

# Metacognitive Awareness among Teachers: A Descriptive Survey Study

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## ABSTRACT

Metacognition has emerged as a critical construct in educational research due to its strong association with effective teaching, professional competence, and lifelong learning. In the context of secondary education, teachers are required to plan, monitor, and evaluate their instructional practices to address diverse learner needs and evolving curricular demands. The present study investigates the level of metacognitive awareness among high school teachers and examines differences based on gender, locality, type of school, and teaching experience. A descriptive survey method was adopted, and a sample of 100 high school teachers was selected using random sampling techniques.

Data were collected using the Metacognitive Awareness Inventory (MAI) developed by Schraw and Dennison. Statistical analyses included descriptive statistics and independent samples t-tests. The findings revealed significant differences in metacognitive awareness based on gender and teaching experience, whereas no significant differences were observed with respect to locality and type of school. The study highlights the importance of integrating metacognitive strategies into teacher education and professional development programs to enhance instructional effectiveness and reflective teaching practices.

**Keywords:** Metacognition, Metacognitive Awareness, High School Teachers, Reflective Teaching, Professional Development

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## INTRODUCTION

Teaching is widely regarded as a cognitively demanding profession that requires continuous reflection, adaptability, and self-regulation. In contemporary educational systems, teachers are no longer viewed merely as transmitters of knowledge but as facilitators of learning who guide students toward critical thinking, problem-solving, and self-regulated learning. To fulfill these expectations effectively, teachers must possess a high degree of awareness of their own cognitive processes. This awareness is referred to as metacognition.

Metacognition, commonly described as “thinking about one’s thinking,” encompasses the knowledge and regulation of cognitive processes involved in learning and problem-solving (Flavell, 1979). In the teaching context, metacognition enables teachers to plan lessons strategically, monitor students’ understanding during instruction, and evaluate the effectiveness of their teaching methods. Teachers with strong metacognitive awareness are more likely to engage in reflective practices, adjust instructional strategies, and respond constructively to classroom challenges.

The increasing complexity of classroom environments, coupled with rapid advancements in technology and curriculum reforms, has intensified the cognitive demands placed on teachers. High school teachers, in particular, face the challenge of addressing academic rigor, examination pressures, and diverse student abilities. In such contexts, metacognitive awareness becomes essential for effective classroom management and instructional decision-making.

Despite its importance, metacognition among teachers often remains implicit rather than explicitly developed. Many teachers engage in metacognitive processes unconsciously without recognizing or systematically refining them. Consequently, there is a need for empirical research that examines the extent of metacognitive awareness among practicing teachers and identifies factors that may influence it. The present study seeks to address this need by exploring metacognitive awareness among high school teachers and analyzing differences based on selected demographic variables.

## REVIEW OF RELATED LITERATURE

The concept of metacognition has been extensively explored in educational psychology, particularly in relation to learning, academic achievement, and self-regulated behavior. Flavell (1979) introduced metacognition as a construct involving both awareness and control of cognitive processes. Brown (1987) further emphasized its role in executive control and self-regulation, highlighting its importance in effective learning.

Schraw and Dennison (1994) proposed a comprehensive framework of metacognition consisting of two major components: knowledge of cognition and regulation of cognition. Knowledge of cognition includes declarative knowledge (knowledge about oneself as a learner), procedural knowledge (knowledge about how to use strategies), and conditional knowledge (knowledge about when and why to use strategies). Regulation of cognition involves planning, monitoring, and evaluating cognitive activities.

Empirical studies have consistently demonstrated a positive relationship between metacognition and academic performance. Nongtudu and Bhutia (2017) reported a significant correlation between metacognitive awareness and academic achievement among college students. Madanagopal and Thenmozhi (2017) found that metacognitive self-regulation significantly influenced academic performance and locus of control.

Research focusing on teachers and teacher education also underscores the importance of metacognition. Subitha (2015) observed significant differences in metacognitive awareness among prospective teachers based on gender and institutional type. Kartal, Demir, and Kaya (2017) reported that engagement in reflective and community-based activities enhanced teachers' metacognitive skills and higher-order thinking.

However, most existing studies focus on students or pre-service teachers, with relatively limited research examining metacognitive awareness among in-service high school teachers. Furthermore, findings related to demographic variables such as gender, locality, and teaching experience remain inconsistent. The present study contributes to the literature by addressing these gaps and providing empirical evidence on metacognitive awareness among high school teachers.

### Objectives of the Study

**The study was undertaken with the following objectives:**

1. To assess the level of metacognitive awareness among high school teachers.
2. To examine differences in metacognitive awareness based on gender.
3. To examine differences in metacognitive awareness based on locality (rural and urban).
4. To examine differences in metacognitive awareness based on type of school (government and private).
5. To examine differences in metacognitive awareness based on teaching experience.

