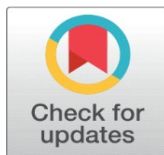


METACOGNITIVE AWARENESS OF LATE ADOLESCENTS

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ABSTRACT

Metacognitive awareness seemed to be the key factor in learning the material. Metacognition refers to the knowledge of cognitive functions such as perception, memory, reasoning etc., Academic achievement to a large extent depends on metacognitive awareness as per various metacognitive psychologists. The present study is focused on metacognitive awareness of late adolescents and also to assess the comparison of metacognitive awareness between girls and boys in eight sub-components such as declarative knowledge, procedural knowledge, conditional knowledge, planning, information management strategies, comprehension monitoring, debugging strategies and evaluation. The study was carried out on a sample of 100 late adolescents aged 18yrs. The results revealed that late adolescents have metacognitive awareness. Boys and girls both have good knowledge on all the sub-components of metacognitive awareness equally but significant difference was found on only one sub-component i.e., comprehension monitoring which was in favor of girls.

Keywords: Metacognitive Awareness, Undergraduates, Late Adolescents, Comprehension Monitoring, Academic Achievement, Etc

1. INTRODUCTION

Learning in the new digital era is really a challenging task. A powerful technique is required to learn and remember the content. Cognition is a term that can be known as knowing. Metacognition is regarded as “thinking about thinking”. According to Jaleeland Premachandran (2016) it is referred to as system which has the potential to regulate and understand one’s performance of cognition. Metacognition helps people to be aware of their learning processes. Sometimes metacognition is known to be the outsider who observes the thought processes of one’s own intellectual performance. Flavell, 1979: Brown, 1978: referred metacognition as the knowledge of activities of own cognition in learning processes.

Flavell classified metacognition into two processes, Knowledge of cognition and regulation of cognition. Knowledge of cognition or metacognitive knowledge deals with three kinds of awareness:

- 1) Awareness of knowledge:** this speaks about one’s own knowledge of what knows, what was not known and what one wants to know.

- 2) Awareness of thinking:** comprehension about the tasks of cognition and the technique of how to complete them
- 3) Awareness of thinking strategies:** understanding the ways to direct learning.

Regulation of cognition is the control of cognitive processes. Halpern (2001) defined metacognition as the critical thinking which has executive function. Hasselhorn and Lobuhn (2011) refers metacognition as having knowledge or control of perception, learning, memory, understanding and thinking.

2. REVIEW OF LITERATURE

- Late adolescence age is the age in which metacognitive ability significantly reaches to the highest Weil, et. al., (2013).
- Indu and Vanitha (2015) opined that metacognitive ability is good in male students than female students who are in adolescent age.
- Narang and Saini (2013) stated that knowledge of cognition and regulation of cognition contribute a lot for the academic performance of adolescents.
- High scores in metacognitive awareness is associated with good academic achievement in undergraduates Sawhney and Bansal (2015).
- Rani et. al., (2020) conducted a study on metacognition on adolescents and proved that home environment and mental health are the factors that shows significant impact on metacognition.
- Liliana and Lavinia (2011) portrayed that significant difference does not exist between boys and girls.
- Mondal (2023) presented in a study that metacognitive awareness and academic achievement are strongly correlated with each other.
- Dhyani and Maikhuri (2018) reported that significant difference does not exist based on locality and gender in primary school teachers in metacognition.
- Palantis, et. al., (2019) stated that declarative knowledge, conditional knowledge, procedural knowledge, planning, monitoring and evaluation does not affect with regard to age, qualification, experience and gender when tested on primary school teachers.

3. OBJECTIVES

- To assess metacognitive awareness of late adolescents
- To study the comparison of metacognitive awareness between boys and girls

4. RESEARCH METHOD

The present research work is aimed to assess metacognitive awareness of late adolescents studying undergraduate degree and also to know the level of metacognitive awareness between boys and girls. The study was conducted in the private colleges located in the town of Nellore which belongs to Nellore District located in Andhra Pradesh.

5. PARTICIPANTS

The sample comprised of 100 students among them 50 were boys and were girls. Random Sampling Technique was employed to collect the sample. The sample age group was between 18-19yrs.

5.1. TOOL

The following tool was used to collect the data

- “Metacognitive Awareness Inventory” developed by Schraw and Dennison (1994) was used to assess the metacognitive awareness of late adolescents. The inventory was divided into two sub-categories namely Knowledge of Cognition and Regulation of Cognition. This is a 52 item inventory with eight sub-components such

as declarative knowledge, procedural knowledge, conditional knowledge, planning, information management strategies, debugging strategies, comprehension monitoring and evaluation.

