
A COMPARISON OF PUBLIC AND PRIVATE HIGH SCHOOLS LEARNERS' PERFORMANCE IN MATHEMATICS IN DISTRACT LAYYAH PUNJAB, PAKISTAN

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ABSTRACT

The key purpose of the current study was to inspect the mathematics teaching and education performs of high schools educators and to recognize the break between present mathematics teaching performs in distract Layyah Punjab Pakistan and the finest teaching performs advocated through literatures. In teaching to understand this purpose, the researcher chosen a samples of 100 high school learners and 100 teachers. The sample of study were taken in two phases. In 1st phase 25 high school males schools and 25 government females schools were designated. Likewise 25 private males' institutes and 25 females' private institutes were also designated. 10 learners from every of the sample institutes were designated by mean of methodical random sampling method. The study was quantitative data gathering and examination expired parallel and the results accompaniment every other. The quantitative facts were composed with the help of two surveys tool 1 for learners and the other for educators. The reliability coefficient resulting in a pilot study designated that surveys were dependable sufficient to be used in the full study for data gathering. The outcomes presented a thoughtful gap among present and professed coaching and knowledge performs. It was too originated that educators did not even know what class room

performs were recommended in instruction policy documents and the National Mathematics Curriculum. In the survey, it was piercing out that the argument and protest method is extremely used by the educators, though the class room comment exposed that the educators frequently used the drill and practice method. Educators give learners a guide for remembering numerous ideas and then practice it. Though numerous educators have spoken intangible considerate of mathematics, it is missing in class rooms. Problem solving teaching technique is claimed to be the best and operative repetition with the standard stated in Nationwide Curriculum Mathematics (2006), data presented that this repetition is infrequently used in mathematics class rooms. It is decided that Pakistani high school mathematics educators do not usage numerous of the finest mathematics instruction performs recommended in the literature. The study likewise observed that certain of the finest mathematics instruction practices are used in private institutes, which is illustrated in the teacher survey. It was recommended that teachers orientate themselves on the usage of the best mathematics instruction performs in high school class rooms. With the purpose of emerging a profounder conceptual considerate amongst learners. Moreover, educators may be given the chance to progress their individual knowledge and considerate of the best performs for coaching mathematics as recommended in national education policy and curriculum pamphlets. Furthermore, it is recommended that upcoming study may be lead to inspect how pre-service and in-service preparation makes middle school mathematics educators to usage the best performs in coaching mathematics.

KEYWORDS

Comparison, Public, Private, learner's, performance

INTRODUCTION

All nations, like Pakistan, struggle to progress learning superiority by presenting suitable developments in instructive system. Many actions are made, for example adjustment with the modification of the curriculum and continuous specialized progress, the completed training accessible to educators throughout the complete period of their delivery and provision. Teachers are stimulated, inspired and concerned in using physical possessions and present tools to transform their teaching approaches to develop students' information aptitudes. Pakistan Ministry under the leadership of provincial management has taken the resolution to develop the curriculum. Presently, the studied curriculum is subject to review by the organizations. In adding, the reimagined mathematics curriculum emphasizes on students' imperceptible accepting, theoretical understandings, and serious coherent thinking.

Therefore, teachers are required to change their current mathematics instruction methods to development abstract familiarity (Amirali 2010; Halai 2008; Halai, Rizvi, & Rodrigues, 2007). In adding, it needs the taking of modifications that are completed

in the present mathematics curriculum. The Novel Mathematics Syllabus (2006) deliberate that "the part of the teacher has been reorganize from facts to establishing control responsibilities, managing the situations for conclusive learning and associate learners' ideas in making objective sympathies for mathematical ideas" (p. 6). Thus, this curriculum development advocates that modern actual mathematics educators can theoretically teach, understand with and explain their students (Susan, Swars, Smith, Smith, & Hart, 2009).

