

## Metacognitive Awareness of Higher Secondary Learners: The West Bengal Perspective

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### ABSTRACT

“Thinking about one’s own thinking” is the umbrella term of metacognition. Metacognition has two components: self-regulation- which involves controlling our learning process, and reflection- which involves considering what we already know. When combined, these processes provide a significant component of learning and growth. Gaining these metacognitive skills involves studying particular learning techniques in addition to being reflective learners. Being conscious of your thoughts is known as metacognitive awareness. Being conscious of one's own thought processes and tactics is known as metacognition. It helps learners to be more aware of what they are doing, why they are doing it, and how the skills they are acquiring could be used differently depending on the circumstance. The **major objective of the study** was to analyse metacognitive awareness of higher secondary learners of West Bengal. For the study, a sample of 972 XI standard learners was chosen using the simple random sampling technique. A standardized Metacognitive Awareness Scale was developed by the researchers to assess higher secondary learners’ metacognitive awareness. Based on their metacognitive awareness, the study attempts to determine whether there are any notable differences across the several sub-samples: gender, locale and academic stream. The **descriptive survey method** was used to collect the data. The data has been analysed using the mean, standard deviation, percentage analysis and t-test. It **has been found** that there are no significant variations in the metacognitive awareness of West Bengal higher secondary learners based on their gender and academic stream but a discernible difference exists based on their locale.

**Keywords:** *Metacognitive Awareness, Metacognitive Awareness Scale, Higher Secondary Learners*

The phrase "thinking about thinking" is frequently used to describe metacognition. A person can better comprehend and manage their own cognitive performance with the aid of metacognition, a regulatory system. People can take control of their own learning through metacognition. When discussing metacognition, the term "going meta" is occasionally used to describe the act of taking a step back to observe one's own actions as though one were an outsider. Being an audience for your own performance—in this case, your own intellectual performance—is what it means to "go meta."

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*“Metacognition was originally referred to as the knowledge about and regulation of one’s own cognitive activities in learning processes” (Flavell, 1979; Brown, 1978). “Metacognition involves awareness of how they learn, an evaluation of their learning needs, generating strategies to meet these needs and then implementing the strategies” (Hacker, 2009).*

Most often, metacognition is divided into two distinct but connected domains. One of the earliest scholars to study metacognition and memory, John Flavell, distinguished between two concepts: metacognitive knowledge, or awareness of one's own thought processes, and metacognitive regulation, or control over one's own thought processes. Learning theory is informed by the combination of these two elements. According to Flavell (1979), metacognitive information comes in three forms:

1. **Awareness of knowledge**-It entails being aware of one's knowledge, ignorance, and area of interest. Awareness of other people's knowledge may also fall under this category.
2. **Awareness of thinking**-knowing the nature of cognitive activities and the prerequisites for completing them.
3. **Awareness of thinking strategies**- comprehending methods for direct learning.

Metacognitive knowledge is engaged by questions that specifically ask students to consider questions like "How do I study best?" or "What kinds of tools help me learn?" This might include anything from data that aids students in evaluating their own skills and intelligences to analyses of particular learning strategies they frequently employ in various contexts. The ability to think strategically, solve issues, define objectives, arrange thoughts, and assess what is known and unknown are all components of metacognitive control. It also entails having the capacity to instruct others and demonstrate thought processes.

Students are able to control or guide their learning when they have knowledge about how they think. "Executive control" is another term for this type of metacognition. Every time they learn, successful students usually employ metacognitive techniques. However, they might not employ the most effective technique for any kind of studying circumstance.

Each learner may use these metacognitive techniques.

- **Knowing your limits** -being aware of one's own memory limitations for a given task and developing a way to get outside assistance.
- **Self-monitoring** –keeping an eye on one's own learning approach, such as idea mapping, and modifying it if necessary.
- **Modify** –determining whether one has understood what they have just read and, if not, changing their strategy.
- **Skimming** –deciding to quickly scan through subheadings of irrelevant material in order to find the information they require.
- **Rehearsing** –practicing a skill repeatedly in order to become proficient.
- **Self-test** –taking self-assessments on a regular basis to gauge your level of learning.

