mathematical development.
- **According to Parents' Perspective:** Lack of attention and guidance from parents adversely affect students' performance.

Table 1: Descriptive Statistics of Key Variables

Variables	Number of Participants	Min Value	Max Value	Mean	Standard Deviation	Percentage
Strictness	200	1.00	5.00	2.90	1.13	36.0%
Lack of Practice	200	1.00	5.00	3.15	1.09	29.5%
Lack of Attention	200	1.00	5.00	3.37	1.17	19.5%
Insufficient Exercises	200	1.00	5.00	3.59	1.04	18.0%

Interpretation of Results

- **Strictness whilst Teaching:** Mathematics is perceived difficult by students because of the stiff teaching environments, which discourage participation from students.
- **Lack of Exercises:** Inadequate or less practice as believed by teachers, limit students' ability to comprehend mathematical concepts.
- **Lack of Parental Attention:** Lack of guidance and attention contributes heavily to students' struggles in and their performance in learning mathematics. This was acknowledged by parents themselves.

Conclusion and Recommendations

Conclusion

In a nutshell, the study specifies the main causes of low achievement in mathematics. Such research was done through various perspectives, including strict teaching methods, lack of practice, and inadequate parental attention being the major factors. Discouraging these problems require joint efforts from educators, teachers, parents, schools and policymakers.

Recommendations

- **For Teachers:** Develop interactive teaching environment and support student participation.

- **For Parents:** Elevate involvement in children's academic activities and stipulate support and motivation.
- **For Schools:** Create and encourage remedial programs and provide sufficient resources for teaching mathematics.
- **For Policymakers:** Invest in teacher training and curriculum development to improve mathematical education in Pakistan.

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