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Mathematical Anxiety of Student of Standard VIII in Relation to their Internet Cognitive Awareness

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Abstract

Mathematical anxiety is a phenomenon that is often considered when examining students' problems in mathematics. Mathematical anxiety is more than a dislike toward mathematics. Ashcraft defines math anxiety as "a feeling of tension, apprehension, or fear that interferes with math performance."Internet cognitive Awareness means being aware of how and what you think. In the classroom, it means being aware of how you learn. Developing." Internet cognitive awareness is an important part of helping learners become more effective and, importantly, more autonomous. Internet cognitive awareness plays an important role in development of an individual. This study tries to find out whether Internet cognitive awareness influences the mathematical anxiety of students of standard VII In the present study, the sample consisted of 610 students from 12 Gujarati medium secondary schools of Std. VIII situated in Radhanpur For the purpose of the present study, a three-staged sampling technique was used. The study had used ready made data gathering tools for all the variables. The result revealed that there is no significant relationship between Mathematical Anxiety and Internet cognitive Awareness.

Keywords : Mathematical anxiety, Internet cognitive awareness,

Introduction

Everybody in the world is suffering from some or the other anxiety, whether the individual is student or adult. Anxiety is an unpleasant state of inner turmoil, often accompanied by nervous behavior, such as pacing back and forth, somatic complaints and rumination. It is the subjectively unpleasant feelings of dread over something unlikely to happen, such as the feeling of imminent death. Anxiety is not the same as fear, which is felt about something realistically intimidating or dangerous and is an appropriate response to a perceived threat; anxiety is a feeling of fear, worry, and uneasiness, usually generalized and unfocused as an overreaction to a situation that is only subjectively seen as menacing. It is often accompanied by restlessness, fatigue, problems in concentration, and muscular tension.

Anxiety is not considered to be al normal reaction to a perceived stressors although many feel it occasionally.

Mathematical anxiety is a phenomenon that is often considered when examining students' problems in mathematics. Ashcraft, defines math anxiety as "a feeling of tension, apprehension, or fear that interferes with math performance" (2002, p. 1). The first math anxiety measurement scale was developed by Richardson and Suinn in 1972. Since this development, several researchers have examined math anxiety in empirical studies. Hembree (1990) conducted a thorough meta-analysis of 151 studies conceming math anxiety. It determined that math anxiety is related to poor math performance on math achievement tests and that math anxiety is related to negative attitudes concerning math. Hembree also suggests that math anxiety is directly connected with math avoidance.

Ashcraft (2002) suggests that highly anxious math students will avoic situations in which they have to perform mathematical calculations. Unfortunately math avoidance results in less competency, exposure and math practice, leaving students more anxious and mathematically unprepared to achieve. In college and university, anxious math students take fewer math courses and tend to feel negative towards math. In fact, Ashcraft found that the correlation between math anxiety and variables such as confidence and motivation are strongly negative.

Internet-cognitive Awareness

It means being aware of how you think. In the classroom, it means being aware of how you learn. Developing Internet -cognitive awareness is an important part of helping learners become more effective and, importantly, more autonomous. It learners are conscious of how they learn then they can identify the most effective ways of doing so.

For example the teacher asks the learners to keep a diary of their classes in which they can note what they liked and didn't like and why. They then discuss their ideas and develop individual and class action plans.

In the classroom -One of the most effective and easiest ways to develop Internet cognitive awareness is simply talking with learners about how they do things in the classroom, such as recording new words, reading a text, and laying out a page in their notebook.

Karimi and Venkatesan (2009) conducted a research study on Mathematics anxiety, Mathematics performance and Academic hardiness in high school students. The sample comprised 284 (144 males and 140 females) 10th grade high school students from Gujarat state. Pearson correlation analysis and two independent samples t-fest are used to analyze the data. The results have revealed that mathematics anxiety has significant negative correlation with mathematics performance but no significant correlation is detected with academic hardiness. It is also found that the gender differences in mathematics anxiety are significant, whereas no significant differences are detected between boys and girls in mathematics performance and academic hardiness. This study has established the fact that the performance of students in mathematics can be perceived by mathematics anxiety and females scored slightly higher on this variable but this relation has not observed with academic hardiness.

