



Impact of Teachers on Students Image Along Mathematics

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Abstract This study was directed to observe the impact of teachers on students image along mathematics and it also purposed to explore teacher's image which impact on image of students along mathematics. The study accepted expositive research method. The correlational design was used and survey method was used to collect the data. The study was directed on a sample of 200 students of 11th and 12th grade (100 male and 100 female students) studying mathematics. This sample was elected conveniently from 30 different colleges of Bogura district. So for the collection of material data and information a mass researcher made self-reported questionnaire was used. Questionnaire was categorized in 5 segments and 50 statements. On the basis of collected data which was taken from intermediate college students of Bogura city, it was resolved that teacher's concern, planning, assignment, assessment and expectation from student significantly impact on student image along mathematics.

Keywords Impact, Image, Higher Secondary Students', Mathematics

1. Introduction

Research has induced the truth that a good responsive of mathematics is necessary for the solution of everyday problems in all perspective of human life. Anthony & Walshaw (2009) also argued that Mathematics has a significant role in shaping various spheres of private, social, and civil life of the individual. Likewise responsive of mathematics also has a major preface in students' academic success as it helps the student in problem solving of academic life also. Hence the subject of mathematics is compulsory for those who go through secondary education. But the image along math varies person to person which may positively or negatively effects the skill Low skill in mathematics has been a worldwide worry over the years (Pisa, 2003) as National Mathematics Advisory Panel (2008) of US found that benefits of mathematical literary society are many lap. Several research studies have been done on this subject since denary. The number of research studies on the factors that impact the students' piercing in mathematics have been doubled than the previous century. One important factor that has been consistently studied among these factors is students' image along mathematics. Correlational studies on image along mathematics and the students' academic piercing showed a positive relationship (Mohd, Mahmood, & Ismail, 2011; Bramlett & Herron, 2009; Nicolaidou & Philippou, 2003; Papanastasiou, 2000) with a conclusion that image along mathematics is a major factor that might impact the piercing and the skill of the students.

Image is a way of thinking, acting and behaving by the individual. images are formed as a result of some kind of direct interaction with the environment. Social roles preface and social ideals have also a strong impact on images. Formation of image has important relations for the student, the teacher, the individuals with whom the student relates the entire school system and even the society.

Every student has different opinion and level of interest concerning math subject. But the point is on what base the difference is being arrived. Established literature reported different factors that sense the student's image i.e. parental and teacher support, societal factors, gender difference, parent's education and socio economic ground



and the students' fervor in general. Some students naturally disfavor math they can't fulfill well in mathematics, some are those who like math at opening age of their studies but due to any bad social, environmental, school, teacher concerned experience they begins to disdain mathematics.

2. Objectives of the study

The objectives of this study were to

- Research level of positive images that college students have in mathematics.
- To research the difference concerning different categorical variables i.e. gender and type of college on image along mathematics scale.
- Research the concern between teachers impact and the images of students along mathematics.
- Analyze Teachers' pedagogy concerned images that directly or indirectly impacts on students images along mathematics?
- Research the concern between teacher's pedagogy concerned vertues and students images along mathematics.

3. Literature review

3.1. Students images along mathematics

Researchers (Attard, 2012; Grootenboer et al., 2008; Mata, Monteiro, & Peixoto, 2012) have identified important factors that contribute to students' images along mathematics. These include the students themselves, the school, the teachers' beliefs and images (Beswick, 2006) and their teaching methods. The teachers' teaching method have a major impact on students' images (Akinsola & Olowojaiye, 2008; Mensah et al., 2013). Teachers can do many things to facilitate the classroom learning to alleviate students' engagement level and confidence in mathematics (Attard, 2012; Kele & Sharma, 2014). According to Sullivan and McDonough (2007), teachers can find ways to encourage student engagement and confidence in mathematics. This can be achieved by implementing meaningful activities embedded in real-life contexts (Kacerja, 2012).

3.2. Traditional teaching system and thesis

Many studies have identified that teaching mathematics in real life thesis enhance students' enjoyment of mathematics lessons (Anthony & Walshaw, 2007; Boaler, 2002; Dickinson & Hough, 2012; Kacerja, 2012). The concern formed between the student and the task fosters students' engagement in the mathematical tasks. By creating, exploring and verifying mathematical ideas students tend to see the importance of mathematics (Reys et al., 2013). In Boaler's (2002) study, students who were taught in a traditional manner viewed mathematics as a collection of procedures. In contrast, those students who were taught in a thesis viewed mathematics as an active and inquiry-based discipline. Dickinson and Hough (2012) worked on a project that trialled teaching mathematics in a thesis. The project included the views of both teachers and students on the impact of teaching mathematics in a thesis.

4. Methodology

The nature of the research was expositive and correlational design was used. Survey method was used to collect the data.