Mathematic is a severe problem intended on behalf of the modification of bright and sensitive intelligences. Famous educators Herbert, Froebel, and Maria expected a battle that the practical and public progress of specificity could not take place deprived of engaged social mathematics (Yasoda, 2009). Mathematics shows a role part structural aptitude like cognitive ability, thinking, idea based kindness, technical evidence and stern thinking which required inspect mathematical topics like physics, chemistry etc.

In Pakistan, the teaching objective level of mathematics is small. Previous studies have showing that learners are not education appropriate middle school mathematics. Learners do not have a dense important information of mathematical concepts. Hence, the suitability of the learners is not formed in high school. There are many problems in the teaching and likewise in the training of mathematic at the high school. The administration consumes drive and reasonable scheduled it. We are still far late in producing a close of accurate aptitude in learners. The administration desires to review thoughtful role of teachers in teaching students in mathematics in the class room. As a result freedom rises queries like as how educators differentiate the situation and accept appropriate instruction methods to progress mathematics understanding; what are the collective difficulties students encounter daily in math's classrooms; and what keenly accessible resources of suggestion do teachers usage to assistance students clip these problems?

The present study deliberate to inspect mathematics knowledge works by way of glowing as instruction spells in government high schools and private high schools in the Punjab province of Pakistan though it may be unusually amazing to differentiate the unspoiled slit among present and usual mathematics teaching and understanding has dogmatic origins forms, earlier trainings and mathematics curriculum. Inappropriately in Pakistan, learners have fewer asset who are skilled of mathematics. Reviews and present educations have shown that the key stream of learners fail the matter or pass the subject with normal or lower normal marks. This is unusually significant for promotion this subject. This examination had risky insinuations for directors, policy makers, educators and principals. Specialists could device a mathematics curriculum in light of the consequences of this present study.

LITERATURE REVIEW

The discussion mathematics comes from the Greek word "μάθημα" (máthēma), means mathematics or the training of statistics. Mathematics is "a subdivision of humanoid review which includes the review of figures, calculations, proofs, statistics and spheres and their relationships, mainly their theories and metaphors and their performance to situations as a overall instruction" (Clapham and Nicholson, 2009, p. 505).). An arithmetician might group new equations or events in reference of alike empathies amongst different divisions of mathematics (Devlin, 2004). Before instruction mathematics, it is significant that the educator is experienced in the complete setting and purpose of the learning results of the subject. The appropriate instruction approach would be suspended according to the conditions of the learners' knowledge and their unnoticeable setting. It is important to reservation a high level of stimulation amongst learners, then they might be helpless to invention kindness for a mathematical question (Butler and Wren, 1965). Likewise, students may acquire implausible accomplished assortments in their near life as of the startling degree of position of mathematics in numerous arenas (Rani, 2007). Educators might be basic approximately penalties of coaching mathematics (Cornelius, 1982; Sidhu, 1995).

Ernest (1991) ubiquitously stated 3 positive logical sentiments on mathematics, i.e. the performer, the Platonist and the direct cognitive opinion and their direction to the educational presentation of teachers. He explains that "performers see mathematics as a collection of philosophies, morals, and extents in the appraisal of other painterly belongings. It is therefore a development of attaining insignificant usefulness standards and resources. Artists' opinions on the abilities of a math educator would be measured disciplinarians who have and stimulate math education. Platonists reproduce mathematics as a stationary but restricted deposit of learning, a gleaming region of crossing buildings and certs, a certain meeting of basics of judgment and allusion. In this method, mathematics is a the strongest, steady and complete object.

RESEARCH OBJECTIVES

1. To Adjust the current practice of instruction mathematics at the high schools level.
2. To discover out the current presentation of mathematics instruction at the high schools level.
3. To identify interruption amongst the present and the best presentations in the instruction of mathematics of the repetition of instruction mathematics at the high schools level.

