

# MODIFICATIONS OF TEACHER EDUCATION: THE CONSEQUENCE OF META-COGNITION TO PROSPECTIVE TEACHERS

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Revised and Accepted: 14 March 2020

## ABSTRACT

In this paper the investigator to identify the consequence of Metacognition in different forms. It comprises information around when and anywhere to use specific plans for knowledge or for resolving difficulties. In the study, the researcher has used the survey method to study the level of metacognition of the B.Ed. students. The investigator has used a simple random sampling probability technique for selecting the sample and randomly designated 15 B.Ed., colleges located in Sivaganga District. Metacognition Inventory (MCI) developed by Investigators (2019).The author of the tool established the reliability of the tool. The reliability of the tool was strong-minded by two approaches. Cronbach alpha coefficient and test-retest method. The correlation coefficient was obtained for two sets of scores. It was computed to be 0.91. There is a important change between day scholar and hostel Prospective educators in their knowledge of cognition, regulation of cognition and metacognition.

**KEYWORDS:** Teacher Education, Meta-Cognition and Prospective Teachers.etc.

## INTRODUCTION

Metacognition can take various structures in cognitive science. It consolidates data about when and where to use explicit methods for learning or for dealing with issues. Meta-memory, an individual's data about memory is an especially huge sort of metacognition. Meta memory consolidates general data about memory. For instance, understanding that affirmation tests are less difficult than survey tests. It is like manner incorporates data nearby one's particular remembrance, for instance, perceptive whether you have perused sufficient for a best in class test. The most well-known qualification in metacognition isolates metacognitive information from abilities. The previous alludes to a person's decisive information about the communications between individual, errand, and system attributes (Flavell, 1979). Additional proof of such psychological observing and key conduct originates from investigations of understanding checking. Bread cook (1979) discovered that numerous understudies who unconsciously read sections containing confusions.

**METACOGNITION**

Metacognition refers to familiarity with one's own contemplations. It has as of late become a mainstream subject for guessing and observational research and is of premium since it suggests that models of educating may be isolated that lead to more powerful learning than the general level. As of now accomplished in schools both hypothesis and research are hampered by troubles that have been experienced in characterizing metacognition and are evaluating the level of it in a person. Analysts have recognized lot progressively explicit segments of metacognition; be that as it may, they appear to differ about the idea of those segments. For example, Meta-memory is frequently just concentrated from a revelatory information point of view, while observing procedures are vigorously associated with producing this information. Correspondingly, Feeling of Knowing and Judgment of Learning have been researched as metacognitive procedures (driven by metacognitive encounters; Efklides and Vauras, 1999), or rather as item quantifies (i.e., the information created). At long last, restrictive information about Fwhat to do when\_ is now and then considered as metacognitive mindfulness and decisive information (Alexander, Schallert and Hare, 1991; Desoete and Roeyers, 2003; Schraw and Moshman, 1995), or as being characteristically part of metacognitive abilities (in accordance with the psychological period of Anderson\_s ACT-R model; cf. Veenman, 1998). Clearly, increasingly exact scientific classifications of metacognitive information and aptitudes are required.

**REVIEW OF LITERATURE**

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive–developmental inquiry. Studies propose that small kids are very restricted in their insight about subjective wonders—or in their metacognition—and do generally small observing of their own memory, cognizance, and other intellectual ventures. Metacognitive information is one's put away information or convictions about oneself as well as other people as psychological specialists, about undertakings, about activities or procedures, and about how all these collaborate to influence the results of such a scholarly venture. Metacognitive encounters are cognizant subjective or full of feeling encounters that happen during the venture and concern any part of it—regularly, how well it is going. Examination is expected to depict and clarify unconstrained formative acquisitions here and find powerful methods of showing metacognitive information and intellectual observing abilities.

