

<div>Research Paper</div> <div>EDUCATION</div>	
<div>Metacognitive awareness among adolescents.</div>	
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<div>ABSTRACT</div>	<div>The study was conducted to find out the metacognitive awareness among higher secondary school students in coimbatore district. The sample consisted 1005 higher secondary school students. Schraw and dennision's tool was used for data collection. From the result it is seen that male students possess better metacognitive ability than their female counterparts and it is also interesting to note that students who read newspaper regularly possess better cognition and they know regulate their cognition better. The finding that Tamil medium students possess better metacognitive ability reveals the fact that when students learn in their mother tongue their thinking ability and cognition in better than when learning in a foreign language.</div>
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<div>KEYWORDS</div>	<div>Metacognition, knowledge about cognition and regulation of cognition.</div>
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Introduction

Metacognition is defined as cognition about cognition or knowing about knowing. It can take many forms it includes knowledge about when and how to use particular strategies for learning or for problem solving. Metacognition means thinking about thinking. The term has been part of the Vocabulary of educational psychologists for the last couple of decades and the concept for as long as humans have been able to reflect on their cognitive experience, there is much debate over exactly what it is. One reason for this confusion is the fact that there are several terms currently used to describe the same basic phenomenon such as self-regulation, executive control or an aspect of that phenomenon Meta memory and these terms are often used interchangeably in the concepts of metacognition. While there are some distinctions between definitions, all emphasize the role of executive process in the overseeing and regulation of cognitive process. The term Metacognition is most often associated with John Flavell, (1970).

According to Flavell (1979, 1987), metacognition consists of both metacognitive knowledge and metacognition experiences. Metacognition knowledge refers to acquire knowledge about cognitive processes.

Components of Metacognition

Metacognition has two constituent parts: knowledge about cognition and monitoring of cognition (Cross & Paris, 1988; Flavell, 1979; Paris & Winograd, 1990; Schraw & Moshman, 1995; Schraw et al., 2006; Whitebread et al., 1990). Several frameworks have been developed for categorizing types of knowledge about cognition. For example, Flavell (1979) defines cognitive knowledge as knowledge about one's own cognitive strengths and limitations, including the factors (both internal and external) that may interact to affect cognition. He classifies such knowledge into three types: (1) "person" knowledge, which includes anything one believes about the nature of human beings as cognitive processors; (2) "task" knowledge, which includes knowledge about the demands of different tasks; and (3) "strategy" knowledge, which is knowledge about the types of strategies likely to be most useful. Flavell notes that these different types of knowledge can interact, as in the belief that one should use strategy A (versus strategy B) to solve task X (rather than task Y).

Significance of the Study

This study is considered to help the students to realize their level of metacognitive awareness. This study was mostly based on the assumption that metacognition plays a key role in different disciplines such as oral communication, reading comprehension and writing comprehension.

Objectives

- To find out if there is any statistically significant relationship between metacognitive awareness and gender.
- To find out if there is any statistically significant relationship between metacognitive awareness and type of family.
- To find out if there is any statistically significant relationship between metacognitive awareness and News paper reading habits.

Hypothesis

- There is no significant difference relationship between metacognitive awareness and gender.
- There is no significant difference relationship between metacognitive awareness and type of family.
- There is no significant difference relationship between metacognitive awareness and News paper reading habits.

Methodology

The current study was conducted in Coimbatore city. Survey method was used for the study.

Participants

The sample of the study included a total of 1005 (420 male and 585 female). Students were selected from 4 government, 6 private and 4 corporation schools in Coimbatore city.

Instrument

In order to measure the metacognitive awareness skills of the participants, the metacognitive awareness developed Schraw and Dennison (1994) and translated into Tamil was used. The inventory consists of 52 questions and two sub scales, which are of cognitive characteristics (17 questions) and regulations of cognition skills (35 questions). The reliability of the tool was 0.713. The inventory has Likert type responses in 5 categories (never, rarely, sometimes, frequently and always). In addition to the inventory a demographic information question was also used to collect information about gender, type of family, medium of instruction and News paper reading habits.

Data analysis

t test was used by the investigator to test the differences in metacognitive awareness based on gender, medium of instructions and news paper reading habit.