RESEARCH QUESTIONS

1. What controls the current performs of mathematics instruction in high school?

2. What are the current consequences of knowledge of mathematics at the high schools level?
3. What are the disruptions amongst present and finest execution mathematics instruction achieves at the high schools level?

RESEARCH METHODOLOGY

It was expected that the quantitative method would attain a creative consequence. This method will be descriptive in nature. The study contained of questionnaire surveys, mathematics educators to know the public of the class rooms of the organizations. Kumar's (2011) view drawing survey methodology is a recognized study design that is deliberate to gather a huge amount of information from a massive population in an economic method. The survey is a consistent tool to gather easy data about learners to shorten the effects of the consequences, which will have a large influence on others in the upcoming to evaluate their learning in contradiction of present data. It will be sensible for all learners to dedicate their exertions to preserving service in a wealthy manner. Information will be the chief place for research to shorten in a comprehensive method for scholars to usage the expedient in an attired method.

Population

The population of the given invwstigation was mathematics learners as well as educators from all government and sequestered high schools in Layyah Punjab. Here were 433 secondary institutes in Layyah. Here were 206 public institutes and 227 secluded institutes in Layyah.

Sample

This present investigation is limited to the dispersal of Layyah's secondary schools. Investigation was extra distinct on the matter of Mathematics for high classes like 9th and 10th public and private institutes of Layyah distract. 100 high institutes were randomly chosen for the present study sample. The study sample was 50 government and 50 private organizations from urban and rural areas of Layyah dispersal. The members of the study sample were teachers and learners. Research attentive on the instruction and learning of mathematics takes residence in high schools. First, the sampling technique expected in the study for sample variety was the random sampling method.

25 private institutes and 25 government institutes were designated. 25 private girls and 25 government institutes were chosen. Mathematics learners and teachers were the respondents from these chosen organizations. Mathematics educators who were offered at every school were comprised in the study sample. 10 learners of every educator were designated as a sample by the technique of organized selection. These 100 institutes were arbitrarily designated from the total number of institutes.

Data Collection Tool

To achieve the aims of the study a questionnaire was set for students and also for educators. This was definite to collect educators' and learners' views on the educational process of mathematics. The tool were generated based on a literature review. The researcher too retrieved the National Mathematics Curriculum 2006 as a usual and certain other vital instruction information to attain these achievements. The main attainments, which are registered in the National Education Program 2006, have been united.

Analysis of Data

An inspection of the statistics is essential to make a rational given rare statistic. Data finding is associated to descriptive given data and inspection data (Kombo and Tomp, 2006). Descriptive and inferential statistics were used to inspect the given data, which were finally tabulated using SPSS to answer the study questions. It is too obligatory that the detective be acquainted with the term. The chief intelligences on the situations used in the study are given below:

DATA ANALYSIS AND FINDINGS

The views of high school educators on the application of the instruction of mathematics educators

The answers of the teachers were allocated to 1. The effect of the performance of the teachers in the teaching of mathematics. Mean, and S.D are providing below in section.

Items	Male or Female	Strongly Agree %	Agree %	Neutral %	Disagree %	Strongly disagree %	Mean	S.D
Learners of same abilities learn mathematics more effectively.	Male	11 (22) %	15 (30) %	14 (28) %	10 (20) %	0 1 (2) %	2.4 8	.98
	Female	9 (18) %	13 (26) %	24 (48) %	3 (8) %			
Learners of different abilities learn mathematics more effectively.	Male	2 (4) %	24 (48) %	17 (34) %	5 (10) %	0 (0) %		
	Female	7 (14) %	27 (54) %	11 (22) %	2 (4) %	3 (6) %	2.4 1	.83