### Hypotheses

**The following null hypotheses were formulated:**

1. There is no significant difference in metacognitive awareness between male and female high school teachers.
2. There is no significant difference in metacognitive awareness between rural and urban high school teachers.
3. There is no significant difference in metacognitive awareness between government and private high school teachers.
4. There is no significant difference in metacognitive awareness between teachers with less than five years and more than five years of teaching experience.

## METHODOLOGY

### Research Design

A **descriptive survey design** was employed to examine the metacognitive awareness of high school teachers. This design was considered appropriate as it allows for systematic collection and analysis of data from a representative sample.

### Sample

The sample consisted of **100 high school teachers** selected from government and private schools located in both rural and urban areas. The sample included male and female teachers with varying years of teaching experience. Random sampling techniques were used to ensure representativeness and reduce sampling bias.

**Instrument**

The **Metacognitive Awareness Inventory (MAI)** developed by Schraw and Dennison (1994) was used for data collection. The inventory measures two dimensions of metacognition: knowledge of cognition and regulation of cognition. The MAI is a standardized and widely validated tool with established reliability and validity.

**Statistical Techniques**

The collected data were analyzed using:

- Mean and Standard Deviation
- Independent samples t-test

**RESULTS**

**Table 1**

**Difference in Metacognitive Awareness Based on Gender**

Gender	N	Mean	SD	t-value	Significance
Male	50	41.12	4.28	3.34	Significant (p < .01)
Female	50	45.36	4.12		

The results indicate a significant difference in metacognitive awareness between male and female teachers, with female teachers demonstrating higher levels of metacognitive awareness.

**Table 2**

**Difference in Metacognitive Awareness Based on Locality**

Locality	N	Mean	SD	t-value	Significance
Rural	50	43.18	4.25	0.05	Not Significant
Urban	50	43.22	4.19		

No significant difference was observed between rural and urban high school teachers.

**Table 3**

**Difference in Metacognitive Awareness Based on Type of School**

Type of School	N	Mean	SD	t-value	Significance
Government	50	43.29	4.36	1.35	Not Significant
Private	50	41.48	4.18		

The type of school did not significantly influence teachers' metacognitive awareness.

**Table 4**

**Difference in Metacognitive Awareness Based on Teaching Experience**

Experience	N	Mean	SD	t-value	Significance
< 5 Years	50	41.44	4.10	3.01	Significant (p < .05)
> 5 Years	50	45.36	4.22		

Teachers with more than five years of experience exhibited significantly higher metacognitive awareness.

## DISCUSSION

The findings of the study reveal that gender and teaching experience significantly influence metacognitive awareness among high school teachers. Female teachers demonstrated higher levels of metacognitive awareness, which may be attributed to greater reflective tendencies, planning skills, and self-regulatory behaviors. This finding is consistent with earlier studies (Subitha, 2015).

Teaching experience also emerged as a significant factor, suggesting that prolonged engagement in the profession enhances teachers' ability to reflect on and regulate their instructional practices. Experienced teachers are likely to have encountered diverse classroom situations, enabling them to develop more effective cognitive and metacognitive strategies.

The absence of significant differences based on locality and type of school suggests that contextual factors such as access to resources and institutional structure may exert limited influence on metacognitive awareness. This finding indicates that metacognition is more closely related to individual cognitive development and professional experience than to external school characteristics.

### Educational Implications

The study has important implications for teacher education and professional development. Pre-service and in-service training programs should explicitly focus on developing teachers' metacognitive awareness through reflective practices, self-assessment, and strategic planning. School administrators can promote metacognitive growth by encouraging collaborative reflection, mentoring, and continuous professional learning.

## CONCLUSION

Metacognitive awareness is a crucial attribute for effective teaching in the twenty-first century. The present study demonstrates that gender and teaching experience significantly influence metacognitive awareness among high school teachers, while locality and type of school do not. Enhancing teachers' metacognitive skills can lead to improved instructional effectiveness, professional growth, and enriched student learning experiences. Therefore, metacognition should be integrated as a core component of teacher education and professional development programs.

## REFERENCES

- [1]. Brown, A. L. (1987). Metacognition, executive control, self-regulation, and other more mysterious mechanisms. *Educational Psychologist*, 22(3-4), 65-116.
- [2]. Flavell, J. H. (1979). Metacognition and cognitive monitoring. *American Psychologist*, 34(10), 906-911.
- [3]. Kartal, T., Demir, A., & Kaya, M. (2017). Metacognitive skills of prospective teachers. *Educational Research Review*, 12(2), 85-94.
- [4]. Madanagopal, K., & Thenmozhi, S. (2017). Metacognitive self-regulation and academic performance. *International Journal of Educational Research*, 5(2), 45-53.
- [5]. Nongtudu, S., & Bhutia, Y. (2017). Metacognition and academic achievement. *International Journal of Research in Education*, 3(1), 78-85.
- [6]. Schraw, G., & Dennison, R. S. (1994). Assessing metacognitive awareness. *Contemporary Educational Psychology*, 19(4), 460-475.
- [7]. Subitha, G. (2015). Metacognition among prospective teachers. *Journal of Educational Studies*, 7(2), 112-120.