### REVIEW OF RELATED STUDIES

The studies collectively underscore the importance of metacognition in academic achievement across various educational contexts. Mwangi et al. (2024) found a significant positive correlation between metacognition and academic achievement among high school students in Kenya, while Sutarto et al. (2022) demonstrated that problem-based learning

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significantly enhanced metacognitive abilities in junior high students. Akbayir and Topçul (2021) highlighted the positive effects of metacognitive awareness and logical thinking on mathematics success, with gender differences observed. Similarly, Abdelrahman (2020) identified strong correlations between metacognition, motivation, and academic success among university students, emphasizing metacognitive awareness as a critical factor. Sonowal and Kalita (2019) reported a positive correlation between metacognition and achievement in arts-stream students, and Nongtodu and Bhutia (2017) found stronger metacognitive abilities among females and urban students, linking it to better academic performance. However, Dhyani and Maikhuri (2018) observed no significant differences in metacognitive awareness among primary school students based on gender or locality. Fernandes and Talekar (2016) noted that secondary students exhibited average metacognitive awareness, with no gender differences. Finally, Owo and Ikwut (2015) showed significant correlations between metacognition, attitude, and achievement among chemistry students, with attitude being the stronger predictor. These findings emphasize the need to integrate metacognitive skill development into educational practices to enhance learning outcomes.

Metacognitive knowledge plays a crucial role in fostering independent learning by promoting anticipation, introspection, and the ability to strategically manage one's learning processes. Intentional learners, as effective metacognitive thinkers, can adapt strategies to enhance comprehension and persist through challenges by employing new approaches to learning. Recognizing that metacognition improves learning capacity, retention, and performance, researchers aimed to assess the metacognitive awareness of higher secondary learners in West Bengal. Understanding learners' metacognitive awareness can help teachers adopt instructional strategies and equip students with effective techniques to develop their metacognitive skills, ultimately improving concept learning and overall academic outcomes.

### ***Need and Significance of the Study***

This study is significant as it investigates the metacognitive awareness of higher secondary learners in West Bengali, focusing on differences based on gender, locale, and academic stream. By analysing these classificatory variables, the study provides insights into current patterns and future trends, addressing the prevalent gender gap in West Bengal that impacts the psychological well-being of learners. The findings are expected to clarify the relationship between metacognitive awareness and these variables, thereby fostering awareness among learners and teachers about its importance in education. This understanding can help enhance teaching strategies and support learners' academic and personal growth. This study highlights the significant impact of metacognitive awareness on teaching and learning, offering valuable insights for both teachers and learners. Teachers can utilize the findings to tailor instructional strategies, simplify abstract concepts, and enhance learners' academic performance by understanding their levels of metacognitive awareness. The study also emphasizes the importance of rewarding, praising, and encouraging learners to foster their metacognitive development. For administrators, it underscores the value of integrating metacognitive awareness into the teaching-learning process, while policymakers and stakeholders can use the findings to address psychological factors affecting academic outcomes and improve professional practices. Additionally, the results can inform the development of effective training methods and equip learners with essential skills for holistic personality development.

### *Objectives of the Study*

- To find out the level of metacognitive awareness in relative percentage with reference to total sample and selected demographic variables viz., gender, locale and academic stream of higher secondary learners in West Bengal.
- To find out whether there exists any significant difference in the metacognitive awareness of higher secondary learners in West Bengal based on their gender.
- To find out whether there exists any significant difference in the metacognitive awareness of higher secondary learners in West Bengal based on their locale.
- To find out whether there exists any significant difference in the metacognitive awareness of higher secondary learners in West Bengal based on their academic stream.

### *Hypotheses of the Study*

- **H<sub>01</sub>** The level of metacognitive awareness in relative percentage with reference to total sample and selected demographic variables viz., gender, locale and academic stream of higher secondary learners in West Bengal will not vary.
- **H<sub>02</sub>** There will be no significant difference in the metacognitive awareness between boys and girls higher secondary learners in West Bengal.
- **H<sub>03</sub>** There will be no significant difference in the metacognitive awareness between urban and rural higher secondary learners in West Bengal.
- **H<sub>04</sub>** There will be no significant difference in the metacognitive awareness between higher secondary learners of arts and science streams in West Bengal.

## **RESEARCH METHODOLOGY**

Descriptive research design was used. A comprehensive survey of the higher secondary schools of West Bengal was carried out.