Mathematics is taught best in government schools.	Male	5 (10)%	13 (26) %	22 (44) %	7 (14) %	3 (6) %		
	Female	20 (40) %	15 (30) %	10 (20) %	3 (6) %	2 (4) %	2.3 0	1.0 5
For teaching mathematics revision of previous knowledge is compulsory.	Male	4 (8) %	23 (46) %	21 (42) %	2 (4) %	0 (0)%		
	Female	15 (30) %	26 (52) %	7 (14) %	1 (2)%	1 (2)%	2.1 1	.75
While teaching teacher provide updated knowledge.	Male	13 (26) %	28 (56) %	4 (8) %	3 (6) %	2 (4) %		
	Female	17 (34) %	20 (40) %	11 (22) %	2 (4) %	0 (0)%	1.9 2	.81
There should be between previous concept and new during learning.	Male	14 (28) %	24 (48) %	8 (16) %	2 (4) %	0 (0)%		
	Female	10 (20) %	27 (54) %	11 (22) %	1 (2)%	1 (2)%	2.0 5	.80
Learner Centered Approach towards project work for better learning.	Male	13 (26) %	16 (32) %	16 (32) %	3 (6) %	2 (4) %		
	Female	10 (20) %	31 (62) %	7 (14) %	2 (4) %	0 (0)%	2.0 5	.80
Collaboration in exertion for familiarity understandi	Male	12 (24) %	21 (42) %	12 (24) %	4 (8) %	1 (2)%		
	Female	17 (34) %	22 (44) %	10 (20) %	1 (2)%	0 (0)%	2.0 1	.86

ng to support topic.			(44) %	(20) %				
Inquiry is an important factor in learning environment to show the strength of behaviour. Different tools are better for understandi ng and use in methods for teaching learning process. Motivation and inspiration are necessary for smooth learning. Total	Male	13 (26) %	21 (42) %	12 (24) %	2 (4) %	2 (4)%	1.9 8	.85
	Female	18 (36) %	22 (44) %	10 (20) %	0 (0)%	0 (0)%		
	Male	13 (26) %	22 (44) %	12 (24) %	2 (4) %	1 (2)%		
	Female	8 (16) %	12 (24) %	25 (50) %	3 (6) %	2 (4)%	2.3 1	.88
Total	Males	14 (28) %	16 (32) %	14 (28) %	4 (8) %	2 (4) %		
	Female	10 (20) %	25 (50) %	12 (24) %	3 (6) %	0 (0)%	2.1 4	.90
Total							2.1 6	.32

The above table proves that the whole %age of teachers' answers to the messages extended amongst agree and unsure (51.0%) to (25.0%) on scale. The general means worth of the effect that teachers' teaching has on developing mathematics support decreases at the agreement (Mean =2.16, Standard Division =0.32).

This section that incomplete the lowest means values were to expand students' imperceptible compassion for mathematics (M=1.94, S.D= 0.81) signifying the preparation they used to teach mathematics (as the Likert scale of the replies were in conflicting directive, i.e. 1: I strongly agree, 5: I strongly disagree). The 2nd lowermost item mean was asking questions as students effort finished the message to safeguard

their level of considerate through the lesson ($M=1.98$, $S.D=0.85$), which was an example of teachers asking or attending to questions throughout the oration, to make sure that the learning of mathematics learners. The message that drove the supreme mean was ($M=2.48$, $SD=0.98$) that learners of equal aptitude do best in mathematics, signifying hesitation about teachers' answers to the project.

The estimation of high school educators about the instruction of working learners: Teachers' approximations caused from the second effect of working instruction of learners. Incidences, mean, and S.D are available in the given table.