5. Population

The population of the study comprised of all the male and female college students admitted at Intermediate level at district Bogura. A total of 30 colleges (18 public and 12 private) were elected randomly. Only those students were elected conveniently who were originally studying course of mathematics.

6. Sample

The study was directed on a sample of 200 students of 11th and 12th grade (100 male and 100 female students) studying mathematics. This sample was elected conveniently from 30 different colleges of Bogura district.



7. Instrument

For the excerpt of material data and information a mass questionnaire was developed which was consisted of 5 segments and 50 items initially. The Instrument was firstly examined by the four experts in the field. The researcher required to verify the soundness of this instrument and its content validity. After super visiting the reaction in the pilot study, researchers made modification in 03 items and discarded 01 item and finalized Image Along Mathematics Scale (IAMS) with 50 statements. In order to ensure reliability for the questionnaire, Cronbach Alpha was calculated having the value of 0.706. Four more items of IAMS were excluded due to low level of reliability 0.12, 0.22, 0.28 and 0.30 respectively. IAMS was finalized with 48 items. First 12 items were about students image alongs mathematics, 8 items were regarding impact of teacher on images of students alongs mathematics and 25 items were regarding teacher attributes. At the end, 5 open ended questions were also asked to elicit detailed opinion of participants.

8. Data Analysis and Results

The questionnaires were administered to 200 students from 30 colleges of Bogura and the collected data were analyzed through SPSS software to address the research questions. Besides frequencies and Means independent sample t-test Pearson Correlation I was calculated to determine the results.

Table 1 shows the criteria used to categorize these variables as low, medium and high, based on the range of scores given by Jamil (2001) as cited by Mohd et al (2011).

Table 1: Level of Image Along mathematics

Mean Score Level		
1.00	2.30	Low
2.31	3.65	Medium
3.66	5.00	High

Table 2: Students' enjoyment and liking, interest, personal confidence and perceived usefulness of mathematics in daily life is medium

Factors of Image along mathematics	Mean	Standard deviation	Level
Enjoyment and Liking	2.50	1.170	Medium
Interest	3.20	1.440	Medium
Personal Confidence	3.45	1.480	Medium
Usefulness in daily life	2.55	1.182	Medium

9. Discussion

The study investigated to explore college students' image along mathematics. It can be resolved that overall the students' positive image along mathematics is at medium level. Similar findings can be found from a research study directed by Lawsha and Waheed (2011) with the secondary school students. This discussion has an relation for the college students that there is yet need for promotion in their positive image along mathematics.

The gender based results showed that male and female students of intermediate level had significantly different opinion regarding image along mathematics. A large volume of research studies had made the same speaking that mathematics has always been a male domain and there is strong record that girls show less trust in Mathematical work as compared to the boys (Meelissen & Luyten, 2008; Asante, 2012). The study also resolved that image along mathematics between public and private sector students were not significantly different. The students of both types of colleges have similar image along mathematics. Another study provides ample record that there was no significant difference between public and private school students' image along mathematics (Khan, 2011). For the fact that students in private schools have better learning opportunities, they showed similar image along mathematics as compared to their counter parts in public schools.

One of the research questions was to examine the relationship between teacher's impact and student's image along mathematics at intermediate level in Bogura city. The results of this study resolved that significant moderate positive relationship exists between the teacher's impact and student's image along mathematics. Similar type of speaking has been made by Davadas & lay (2018) that teachers' violent support and classroom



instruction foretell their image along mathematics. This result has an important implication for the mathematics teachers that their trust, encouragement and motivation can make mathematics an enjoyable subject.

10. Conclusion

It concludes that the teacher's pedagogical images i.e. lesson planning, use of appropriate teaching methodologies, creative home assignments and skill of assessment focusing on reasoning and critical thinking concern regarding classroom environment, also matter in shaping the image of student along mathematics. According to this study, majority participants believed that there is very great role of teacher in liking or disliking the subject of mathematics and most of the students want positive, friendly and good teacher of mathematics to make their image more positive. The result is supported by the research done by (Domino, 2009) which concluded that it is the teachers' role to assist their students in the learning and understanding of mathematics. Another research question aimed to explore the relationship between teachers' pedagogical attributes and image of students along mathematics. It was also concluded that the teacher's pedagogical attributes i.e. concern regarding classroom environment, lesson planning, use of appropriate teaching methodologies, creative home assignments and skill of assessment focusing on reasoning and critical thinking have a significant relationship with the attitude of student towards mathematics. The relationship of effective teaching variables and images of students along mathematics had also been examined by Akinsola & Olowojaiye, (2008) in a quantitative study. They found that teacher quality, the social-psychological elements of the classroom, and the management-organization elements in the classroom are related to the general image of students along

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