Meta-Cognitive Abilities among Secondary School Teachers of District Budgam

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Abstract—*The aim of the present study was to assess the meta-cognitive abilities of secondary school teachers of District Budgam. The sample for the present study consisted of 100 secondary school teachers of District Budgam in which 50 were male secondary school teachers and 50 were female secondary school teachers. The random sampling technique was used to collect the data and the data were collected from one district of Kashmir valley viz, Budgam district. In order to assess the meta-cognitive abilities among the teachers, the investigator used Schraw, G., & Dennison, R.S., (1994), Assessing Meta-cognitive awareness inventory. The inventory has 52 items with True and False options. The study found that there is a significant mean difference between male and female secondary school teachers on meta-cognitive abilities. Further, found that female secondary school teachers have the better meta-cognitive ability as compared to male secondary school teachers.*

Keywords: *Meta-cognitive, Abilities, Secondary School, Teachers, District Budgam.*

INTRODUCTION

In the field of education, meta-cognition is often referred to as thinking about one's own thinking processes. Yet, meta-cognition also can be understood as a range of executive system processes that are intimately involved in self-assessment, cognitive control, and monitoring, such as controlling the amount of time spent studying and assessing whether we understand a text. Through ongoing monitoring and control of cognition, meta-cognition enables us to recognize the "absence of knowledge" in a given context. Meta-cognitive processes depend on a complex interplay of several distinct brain regions known to be responsible for attention to task, self-awareness, memory, and even individual expectations. Historically, meta-cognition has included the concept of meta-cognitive knowledge, recognizing that learners must have knowledge or awareness of strategies such as rehearsal, use of mnemonics, and content organization, which can all be mobilized during learning.

Meta-cognitive processes have been described and studied for decades within the fields of psychology, cognitive neuroscience, behavioral neurology, educational psychology, education and special education. Articles published in the medical education literature have focused primarily on the role of meta-cognition in clinical reasoning and career-long learning.

Meta-cognition has now been emerged as an important part of teacher preparation programs. The term meta-cognition was introduced by psychologists to refer to knowledge about and control over thinking and learning activities. Meta-cognition involves at least two components:

Teacher education is going through an unprecedented period of change. Across the world, the number and quality of teachers are becoming a key policy concern. This phenomenon affects the richer industrialized nations and those in the process of developing stronger economic infrastructure. Ensuring adequate supply of higher quality teachers is therefore a challenge, as is the expanding task of providing coherent, career- long, professional development, opportunity for teachers. As knowledge increases and technologies emerge, so the status of teachers has to adapt. The scale of demand for teacher education is large. In this context, it is clear that the institutions of teacher education created in the twentieth century will be unable to meet the demands of the twenty first. Any educational effort loses its vitality if it does not give adequate attention and importance to the teachers, one of the most important pillars of education. In this context the investigator made an attempt to find the existing level of Meta-cognitive Awareness in Teaching and Meta-cognitive Teaching Competency of student teachers at secondary level.

Pelin Cetinkaya and Emine Erktin (2002) made an assessment of Meta-cognition and its relationship with reading comprehension, achievement and aptitude. The main purpose of the study was to construct an assessment tool for meta-cognition for Turkish regular and gifted preadolescents. The result showed that the awareness and cognitive strategies subscales of the inventory were significantly and positively correlated with reading comprehension, self-checking and evaluation. Subscales of the inventory were significantly and positively correlated with science course grades of the gifted students. No significant correlations were found between the metacognition scores and the achievement in the Turkish, Science and Mathematics courses.

Cetinkaya & Erktin (2002) had also developed meta-cognition inventory for the sixth graders. Subscales of the inventory were Evaluation, Self-checking, Awareness & Cognitive Strategies. Ahmet Tosun & Metehen Irak (2008) had translated a Meta-cognition Questionnaire-30 from English to Turkish. The original questionnaire was prepared by Cartwright-Hatton and Wells in 1997, which consisted of five factors named 1) Cognitive Confidence, 2) Positive Beliefs, 3) Cognitive Self-consciousness, 4) Uncontrollability and Danger and 5) Need to control thoughts. This questionnaire was standardized on university students.