Items	Male or Female	Strong ly Agree	Agree	Neutral	Disagree	Strong ly disagree	Mean	S. D
Self-expression is important in learning for good study.	Male	14 (28) %	16 (32) %	15 (30) %	5 (10) %	0 (0) %	1.99	.87
	Female	20 (40) %	18 (36) %	11 (22) %	1 (2) %	0 (0) %		
AV Aids are important by using different methods during specific study.	Male	10 (20) %	30 (60) %	7 (14) %	3 (6) %	0 (0) %	2.05	.74
	Female	11 (22) %	22 (44) %	14 (28) %	2 (4) %	1 (2) %		
Profession plays key role in study.	Male	16 (32) %	17 (34) %	15 (30) %	1 (2) %	1 (2) %	1.90	.84
	Female	20 (40) %	18 (36) %	10 (20) %	0 (0) %	2 (4) %		
Learners' concern in Mathematics for gaining teaching.	Male	16 (32) %	11 (22) %	18 (36) %	2 (4) %	3 (6) %	2.06	.91
	Female	15 (30) %		13 (26) %	2 (4) %	1 (2) %		

			19 (38) %						
Computational aptitudes are important for the specific study.	Male	13 (26) %	22 (44) %	13 (26) %	2 (4) %	0 (0) %	2.11	.82	
	Female	11 (22) %	19 (38) %	13 (26) %	2 (4) %	1 (2)%			
Insides of the study clear the patter of the topic.	Male	15 (30) %	18 (36) %	14 (16) %	2 (4) %	1 (2)%	2.01	.83	
	Female	16 (32) %	19 (38) %	14 (28) %	1 (2)%	0 (0)%			
Use different techniques of Questions.	Male	16 (32) %	20 (40) %	11 (22)%	3 (6) %	0 (0) %	1.90	.85	
	Female	20 (40) %	17 (34) %	12 (24) %	1 (2) %	0 (0)%			
Classroom database record for smooth working.	Male	14 (28) %	21 (42) %	11 (22) %	3 (6) %	1 (2)%	2.00	.84	
	Female	19 (38) %	15 (30) %	14 (28) %	1 (2)%	1 (2)%			
Problem solving method is important for resolving issues.	Male	13 (26) %	21 (42) %	11 (22) %	3 (6) %	2 (4)%	2.06	.95	
	Female	18 (36) %	19 (38) %	10 (20) %	2 (4)%	1 (2)%			

Mutual Cooperation is important in the class for resolving issues.	Male	10 (20) %	16 (32) %	21 (42) %	3 (6) %	2 (4)%		
Question/ Answer session should be for resolving problems of queries.	Female	17 (34) %	19 (38) %	12 (24) %	2 (4) %	2 (4)%	2.10	.84
	Male	13 (23) %	17 (34) %	15 (30) %	4 (8) %	1 (2) %		
	Female	11 (22) %	24 (48) %	13 (26) %	2 (6) %	0 (0)%	2.10	1.03
Total							2.03	.36

The above table offered that overall %age of the teachers' answers for the accounts were comprehensive among regularly to specific time (45.01%) to (21.01%) at the given scale. The whole mean rate of effect almost definite learners' teaching for emerging mathematics facilities remain by close of potential ($M=2.02$, $S.D=.37$). The lowermost means mark was bounded by lettering impartialities and resolves to indicate associations and attractive students in entire class sentiments (Mean= 1.90, Standard Division =.86) on behalf of the convention of teachers that they remained convoluted it for mathematics teaching. The 2nd lowermost mean worth was recognized by the access to elucidate logical aimed at determining problems in different way if required ($M=1.98$, $S.D=.85$) demonstrated that educators frequently practice the replication.

This extreme means marks were on to acquaint satisfied done authorized performance (Mean=2.10, $S.D=.83$) Likewise, males declared to be charge replication (44.50%) frequently than females educators (38.30%). This 2nd extreme means marks were aimed at smart learners in difficult determining elegance of understanding compared generous usual meetings (Mean = 2.13, Standard Division = .85).

Assessment of males and females Views on Mathematics Teaching Performs

An assessment was conducted to determine the worth of educators' opinions on Mathematics Coaching based on their sexual orientation. The objective was to reach a conclusive understanding of any differences that exist. To achieve this, Autonomous Sample t-tests were performed on the mean values, comparing the educators' sexual orientation. The following table presents the results obtained.