### *Population and Sample*

The population of this study consists of all of the learners enrolled in higher secondary schools in West Bengal. There were 972 higher secondary learners in the sample. It was selected using simple random sampling technique among 11th standard learners of different higher secondary schools spread throughout rural and urban locations.

*Table 1: Showing the distribution of Sample according to Demographic Variables*

Demographic Variables	Group	N
Gender	Boys	454
	Girls	518
Locale	Urban	545
	Rural	427
Academic Stream	Arts	520
	Science	452

### *Tools Used in the Study*

The researcher's Metacognitive Awareness Scale was employed in the investigation. It is composed of two dimensions: Knowledge of Cognition and Regulation of Cognition. It consists of thirty items following 5-point scale. The Metacognitive Awareness Scale was shown to be both valid and reliable, with construct validity established at 0.85 and test-retest reliability at 0.82.

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### *Data Collection*

With the approval of the respective head masters, the researcher conducted personal visits to the schools. The researcher conducted a quick conversation with the learners in order to get the accurate responses before giving them the tool. Learners received important instructions on how to mark their responses in relation to each tool statement.

### *Statistical Techniques Used*

- Basic statistical techniques such as arithmetic mean, median and standard deviation.
- Percentage Analysis.
- Significance of difference between the means (t-test).

### *Data Analysis and Interpretation Data*

When gathering the data, the researcher employed a range of descriptive and inferential statistics. Mean, median, mode, standard deviation, Std. Error of mean, Skewness, Z value and t-tests were used to analyse the data.

### **A) Descriptive Statistics**

In the present research, the distribution of data has been checked with the help of Normal Probability Curve (NPC), Quantile-Quantile plot (Q-Q plot), skewness (Sk), kurtosis (Ku) and z-values. The property of the normal curve is that the mean, median and mode all lie at the same midpoint of the distribution and their values are numerically equal (Garrett, 2009). The range of z-value for checking the normality of data must be within -2.58 to +2.58 (Huck, Cross & Clark, 1986; Ghasemi & Zahediasl, 2012). According to Doane and Seward (2011) the range of z-value in normal distribution comes under -1.96 to +1.96. All the z-values given below in the tables come under the accepted range of z-values. Thus, the data for all the variables fulfilled these criteria and considered as normally distributed.

**Table 2: Descriptive Measures of Metacognitive Awareness Scores of Higher Secondary Learners in West Bengal**

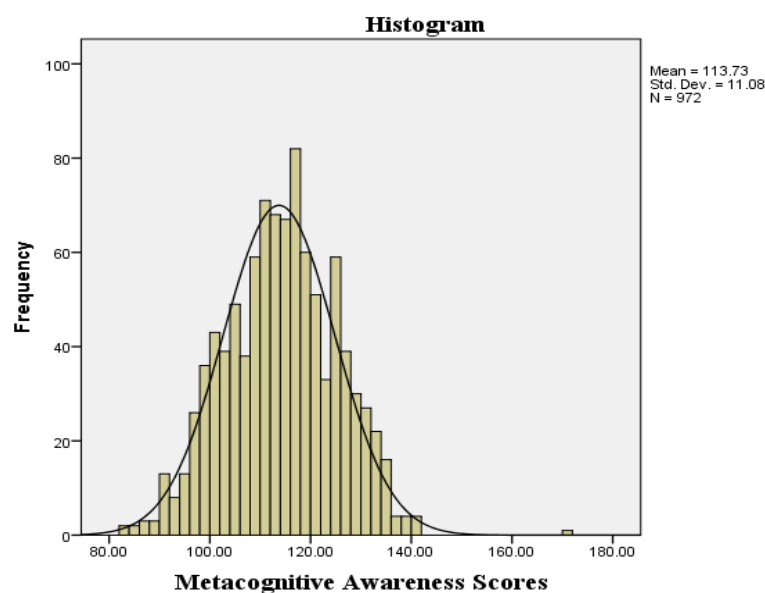
<b>N</b>	<b>Mean</b>	<b>Median</b>	<b>Mode</b>	<b>SD</b>	<b>S.E. of Mean</b>	<b>Sk</b>	<b>Ku</b>	<b>Z Value</b>	<b>Z Standard</b>
972	113.72	114	117	11.07	0.35	.037	.133	-0.54	±1.96

The table (2) represents various descriptive measures of metacognitive awareness scores attained through the application of metacognitive awareness scale. Results indicate that an average learner in the sample is able to secure 113.72 scores in metacognitive awareness scale. The table (2) also reveals that all the measures of central tendency (Mean, Mode and Median) fall more or less to the midpoint of the distribution and are nearer to each other. The normal probability curve is also bilaterally symmetrical, as all the measures of central tendency coincide at the centre of the distribution. Thus, it can be concluded that the distribution of metacognitive awareness scores of higher secondary learners is approximately normal as shown in the figure 1&2.