6. STATISTICAL TREATMENT

Statistical treatment of the data was analyzed by using

- 1) Percentage
- 2) Mean
- 3) Standard Deviation
- 4) T-test

7. RESULTS AND DISCUSSION

The data subjected to statistical analyses of percentage, mean, standard deviation and t-test was explained below:

Table 1 Percentage of metacognitive awareness in its components

Sl.No	Name of the component	Percentage	Interpretation
01.	Declarative Knowledge	80	Excellent
02.	Procedural Knowledge	71	Very good
03.	Conditional Knowledge	74	Very good
	Knowledge of Cognition	80	Excellent
04.	Planning	78	Very good
05.	Information Management Strategies	67	Good
06.	Debugging Strategies	68	Good
07.	Comprehension Monitoring	72	Very good
08.	Evaluation	74	Very good
	Regulation of Cognition	72	Very good
	Metacognitive Awareness	73	Very good

Table 1 shows the percentage of late adolescents with respect to the components and sub-components of metacognitive awareness. Late adolescents have excellent declarative knowledge with above 80 per cent when compared to procedural and conditional knowledge which has between 70-75 per cent under the component knowledge of cognition. Under the component regulation of cognition, it was found that all the sub-components such as planning, comprehension monitoring, evaluation received very good percentage pointing above 70 when compared to information management strategies and debugging strategies hence, it can be stated from the results obtained that late adolescent's total metacognitive awareness was very good.

Graphical representation of metacognitive awareness in percentage



Table 2: Mean and Standard Deviation comparison of components of metacognitive awareness of late adolescent boys and girls

Sl. No	Name of the component	Mean Score				T-test
		Boys		Girls		
		Mean	SD	Mean	SD	
01.	Declarative Knowledge	6.49	1.29	6.24	1.35	0.95@
02.	Procedural Knowledge	2.69	1.05	2.98	1.05	1.38@
03.	Conditional Knowledge	3.59	1.04	3.80	1.09	0.99@
	Knowledge of Cognition	12.78	2.19	13.02	2.58	0.50@
04.	Planning	5.51	1.58	5.45	1.40	0.20@
05.	Information Management Strategies	6.67	1.87	6.90	1.78	0.63@
06.	Debugging Strategies	3.43	1.14	3.37	1.18	0.26@
07.	Comprehension Monitoring	4.89	1.43	6.18	1.42	4.53***
08.	Evaluation	4.37	1.28	4.59	1.15	0.90@
	Regulation of Cognition	25.04	4.7	25.47	6.94	0.36@
	Metacognitive Awareness	37.82	6.89	38.53	7.13	0.50@

Table 2 shows means and SDs of boys and girls on the components and sub-components of metacognitive awareness. The findings were:

- Declarative knowledge of boys was seemed to be greater than girls as the obtained mean scores were 6.49 and 6.24. But, t-test result proved not much significant difference between them.
- Procedural knowledge of girls was higher than boys. The t-score obtained 1.38 presented no significant difference in both boys and girls.
- Conditional knowledge was also found to be greater in girls rather than boys. The mean score of girls was 3.80 and boys was 3.59 which depicted no statistically significant difference.
- The sub-component of declarative, procedural and conditional knowledge that comes under the component knowledge of cognition showed no significant difference between boys and girls. The component knowledge of cognition also proved no significant difference between boys and girls even though the mean score of girls 13.02 was greater than the mean score of boys 12.78.
- The mean score 5.51 of boys in the sub-component planning was seemed to be higher than girls mean score 5.45 which proved statistically equal awareness and planning strategies in academics.
- Information management strategies were good in girls than boys as the mean scores depicted in the table were 6.90 and 6.67. No statistically significant difference was found between boys and girls.
- Debugging strategies is one of the sub-components in regulation of cognition in which no statistical difference was portrayed by the results calculated. A little difference was found in the mean scores thus it can be proved that boys and girls were more or less equal in application of debugging strategies while studying the material.
- An interesting fact found was that the sub-component comprehension monitoring holds highly statistically significant difference between boys and girls who obtained mean scores of 4.89 and 6.18. Thus, it is proved that girls were better in monitoring their comprehension while reading the content in the books when compared to boys. T-score of 4.53 explains statistical difference.
- Not much difference in mean scores 4.37 and 4.59 were seen between boys and girls. T-score calculated also showed no significant difference between them in the sub-component evaluation.
- The component regulation of cognition also projected no significant difference between boys and girls as the mean scores obtained were 25.04 and 25.47. This proves that boys and girls were good at regulating their cognitive behavior.
- It is clear from the table that boys and girls were metacognitively aware of their strategies in accommodating and analyzing the material learnt. No statistical difference was found between boys and girls when t-test was performed.

8. CONCLUSION

The results tabulated depicted that, late adolescents were aware of their metacognitive strategies. They were excellent in knowledge of cognition rather than regulation of cognition. The sub-component comprehension monitoring was proved to be statistically significant between boys and girls and showed that girls have more comprehension monitoring strategies than boys. All the other sub-components such as declarative, procedural and conditional knowledge, information management strategies, planning, evaluation etc., did not showed any significant difference between boys and girls and thus were equally metacognitively aware in learning the content which helps them to excel in academics.

9. EDUCATIONAL IMPLICATION

In this competitive era adolescents have to prove themselves in academics to strengthen their career prospects when academic merits were high. The scholastic performance can be better if they apply metacognitive strategies to plan, manage, monitor and evaluate their learning behavior at large.

CONFLICT OF INTERESTS

None.

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