Jayapraba and Kanmani (2013) conducted a study, ―Meta-cognitive awareness in science classroom of higher secondary students.‖ According to them, meta-cognition is the awareness one has about his/her thinking process and how he/she is able to control these processes. This study aims at examining the effects of inquiry based learning and cooperative learning on meta-cognitive awareness in science class room. A quasi experimental design involving three groups namely, two treatment groups- inquiry based learning and cooperative learning and control group was adopted. Standardized tool developed by

Shoaakazemi, Javid, Keramati & Tazekand (2013) investigated the relationship between happiness, meta cognitive Skills and academic achievement of students at state universities in Tehran. Data indicated significantly positive relation between 3 variable ($p \leq 0.05$) in which happiness could predict academic achievement & problem- solving, self-regulation of Students and moreover, keep them away from depression and other mental and physical disorders.

OBJECTIVES FOR THE PRESENT STUDY

1. To assess the levels of meta-cognitive abilities among the secondary school teachers of District Budgam.

2. To compare the male and female secondary school teachers on their meta-cognitive abilities.

HYPOTHESIS

1. There is no significant difference between male and female secondary school teachers on their meta-cognitive abilities.

SAMPLE

The sample for the present study consisted of 100 secondary school teachers of District Budgam in which 50 were male secondary school teachers and 50 were femalesecondary school teachers. The random sampling technique was used to collect the data and the data were collected from one district of Kashmir valley viz, Budgam district.

TOOLS USED

In order to assess the meta-cognitive abilities among the teachers the investigator was used Schraw, G., & Dennison, R.S., (1994), Assessing Meta-cognitive awareness inventory. The inventory has 52 items with True and False options.

ANALYSIS AND INTERPRETATION OF THE DATA

After collecting the data from the present study, percentage statistics and t-test was applied for the present study to make the tabulation form as under:

Table 1:Overall Frequency distribution level of Meta-Cognitive Abilities among Secondary School Teachers

Levels of Meta-cognitive abilities	Secondary School Teachers	
	N	%age
Low	8	8.0
Average	71	71.0
High	21	21.0
Total	**100**	**100.0**

The above table shows the overall frequency level of meta-cognitive abilities among secondary school teachers. The table reflected that 8% of secondary school teachers fall low level of meta-cognitive abilities, 71% secondary school teachers fall average level of meta-cognitive abilities and 21% secondary school teachers fall high level of meta-cognitive abilities.

Table 2: Frequency distribution level of Meta-Cognitive Abilities among Secondary School Teachers with respect to gender

Levels of Meta-cognitive abilities	Male		Female	
	N	%age	N	%age
Low	4	8.0	4	8.0
Average	37	74.0	34	68.0
High	9	18.0	12	24.0
Total	**50**	**100.0**	**50**	**100.0**

The above table shows the frequency distribution level of meta-cognitive abilities among secondary school teachers with respect to their gender-wise. The table shows that 8% male secondary teachers were a low level of Meta-cognitive abilities, 74% male secondary teachers were the average level of Meta-cognitive abilities and 18% male secondary teacherswere a high level of Meta-cognitive abilities. While, 8% femalessecondary teachers were the low level of Meta-

cognitive abilities, 68% females secondary teachers were the average level of Meta-cognitive abilities and 24% females secondary teachers were a high level of Meta-cognitive abilities.

Table 3: Mean difference between male and female secondary school teachers on their Meta-cognitive Abilities

Gender	N	Mean	Std. Deviation	t-value	Level of Significance
Male	50	44.24	9.277	2.45	Significant at 0.05 level
Female	50	46.74	8.194		

The above table shows the significant difference between male and female secondary school teachers on their meta-cognitive abilities. The table shows that there is a significant mean difference between male and female secondary school teachers on meta-cognitive abilities and the t-value (2.45) which is significant at 0.05 level. However, the table indicates that the mean favours female secondary school teachers, which implies that female secondary school teachers have a better meta-cognitive ability as compared to male secondary school teachers.

CONCLUSION

The following conclusions have been put-forth for the present study:

1. It was found that 8% of secondary school teachers fall low level of meta-cognitive abilities, 71% secondary school teachers fall average level of meta-cognitive abilities and 21% secondary school teachers fall high level of meta-cognitive abilities.

2. It was found that 8% male secondary teachers were a low level of Meta-cognitive abilities, 74% male secondary teachers were the average level of Meta-cognitive abilities and 18% male secondary teachers were a high level of Meta-cognitive abilities.

3. It was found that 8% females secondary teachers were the low level of Meta-cognitive abilities, 68% females secondary teachers were the average level of Meta-cognitive abilities and 24% females secondary teachers were a high level of Meta-cognitive abilities.

4. It was found that there is a significant mean difference between male and female secondary school teachers on meta-cognitive abilities.

5. It was found that female secondary school teachers have a better meta-cognitive ability as compared to male secondary school teachers.

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