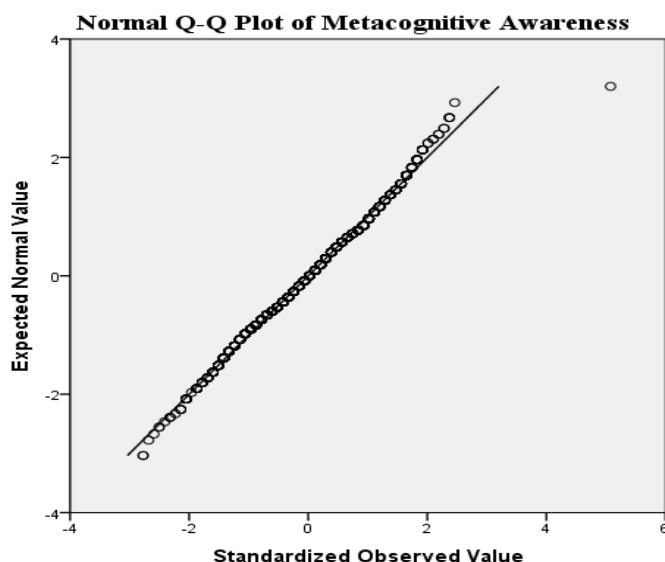
The standard error of mean (0.35) is relatively small, which indicates that the sample mean (113.72) may deviate only 0.35 from the population mean. This indicates that sample mean is relatively close to the true mean of the population. Value of standard deviation is 11.07, which means that the deviation of scores is only 11.07 both on positive and negative sides.

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The Z value of Skewness (-0.54) lying under the standard of Z ( $\pm 1.96$ ) value (Doane and Seward 2011). It shows that the scores of metacognitive awareness are normally distributed as shown in the figure 1&2.



**Figure 1: NPC Showing Metacognitive Awareness Scores of Higher Secondary Learners in West Bengal (N=972)**



**Figure 2: Q-Q Plot Showing Metacognitive Awareness Scores of Higher Secondary Learners in West Bengal (N=972)**

### **Percentage Analysis**

**H<sub>01</sub>** The level of metacognitive awareness in relative percentage with reference to total sample and selected demographic variables viz., gender, locale, academic stream and type of management of schools of higher secondary learners in West Bengal will not vary.

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**Table 3: Percentage of Higher Secondary Learners having different Levels of Metacognitive Awareness**

Levels of Metacognitive Awareness	Total Number (N=972)	Percentage (%)
High Metacognitive Awareness	320	32.9
Average Metacognitive Awareness	318	32.7
Low Metacognitive Awareness	334	34.4

Table 3 shows that, out of 972 higher secondary learners, 320 learners (32.9%) are having high metacognitive awareness level, 318 learners (32.7%) have a moderate level of metacognitive awareness and 334 learners (34.4%) are having low metacognitive awareness.

**Table 4: Percentage of Higher Secondary Learners having different Levels of Metacognitive Awareness with respect to Gender (Boys and Girls)**

Levels of Metacognitive Awareness	Gender			
	Boys (N=454)	Percentage (%)	Girls (N=518)	Percentage (%)
High Metacognitive Awareness	133	29.3	187	32.9
Average Metacognitive Awareness	137	30.2	181	32.7
Low Metacognitive Awareness	184	40.5	150	34.4

Table 4 depicts that 32.9% (187) of the girls' learners held the high metacognitive awareness while 29.3% (133) of boys' learners had high metacognitive awareness. 40.5% i.e. 184 boys' learners had low metacognitive awareness while 34.4% (150) girls learners showed low metacognitive awareness. 30.2% (137) boys' learners and 32.7% (181) girl learners fell into the category of learners who were having average metacognitive awareness respectively.