Das and Das(2013) conducted a study because math anxiety indicates psychologically a negative mind-set towards solving mathematical problems which impacts on students' learning practices and outcomes. In looking more closely at why a remarkable no of students may be struggling for improvement in mathematics in comparison to other subjects, it is timely to consider, the math anxiety factor. This literature review looks at the concept of math anxiety and solving mathematical problems highlighting math anxiety as an important factor of poor performance in terms of solving mathematical problems of school students in mathematics and how to assist in mitigating math anxiety

Maghsudi and Talebi (2009) conducted a study on major issue in discussions about cognitive versus meta-cognitive strategies involves separating what is cognitive from what is meta-cognitive. Cognitive strategies are used to help an individual achieve a particular goal (e.g. understanding a text) while meta-cognitive strategies are used to ensure that the goal has been reached (e.g., monitoring one's understanding of that text). The major aim of this study having an ex-post facto design was to find out whether inequality has any impact on the awareness and use of Internet -cognitive, and total cognitive Internet-cognitive strategies in respective of students proficiency levels. Throughout this study the researchers found that Mono and bilingual students differed significantly in their cognitive, Internet cognitive as well as total cognitive Internet cognitive strategy scores, meaning that bilinguals had significantly higher scores than monolingual students. Further, students with high proficiency had significantly higher scores than students with low proficiency in their cognitive, meta-cognitive and also total cognitive/ strategies. However, the interaction effect between linguality and proficiency is found to be non significant in the aforementioned strategies, indicating that the pattern of cognitive strategy scores are similar for students with low and high proficiency irrespective of the lingual background they have

Jayaprabha (2013) conducted a study which aims at examining the effects of inquiry based learning and cooperative learning on Internet -cognitive awareness in science class room. A quasi experimental design involving three groups namely, two treatment groups-inquiry based learning and cooperative learning and control group was adopted. Standardized tool developed by Schraw and Dennision (1994) was used to measure Internet -cognitive awareness in three groups. Results revealed that students in cooperative learning received higher Internet -cognitive awareness compared to other groups. The researchers recommend that cooperative learning be adapted regularly in classroom to enhance Internet cognitive awareness of higher secondary students.

Operational Definition of the Key Terms Used

Mathematical Anxiety: It is associated with apprehensive and fear related to emotional, physical, assessment and social factors of mathematical anxiety

Internet-cognitive awareness: It may be defined as what the individuals know about their skills and strategies and thus thinking about their own thinking on online platform.

Objectives of the Study

1. To ascertain the relationship between mathematical anxiety (M An) scores and Internet -cognitive awareness (IA) scores with respect to

a) Gender, b) School types and c) Total sample of the study Hypothesis of the study

1. There is no significant relationship in mathematical anxiety (M An) scores and Internet -cognitive awareness (IA) scores with respect to

a) Gender, b) School types, and c) Total sample of the study.

Research Methodology

The survey type descriptive research method included under the quantitative approach has been used in the present research. The descriptive method of the correlational type has been adopted in the present research.

Sample of the Study

The sample for the present study was the Gujarati medium secondary schools students of Std. VIL. A three stage sampling technique was used Tool Used

In the present study researcher used ready-made tool for both variables.

Mathematical anxiety scale was prepared by Karami and Venkatesan in (2008) to measure the mathematical anxiety of students. It contained 19 items. Internet cognitive awareness inventory was developed by Schraw and Dennison (1994) to measure the Internet -cognitive awareness of the students. It contained 52 items.Reliability indexes of the tools are given below

Scale of Mathematical Anxiety: internal consistency reliability was 0.88 and test retest reliability coefficient was 0.85.

Scale of Internet cognitive Awareness: internal consistency reliability was 0.74 and test retest reliability coefficient was 0.70 respectively

Interpretation and Analysis

Table 1

Coefficient of Correlation between Mathematical Anxicty Scores (MAnS) and Internet cognitive Awareness Scores (MAS)

Variables	N	R	P
MAns Vs MAS	351 (male)	0.0263	0.6244
MAns Vs MAS	259 (female)	-0.0464	0.4599
MAns Vs MAS	381 (private aided)	-0.0296	0.5622
MAns Vs MAS	229 (private unaided)	0.0166	0.8028
MAns Vs MAS	610 (total sample)	-0.0117	0.7719

From the table it can be seen that in male students the value of P (two tailed) is 0.6244. Since the value of P is greater than 0.05 it is not significant and hence the null hypothesis is accepted and in female students the value of P (two tailed) is 0.4599. Since the value of P is greater at 0.05 it is not significant and hence the null hypothesis is accepted.

From the table I it can be seen that in private aided school the value of P (two tailed) is 0.5622. Since the value of P is greater than 0.05 it is not significant and hence the null hypothesis is accepted and in private unaided school the value of P (two-tailed) is 0.8028. Since the critical value of P is greater at 0.05 it is not significant and hence the null hypothesis is accepted.