	Males/Females	No.	mean	S.D	df	t-values	p-values
Sensitivity for mathematics instruction	Male	50	2.26	.38	98	3.08	.106
	Female	50	2.09	.24			
P< .05							

The results of the Autonomous Sample t-tests indicate that there is no significant difference in the views of male and female educators regarding effective teaching for specific learners. The analysis, with a degree of freedom (df) of 74.78, yielded a t-value of 1.65 and a p-value of .11. Therefore, it can be concluded that there is no significant disparity between male and female teachers in their perspectives on effective teaching methods for specific learners.

Views of Males and Females teachers while teaching mathematics

Males and females practical difference on teachers' mean worth of the responses about their Views on Real Students' Commands for mathematics teaching was envisioned. Consequently, for conclusive the change Self-governing Sample t- test was applied on mean of the teachers' sensual group in given table:

	Males/Females	no	mean	S.D	df	t-values	p-values
Real students commands	Male	50	2.11	.40	74.79	1.64	.106
	Female	50	1.99	.30			
P< .05							

The results of the sample t-tests indicate that there is no significant difference in the perspectives of male and female educators regarding coaching active learners (df = 74.79, t = 1.64, p = .106). Therefore, it can be concluded that there is no significant difference between male and female educators' views on the importance of coaching active learners in the classroom.

FINDINGS AND DISCUSSION

There were total 55% females and 45% male's defendants.

The associates grew every fewer than 6 year of teaching experience (68%) or more than 6 years of teaching experience (32%).

The teachers were captivating many instructive requirement like B.A (18%), master in arts M.A (66%) and, master in philosophy M. Phil (16%)

Teachers' related Outcomes

The average score for the effectiveness of educators' instructional tools in enhancing mathematics knowledge at the preparatory level was found to be 2.16 (SD = 0.33). A majority of educators reported that they actively promote students' genuine understanding of mathematics during their instructional practices.

The overall average score for the impact of teaching real-world examples on enhancing students' mathematical abilities was recorded as 2.02 (SD = 0.37) at the end of the preparatory phase.

Most educators frequently engage in exercises involving comparisons and analogies to foster deeper comprehension and problem-solving skills among students during whole-class discussions

Teachers' Views by Males and Females

Significant differences were identified when comparing the perspectives of female and male educators regarding mathematics instructional practices. It was evident that female educators hold a more positive view of mathematics teaching practices compared to their male counterparts. However, no significant differences were found between male and female educators' perspectives on coaching active learners, availability of resources and materials, instructional methods, and evaluation techniques in mathematics education.

Educators' Views by Area

Significant differences were observed when comparing the perspectives of private and government teachers regarding effective teaching practices for Mathematics students. It was evident that private educators have a more favorable perception of effective teaching methods compared to their counterparts in the government sector. On the other hand, no significant differences were found between government and private teachers' views regarding the use of teaching materials, resources, instructional methods, and assessment techniques in Mathematics education.

RECOMMENDATIONS

The present study aims to investigate the outcomes of studying Mathematics at the high school level to provide guidance for improving understanding and educational practices in this subject. The conclusions of this study are based on the determinations and outcomes obtained from the research. In summary, this study seeks to understand the current state of Mathematics education at the high school level, pinpoint areas for improvement in teaching practices, and explore the alignment between educational practices and desired outcomes. By addressing these objectives, the study aims to contribute to the enhancement of Mathematics education and instructional approaches at the high school level in both government and private educational institutions.

In Teachers should familiarize themselves with the local mathematics curriculum and

national teaching methodologies. They should receive appropriate training to stay updated on current teaching techniques. Teachers should strive to engage their students actively in the learning process and aim to help them become proficient learners rather than passive recipients of information. Students should be encouraged and motivated to recognize the long-term benefits and applications of mathematics knowledge in their future endeavors. Educational institutions should establish and maintain high standards of mathematics teaching by incorporating innovative teaching methods and consistently implementing them.

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