**Table 5: Percentage of Higher Secondary Learners having different Levels of Metacognitive Awareness with respect to Locale (Rural and Urban)**

Levels of Metacognitive Awareness	Locale			
	Urban (N=545)	Percentage (%)	Rural (N=427)	Percentage (%)
High Metacognitive Awareness	167	30.6	153	32.9
Average Metacognitive Awareness	162	29.7	156	32.7
Low Metacognitive Awareness	216	39.6	118	34.4

Table 5 depicts that 32.9% (153) of the rural learners held the high metacognitive awareness while 30.6% (167) of urban learners had high metacognitive awareness. 34.4% i.e. 118 learners from the rural background had low metacognitive awareness while 32.7% (156) rural learners showed average metacognitive awareness. Similarly, 39.6% (216) and 29.7% (162) learners coming from urban background showed low and average metacognitive awareness respectively.

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**Table 6: Percentage of Higher Secondary Learners having different Levels of Metacognitive Awareness with respect to Academic Stream (Arts and Science)**

Levels of Metacognitive Awareness	Academic Stream			
	Arts (N=520)	Percentage (%)	Science (N=452)	Percentage (%)
High Metacognitive Awareness	154	29.6	166	36.7
Average Metacognitive Awareness	178	34.2	140	31.0
Low Metacognitive Awareness	188	36.2	146	32.3

Table 6 depicts that 36.7% (166) of the science background learners held the high metacognitive awareness while 29.6% (154) of arts background learners had high metacognitive awareness. 32.3% i.e. 146 learners from the science background had low metacognitive awareness while 31% (140) science learners showed average metacognitive awareness. Similarly, 36.2% (188) and 34.2% (178) learners coming from arts background showed low and average metacognitive awareness respectively.

### **B) Inferential Statistics**

**H<sub>02</sub>** There will be no significant difference in the metacognitive awareness between boys and girls higher secondary learners in West Bengal.

The mean and standard deviation of the scores on the metacognitive awareness of higher secondary learners—boys and girls—were computed in order to determine whether the metacognitive awareness of these learners varies with gender. The t-test of non-equivalent groups was used to determine whether there was a significant difference between the two groups' metacognitive awareness scores. The values that were thus acquired are listed in the table below.

**Table 7: Showing Significance of Difference between Means of Scores of Metacognitive Awareness of Higher Secondary Learners in West Bengal based on Gender**

Variable	Group Compared	N	Mean	SD	df	t-value	p-value
Metacognitive Awareness	Boys	454	118.62	13.29	970	1.985	.253
	Girls	518	116.47	10.84			

**Not Significant at 0.01 Level of Significance**

A comparison of the computed 't' value of 1.985 with the critical 't' value of 2.58 at the 0.01 level of significance is shown in the following table. The outcome is therefore not noteworthy. The null hypothesis (H<sub>02</sub>) is upheld, meaning that there was no discernible difference between boys and girls higher secondary learners in West Bengal with regard to their mean views toward metacognitive awareness. This supports the null hypothesis (H<sub>02</sub>).

**H<sub>03</sub>** There will be no significant difference in the metacognitive awareness between urban and rural higher secondary learners in West Bengal.

The mean and standard deviation of the scores on the metacognitive awareness of higher secondary learners in the rural and urban localities were computed in order to determine whether the metacognitive awareness of these learners varies with the locale. The t-test of



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non-equivalent groups was used to determine whether there was a significant difference between the two groups' metacognitive awareness scores. The values that were thus acquired are listed in the table below.

**Table 8: Showing Significance of Difference between Means of Scores of Metacognitive Awareness of Higher Secondary Learners in West Bengal based on Locale**

Variable	Group Compared	N	Mean	SD	df	t-value	p-value
Metacognitive Awareness	Urban	545	113.58	15.18	970	2.689	.000
	Rural	427	111.91	12.34			

**\*\*Significant at 0.01 Level of Significance**

A comparison of the computed 't' value of 2.689 with the critical 't' value of 2.58 at the 0.01 level of significance is shown in the following table. The outcome is therefore significant. The null hypothesis ( $H_{03}$ ) is rejected, meaning that there was discernible difference between urban and rural higher secondary learners in West Bengal with regard to their mean views toward metacognitive awareness. This rejects the null hypothesis ( $H_{03}$ ).