Findings

In this section, findings regarding the higher secondary students metacognitive awareness are presented.

a. Comparison of metacognitive awareness based on gender

An effort was made to compare the metacognitive awareness of students based on their gender. The results obtained is given in Table. 1

Table. 1 Metacognitive Awareness and Gender

Metacognitive Awareness	Gender				df	t
	Male (N=420)		Female(N=585)			
	Mean	S.D	Mean	S.D		
Total Metacognitive Awareness	47.54	10.88	45.71	10.94	1003	2.613**
Knowledge of Cognition	11.89	2.99	11.52	3.11		1.92 ^{NS}
Regulation of Cognition	23.74	5.82	22.67	5.96		2.847**

NS- Not significant, ** - Significant at 0.01 level

From Table.1 it is seen that there is a highly significant difference in the total metacognitive awareness and regulation of cognition of male and female learners and the mean value suggest that male learners possess better metacognitive awareness and regulation of cognition than the female learners.

b. Comparison of Metacognitive Awareness of students based on Medium of Instruction

An effort was made to compare the metacognitive awareness of students based on their medium of instruction. The results obtained is given in Table 2

Table 2 Metacognitive Awareness and Medium of Instruction

Metacognitive Awareness	Medium of instruction				df	t
	Tamil (N=716)		English (N=289)			
	Mean	S.D	Mean	S.D		
MetaCognition Total	47.27	10.77	44.51	11.15	1003	3.64**
Knowledge about cognition	11.83	3.07	11.31	3.04		2.447*
Regulation of Cognition	23.61	5.78	21.89	6.09		4.199**

SD - standard deviation, * - Significant at 0.05 level, ** - Significant at 0.01 level

From Table 2 it is shows that there is highly significant difference in the total metacognitive awareness and regulation of cognition of Tamil and English medium learners and the mean value suggest that Tamil medium learners possess better metacognitive awareness and regulation of cognition than the English medium learners.

c. Comparison of metacognitive awareness of students based on type of family

The difference in metacognitive awareness of students based on their type of family (Nuclear and Joint) was found by using t-test and the results obtained is presented in Table. 3

Table. 3 Metacognitive Awareness and Type of Family

Metacognitive Awareness	Type of family				df	t
	Nuclear (N=848)		Joint (N=157)			
	Mean	Std. Deviation	Mean	Std. Deviation		
Total Metacognitive Awareness	34.92	8.23	34.15	8.33	1003	1.065 ^{NS}
Knowledge about cognition	11.75	3.04	11.32	3.197		1.579 ^{NS}
Regulation of Cognition	23.17	5.93	22.83	5.88		0.666 ^{NS}

NS - Not significant, SD - standard deviation,

The t-value for total metacognitive awareness namely its components, knowledge of cognition and knowledge of regulation shows that there is no statistically significant difference based on type of family. Hence the null hypotheses stated that “there is significant difference between students of nuclear and joint family on metacognition” is accepted.

D. Comparison of metacognitive awareness of students based on news paper reading habit

An attempt was made to find out if there is any statistically significant difference in Metacognitive Awareness between students who read and do not read newspaper and t test results obtained are given in Table. 4.

Table. 4 Metacognitive Awareness and News Paper Reading Habit

Metacognitive Awareness	News paper reading habits				df	t
	Yes (N=576)		No (N=429)			
	mean	SD	mean	SD		
Total Metacognitive Awareness	35.31	8.08	34.10	8.42	1003	2.301*
Knowledge about cognition	11.82	2.98	11.9	3.17		1.635 ^{NS}
Regulation of Cognition	23.49	5.83	22.61	6.02		2.35*

NS - Not significant, SD - standard deviation, * - Significant at 0.05 level

From Table. 4 it is seen that there is a significant difference in the metacognitive awareness of students who read newspaper and who do not read newspaper.

The mean values indicate that students who read newspaper possess better metacognitive awareness. The results also show that students who read newspaper and who do not read newspaper possess same knowledge of cognition whereas the students who read newspaper are found to possess better regulation of cognition. Hence the null hypotheses stated ‘there is no significant difference in the metacognitive awareness and the components of metacognition namely knowledge of cognition and regulation of cognition with respect to newspaper reading is accepted for knowledge of cognition and rejected for metacognitive awareness and regulation of cognition.

Conclusion

In conclusion, this study revealed that that there is a significant difference in the metacognitive awareness of students based on gender, medium of instruction, who read newspaper and who do not read newspaper. It is seen that male students possess better metacognitive ability than their female counterparts and it is also interesting to note that students who read newspaper regularly possess better cognition and they know regulate their cognition better. The finding that Tamil medium students possess better metacognitive ability reveals the fact that when students learn in their mother tongue their thinking ability and cognition in better than when learning in a foreign language.

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