JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue

JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)

An International Scholarly Open Access, Peer-reviewed, Refereed Journal

A STUDY OF METACOGNITIVE ABILITIES AMONG SENIOR SECONDARY SCHOOL STUDENTS OF GHAZIABAD DISTRICT

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ABSTRACT

Metacognitive Abilities is now emerging as the advance paradigm for sr. secondary education. The present study was conducted for measuring Metacognitive Abilities among Senior Secondary school Students of Ghaziabad District. A representative sample of the entire population was gathered from 240 secondary school students. The purposive sampling approach was used to pick a sample of senior secondary pupils. For this study, the researcher used a survey research approach. For this study, the researcher solely employed a Punita Govil-developed Metacognition Inventory (MCI) questionnaire. The investigator employed mean, standard deviation, and t-test to analyse and interpret the data. The study revealed that there is no significant difference difference in metacognitive abilities between boys' and girls' students of sr. secondary school. The study also revealed that there is a significant difference in metacognitive abilities between urban and rural students of sr. secondary school and there is significant difference in metacognitive abilities between the arts and science stream students of sr. secondary school.

KEYWORDS*:* Metacognitive Abilities, sr. Secondary Students, etc

INTRODUCTION

Metacognitive learning techniques are a type of metacognitive learning strategy. They are the actions that are relevant to and appropriate for boosting performance on a certain learning assignment. Learners engage in metacognition when they assess their mastery of the prerequisite skills and knowledge required to complete a task successfully, track their progress and the effectiveness of their overall approach to a task, and choose appropriate task-specific strategies such as using context clues to deduce the meaning of unfamiliar words or seeking help from a teacher or peer when an initial approach to a task fails.

Learners that have good metacognitive learning techniques employ them on a regular basis without any urging. In reality, metacognitive learning processes are self-regulated by the learner by their very nature.

This characteristic makes them more difficult to develop in certain ways, especially in learners who have been conditioned to perceive all learning as procedural, or just following commands. The majority of training is procedural in nature, which isn't necessarily a negative thing. However, if this is the only sort of education a student receives, he or she will have limited opportunity to acquire metacognitive abilitie.

REVIEW OF RELATED STUDIES:

Tansaz & Tavousi (2011) analyzed that a significant difference between strong and weak group according to the meta-cognitive levels. In addition, the subscales scores (awareness, cognitive strategy, planning and self-control) were significantly different in two group.
Jaleel & Premachandran (2016) analyzed that exists any significant difference between the various sub samples Gender, Locality and Type of Management of school based on their metacognitive awareness.
Kaur & Kaur (2016) there is no significant interaction impact of metacognition and problem-solving ability on achievement of medical students in secondary school, according to the findings. There is no link between metacognition and achievement among secondary school students in the medical field.
Singh & Singh (2017) Academic accomplishment of secondary school pupils was investigated in connection to metacognitive capacity and socioeconomic status on a sample of 200 students from +1 commerce grades from various Amritsar district schools. Punita Govil's metacognitive ability assessment was used to collect data. The study found that there is a large difference in academic achievement between boys and girls in secondary school, as well as a significant difference in metacognitive ability between boys and girls.
Popoola, Oginni and Fadiji (2021) there is no evidence that students' metacognitive ability has a major impact on academic success in Mathematics, and that metacognitive ability is gender insensitive.
STATEMENT OF THE PROBLEM:

"A Study of Metacognitive Abilities among Senior Secondary Students of Ghaziabad District"

OBJECTIVES OF THE STUDY

1. To find out the difference in the metacognitive abilities of higher secondary students with respect to their gender.
2. To find out the difference in the metacognitive abilities of higher secondary students with regard to their academic stream their locality.
3. To find out the difference in the metacognitive abilities of higher secondary students with regard to their academic stream.

HYPOTHESIS OF THE STUDY:
1. There is significant difference in metacognitive abilities between boys' and girls' students of sr. secondary school.
2. There is significant difference in metacognitive abilities between rural and urban students of sr. secondary school.
3. There is significant difference in metacognitive abilities between the arts and science stream of education of sr. secondary school.

DELIMITATION OF THE STUDY:

Area of study: The sample of the present study was taken from Ghaziabad District only.

Sample size: Only 240 samples were studied during the investigation.

Tools: The researcher used a Metacognition Inventory (MCI) developed by Punita Govil questionnaire only for this study.

The researcher employed the mean, standard deviation and t-test as statistics.

The present research work was delimited to the sr. secondary school students only (11th and 12thclass).

OPERATIONAL DEFINITION OF KEY TERMS:
Metacognition, according to Flavell (1976), is ".....knowledge concerning one's own cognitive processes and products, or anything related to them....., metacognition refers, among other things, to the active monitoring and consequent regulation and orchestration of these processes in relation to cognitive object or data...."
Sr. Secondary Students: By secondary students we mean a student of class 11th and 12th. After qualifying Madhyamik Examination a student takes admission to secondary level, specifically higher secondary level.