**H<sub>04</sub>** There will be no significant difference in the metacognitive awareness between arts and science higher secondary learners in West Bengal.

The mean and standard deviation of the scores on the metacognitive awareness of higher secondary learners in the arts and science streams were determined in order to determine whether the metacognitive awareness of these learners varies with the academic stream. The t-test of non-equivalent groups was used to determine whether there was a significant difference between the two groups' metacognitive awareness scores. The values that were thus acquired are listed in the table below.

**Table 9: Showing Significance of Difference between Means of Scores of Metacognitive Awareness of Higher Secondary Learners in West Bengal based on Academic Stream**

Variable	Group Compared	N	Mean	SD	df	t-value	p-value
Metacognitive Awareness	Arts	520	121.25	14.45	970	1.756	.326
	Science	452	116.75	10.67			

**Not Significant at 0.01 Level of Significance**

A comparison of the computed 't' value of 1.756 with the critical 't' value of 2.58 at the 0.01 level of significance is shown in the following table. The outcome is therefore not noteworthy. The null hypothesis ( $H_{04}$ ) is upheld, meaning that there was no discernible difference between arts and science higher secondary learners in West Bengal with regard to their mean views toward metacognitive awareness. This supports the null hypothesis ( $H_{04}$ ).

### Major Findings

- The distribution of West Bengal's higher secondary learners in each category for metacognitive awareness is equal.
- The metacognitive awareness of West Bengali higher secondary learners does not significantly differ according to their gender.
- The metacognitive awareness of West Bengali higher secondary learners significantly differs according to locale.

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- Higher secondary learners in West Bengal do not significantly differ in their metacognitive awareness according to their academic stream.

### *Educational Implications*

- In addition to helping learners become more self-aware, metacognitive exercises that prompt them to consider what they know, care about, and can accomplish also provide useful information for their education.
- In order for their metacognitive abilities to improve through successful classroom training, teachers should be aware of the individual differences in each learner's level of metacognitive awareness and should be given instruction that takes these differences into account.
- The study demonstrates that learners' metacognitive abilities are not influenced by gender, locale and academic stream. Therefore, creative teaching strategies and educational exercises that stimulate and raise learners' metacognitive level are required.
- Learners should work on developing their metacognitive skills. Only then can learners evaluate how they learn, how well they perform in class, and adjust their academic performance accordingly.

## CONCLUSION

Regular classroom activities should incorporate activities that promote a strategic and reflective approach to learning. These introspective exercises are an afterthought that detracts from continuous introspection, assessment, and revision as well as strategic work. Teachers can have a long-lasting effect on their learners' learning after they leave the classroom by demonstrating learning and problem-solving techniques and assisting students in identifying their own learning styles and methods.

## REFERENCES

- Abdelrahman, R. M. (2020). Metacognitive awareness and academic motivation and their impact on academic achievement of Ajman University students. *Heliyon*, 6(9), 1-8. <https://www.sciencedirect.com/science/article/pii/S2405844020310367>
- Akbayir, K., & Topçul, I. (2021). The Effect of Middle School Students' Metacognitive Awareness and Logical Thinking Skills on Success in Mathematics Course. *The Asian Institute of Research Education Quarterly Reviews*, 4(1), 617-626. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3836458](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3836458)
- Brown, A. L. (1978). Knowing When, Where, and How to Remember: A Problem of Metacognition. *Advances in Instructional Psychology*, 1, 77-165.
- Dhyani, R., & Maikhuri, R. (2018). A study on the Metacognitive Awareness of Primary School Students. *International Journal of Research in all Subjects in Multi Languages*, 6(2), 56-61. [https://www.rajmr.com/ijrsml/wpcontent/uploads/2018/03/IJRSML\\_2018\\_vol06\\_issue\\_2\\_Eng\\_12.pdf](https://www.rajmr.com/ijrsml/wpcontent/uploads/2018/03/IJRSML_2018_vol06_issue_2_Eng_12.pdf)
- Diaz, I. (2015). Training in Metacognitive Strategies for Students' Vocabulary Improvement by Using Learning Journals. *PROFILE: Issues in Teachers' Professional Development*, 17(1), 87-102. <http://dx.doi.org/10.15446/profile.v17n1.41632>
- Doane, D. P., & Seward, L.E. (2011). *Applied statistics in business and economics* (3rd ed.) McGraw-Hill/Irwin, 154-156.
- Doane, D.P. & Seward, L.E. (2011). Measuring skewness: a forgotten statistic? *J. Statistics Education*, 19, 1-18.