From the table 1 it can be observed that the obtained value of P (two-tailed) is 0.7719. Since the critical value of P is greater at 0.05, it is not significant and hence the mull hypothesis is accepted.

Findings of the Study

1. There is a no significant correlation between mathematical anxicty scores (MAnS) and Internet cognitive awareness scores (MAS) in case of male students, but a positive relationship exists.
2. There is a negative correlation exists between MAnS and MAS but not significant in case of female students
3. There is a no significant correlation between MAns and MAS in case of private-aided school type. MAns and MAS further shows a negative relationship in case of private-aided schools tvpe.
4. There exists a positive but not significant correlation exists between MAns and MAS in case of privates-unaided school type.

There is a negative but not significant correlation exists between MAnS and MAS in case of total sample of the study. MAnS and MAS shows negative relationship in case of total sample of the study.

Educational Implications

The findings of the study would enable the teachers, counselors, teacher-educators to get a holistic picture of the mathematical anxiety of their students and accordingly plan different learning strategies to reduce their mathematical anxiety. The findings of the study would enable the teachers, counselors, teacher-educators to get holistic picture of the Internet - cognitive awareness of their students and accordingly plan different learning strategies to build their meta- .cognitive awareness. The findings of the study would enable the teachers counselors, teacher-educators to get a holistic picture of the goal orientation of their students and accordingly plan different learning strategies.

The findings of the study will also be helpful to the principals of the schools as they would come to know more about their students and according guide the teacher to adopt various teaching and learning strategies. Awareness of the relationship between Mathematical Anxiety, Meta-cognitive Awareness will help the teachers to plan seminars, workshops, guest lectures etc. for the students to reduce mathematical anxiety. help and realize there meta-cognitive awareness and make improvement on it. The findings of this research will be of utility to educational planners, educational administrators and Principles of schools, colleges, etc, to adopt innovative teaching and learning methodologies that will help student to feel confident of their future. Mathematical anxiety, Internet - cognitive awareness also affect individual's personality

Suggestions to Overcome Mathematical Anxiety

A positive attitude would help in overcoming the mathematical anxiety.However, positive attitudes come with quality teaching for understanding which often isn't the case with many traditional approaches to teaching mathematics. Students may ask questions: be determined to 'understand the math. They do not need to settle for anything less during instruction. They should ask for clear illustrations and/ or demonstrations or simulations. Regular practice, especially when they are having difficulty would also help. When total understanding escapes, the students can hire a tutor or work with peers that make them understand the math. They also can do the math, sometimes it just take a different approach for them to understand some of the concepts. They don't iust read over the notes but they can do the math.

Suggestions to enhance Internet -cognitive awareness

Planning refers to the appropriate selection of strategies and the correct allocation of resources that affect task performance. So students should plan as per their goal and aim. Monitoring refers to one's awareness of comprehension and task performance, so students should monitor their task in an appropriate manner Evaluating refers to appraising the final product of a task and the efficiency at which the task was performed. This can include re-evaluating strategies that were used.

Students should re-evaluate themselves before performing any task. Teachers should guide and help students in enhancing their Internet -cognitive awareness skills. Students should learn to control cognition, emotions and actions. Students should learn to monitor their own learning actions. Students should learn to evaluate their own self.

This can be done by analyzing the quality of their work. Students should develop tendency to deal with the failure. Students should always stay focused on the goal that they have in their life

References

- Developing a provincial early childhood learming strategy(n.d). Retrieved on March 20, 2014 from http://www.ed.gov.nl.ca/edu/earlvchildhood/ literature review.pdf
- Dreger, R. M. & Aiken, L.R. (1957). The identification of number anxiety in college population. *Journal of Educational Psychology*, 47, 344-351
- JP. (n.d.). The Role of Metacognition in the classroom. Retrieved on March 20, 2014 from http://faculty.mwsu.edu/west/maryann.coe/c oe/Projects/epaper/meta.htm
- Kadhiravan, S., & Suresh, V. (2008). Self- regulated behavior at work. Journal of the *Indian Academy of Applied Psychology*, 34, Retrieved on March 22, 2014 from http://medind.nic.injak/108/sljak08slp126.p df
- Mind matters: Self-regulation (2012). Retrieved on March 22, 2014 from
- http://www.mindmatters.edu.au/resources a nd downloads/staff matters/the
- thriving selfhuseful information/self regulation.html
- Nisbet, S. (1984). The Seventh Sense(p6). SCRE Publication, 232, 394-410
- Pandya, S. R. (2010). Educational Research. New Delhi: AP.H. Publishing, Corporation.
- Shemp. RR (1986). The psychology of learning mathematics. Penguin: Harmondsworth, 95-112.

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