METHODOLOGY:

Research Method:
As a research method, the researcher adopted the Descriptive Survey Method as well as the quantitative research approach for this present study.

Sample and Sampling:
A total of 240 people were chosen as part of the sample. For this inquiry, the researcher employed the purposive sampling approach.

Population:
The study's target demographic is all UP (India) Sr. Secondary students (classes 11 and 12).

Sample Profile:
Table No 1: Sample distribution according to various independent variables

Independent Variables		N	Percentage
Gender	Male	143	60
	Female	97	40
Locality	Rural	128	53
	Urban	112	47
Stream of Study	Arts	109	45
	Science	131	55

Tools:
The Metacognition Inventory (MCI) created by Punita Govil will be utilised to complete the current investigation. There are 30 items in the test battery. This tool assesses cognitive processes and cognitive control.

TESTING THE HYPOTHESIS:

HYPOTHESIS - 1: There is significant difference in metacognitive abilities between boys and girls students of sr. secondary school.

Table No 2.0: Comparison of metacognitive abilities between boys and girls students of sr. secondary school of Ghaziabad district in relation to gender

Sr. No	**Group Compared**	**N**	**Mean**	**S.D.**	**df**	**"t" Value**	**Level of Significance**
1.	**Male**	143	90.9	10.33	118	0.78	Not Significant
2.	**Female**	97	89.4	10.69			

Analysis: From the table – 2.0 it can be observed that the mean score of male students is 90.9 with an S.D. of 10.33, while mean of female students is found to be 89.4 with an S.D. of 10.69. The calculated t-value is 0.78 and't-table' that the critical value of t with 238 degrees of freedom (df) at a 0.05 level of significance is 1.97 and the 0.01 level of significance is 2.60.

Interpretation: Since, the calculated t-value is less than tabulated t value which not significant at any levels. Hence, the null hypothesis is accepted. It indicates that there is no significant difference difference in metacognitive abilities between boys' and girls' students of sr. secondary school.

HYPOTHESIS - 2: There is significant difference in metacognitive abilities between urban and rural students of sr. secondary school.

Table No 3.0: Comparison of metacognitive abilities between Urban and Rural students of sr. secondary school of Ghaziabad district in relation to locale

Sr. No	Group Compared	N	Mean	S.D.	Df	"t" Value	Level of Significance
1.	**Urban students**	128	90.37	9.94	114	2.25	Significant
2.	**Rural Students**	112	85.95	11.19			

Analysis: From the table – 3.0 it can be observed that the mean score of urban students is 90.37 with an SD of 9.94, while mean score of Rural Students is found to be 85.95 with an SD of 11.19. The calculated t-value is 2.25 and't-table' that the critical value of t with 238 degrees of freedom (df) at a 0.05 level of significance is 1.97 and the 0.01 level of significance is 2.60.

Interpretation: Since, the calculated t-value is greater than tabulated t value which significant at any 0.05 levels. Hence, the null hypothesis is rejected. It means that there is a significant difference in metacognitive abilities between urban and rural students of sr. secondary school.

HYPOTHESIS-3: There is significant difference in metacognitive abilities between the arts and science stream students of sr. secondary school.

Table No 4.0: Comparison of metacognitive abilities between arts and science students of sr. secondary school of Ghaziabad district in relation to stream

Sr. No	Group Compared	N	Mean	S.D.	df	"t" Value	Level of Significance
1.	**Arts Stream Students**	109	90.9	10.33	118	2.09	Significant
2.	**Science Stream Students**	131	87.11	9.52			

Analysis: From the table – 4.0 it can be observed that the mean score of Arts Stream Students is 90.90 with an SD of 10.33, while mean of Science Stream Students is found to be 87.11 with an SD of 9.52. The calculated t-value is 2.09 and and't-table' that the critical value of t with 238 degrees of freedom (df) at a 0.05 level of significance is 1.97 and the 0.01 level of significance is 2.60.

Interpretation: Since, the calculated t-value is greater than tabulated t value which significant at any 0.05 levels. Hence, the null hypothesis is rejected. It means that there is significant difference in metacognitive abilities between the arts and science stream students of sr. secondary school.

FINDINGS OF THE STUDY:

The following findings are given below obtain from the above statistical analysis and the interpretation

- There is no significant difference difference in metacognitive abilities between boys' and girls' students of sr. secondary school.
- There is a significant difference in metacognitive abilities between urban and rural students of sr. secondary school.
- There is significant difference in metacognitive abilities between the arts and science stream students of sr. secondary school.

CONCLUSION:

They frequently employ these tactics during the pre-reading session in order to gain a better understanding of the material. Students employ tactics such as defining the objective of reading, taking a broad view of the material, examining how the text is arranged, including visuals such as photos, figures, or tables, and paying close attention to words or phrases in boldface or italic. The supportive reading methods, which are employed

during reading to improve understanding and memory, are the ones that students utilise the least. Students employ tactics such as taking notes, highlighting crucial points, using a dictionary, reading aloud, paraphrasing, and asking and answering questions while reading.

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