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- Fernandes, A., & Talekar, P.S. (2016). A study of metacognitive awareness among secondary school students in Mumbai. *Paripex - Indian journal of research*, 5(5), 54-55. <https://www.worldwidejournals.com/paripex/article/a-study-of-metacognitive-awareness-among-secondary-school-students-in-mumbai/Mjk2NzM=/?is=1&b1=33&k=9>
- Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive-developmental inquiry. *American Psychologist*, 34(10), 906-911. <https://psycnet.apa.org/record/1980-09388-001>
- Garrett, H. E. (2009). *Statistics in psychology and education*. New Delhi: Paragon International Publishers.
- Ghasemi, A., & Zahediasl, S. (2012). Normality tests for statistical analysis: A guide for non-statisticians. *International Journal of Endocrinology and Metabolism*, 10(2), 486-489. <http://doi.org/10.5812/ijem.3505>
- Hacker, D. J., Dunlosky, J., & Graesser, A. C. (2009). *Handbook of Metacognition in Education*. New York: Routledge.
- Huck, S. W., Cross, T. L., & Clark, S. B. (1986). Overcoming misconceptions about z-scores. *Teaching Statistics*, 8(2), 38-40.
- Jaleel, S., & Premachandran, A. (2016). Study on the Metacognitive Awareness of Secondary School Students. *Universal Journal of Educational Research*, 4(1), 165-172. DOI: 10.13189/ujer.2016.040121
- Karaali, G. (2015). Metacognition in the classroom: Motivation and self-awareness of mathematics learners. *PRIMUS: Problems, Resources, and Issues in Mathematics Undergraduate Studies*, 25(5), 439-452. <https://psycnet.apa.org/record/2015-21588-004>
- Mwangi, E. W., Mwaniki, E. W., & Mutua, J. N. (2024). Metacognition as a Correlate of Academic Achievement Among High School Students in Nairobi County, Kenya. *Interdisciplinary Education and Psychology*, 4(1):2, 1-7.
- Nongtodu, S., & Bhutia, Y. (2017). Metacognition and its relation with academic achievement among college going students of Meghalaya. *International Journal of Education and Psychological Research (IJEPR)*, 6(2), 54-60. <https://ijepr.org/panel/assets/papers/363ij12.pdf>
- Owo, W. J., & Ikwut, E. F. (2015). Relationship between Metacognition, Attitude and Academic Achievement of Secondary School Chemistry Students in Port Harcourt, Rivers State. *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 5(6), 06-12. <https://www.iosrjournals.org/iosr-jrme/papers/Vol-5%20Issue-6/Version-3/B05630612.pdf>
- Schwartz, N.H. (2004). The Influence of Metacognitive Skills on Learners' Memory of Information in a Hypermedia Environment. *Journal of Educational Computing Research*, 31(1), 77-93. DOI: 10.2190/JE7W-VL6W-RNYF-RD4M
- Sonowal, M., & Kalita, M. (2019). Metacognitive Awareness and Academic Achievement of Higher Secondary Level Arts Stream Students of Dibrugarh District, Assam. *SSRG International Journal of Humanities and Social Science (SSRG-IJHSS)*, 6(4), 17-23. <https://www.internationaljournalsssrg.org/IJHSS/paper-details?Id=171>
- Sutarto., Hastuti, I. D., Fuster-Guillen, D., & Garay, Y. P. P. (2022). The Effect of Problem-Based Learning on Metacognitive Ability in the Conjecturing Process of Junior High School Students. *Education Research International*, 1-10. <https://www.hindawi.com/journals/edri/2022/2313448/>
- Veenman, M.V.J., Bernadette, H.A.M., & Afflerbach, P. (2005). Metacognition and learning: conceptual and methodological considerations. *Metacognition Learning*, 1, 3-14. <https://doi.org/10.1007/s11409-006-6893-0>

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***Conflict of Interest***

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