Adrian Wells (1995) Meta-Cognition and Worry: A Cognitive Model of Generalized Anxiety Disorder. A meta-psychological order and examination of components adding to the advancement of tricky concern is introduced. Measurements of meta-convictions, meta-stress, psychological awareness, and techniques can be recognized. A psychological model of Generalized Anxiety Disorder is progressed dependent on this structure in which GAD results from an association between the roused utilization of stress as an adapting system, negative evaluation of stress, and stress control endeavors. These components result from mixes of broken meta-convictions and contribute to emotionally lessen subjective control. The model presents new suggestions for a psychological treatment of GAD, and these are delineated with a solitary case treatment study

**METACOGNITIVE STRATEGIES FOR SUCCESSFUL LEARNING****Awareness**

- i) Determinedly recognize.
- ii) Outline the culture goal.
- iii) Contemplate the task requirements.
- iv) Consider your personal resources.
- v) Determine the presentation will be evaluated.
- vi) Reflect your incentive level.
- vii) Control your level of nervousness.

**Planning**

- i) Guesstimate the time essential to comprehensive the task.
- ii) Proposal study stint into your calendar set imports.
- iii) Establish ingredients.
- iv) Necessary steps to learn by using strategies

**Observing and Likeness**

- i) Reproduce on the learning process
- ii) Screen own learning.
- iii) Deliver own feedback.
- iv) Keep attentiveness and incentive high

**Psychological processes involved in inducing achievement motivation**

The psychological processes involved in inducing achievement motivation among students are compiles but they are inter-related. The process needful can be discussed under the following three heads.

**Creating cognitive structure**

The first step is that of making a specific reasoning construction a being's behavior is directed by his insight of the biosphere in which he exists. Act is occupied on the facts of the situation and the facts are colored by his beliefs and opinions, the private may so to say that he maintains the world.

**Creating a motivational structure**

The second step is the creation of a motivational structure which means the teacher must create in the minds of pupil needs, interests, and purpose which will energize learning and achieving behavior. If they are persuaded to accept them as worthwhile and virtual, they will work for their achievement and fulfillment.

**Creating Behaviour structure**

This is the third step in the process of induction of motives. Generally, we see in the classroom that some of the students are very active and interested in classroom activities while on the other hand, a few of them are always in a mood of laziness and passively sitting in the class. These two different behaviors of the students at the same time disturb the concentration of the teacher and he tries to trace the reasons behind these two kinds of behaviors.

**Importance of the Study**

The determination of education to give the knowledge and skills necessary to make informed and reasonable decisions. The concepts are difficult to understand without proper basic skills. The proper basic skills can be acquired through metacognition. Metacognition is cognizance about insight. It is the attention to one's own contemplations. The reasoning capacity is higher-request perception. It is the attention to one's own considerations. The reasoning capacity is the higher request of the psychological capacity of people. It is the tricky demonstration, which can be the understudies in determination, assessment, and modification, of intellectual undertakings, objectives and methodologies. The metacognitive information enveloped all the data about a proposition task that is accessible to an individual.

**OBJECTIVES****General Objectives**

1. To discover the level of metacognition of the Prospective teachers.

**Specific Objectives**

1. To determine whether there is any important variance between male and female Prospective teachers in their knowledge of cognition, regulation of cognition and metacognition.
2. To determine whether there is any important variance between Tamil and English medium Prospective teachers in their knowledge of cognition, regulation of cognition and metacognition.
3. To determine whether there is any important variance between rural and urban Prospective teachers in their knowledge of cognition, regulation of cognition and metacognition.
4. To determine whether there is any important variance between day scholars and hostel Prospective teachers in their knowledge of cognition, regulation of cognition and metacognition.

**Null Hypothesis**

1. There is no significant difference between male and female Prospective teachers in their knowledge of cognition, regulation of cognition and metacognition.

2. There is no significant difference between Tamil and English medium Prospective teachers in their knowledge of cognition, regulation of cognition and metacognition.
3. There is no significant difference between rural and urban Prospective teachers in their knowledge of cognition, regulation of cognition and metacognition.
4. There is no significant difference between day scholar and hostel Prospective teachers in their knowledge of cognition, regulation of cognition and metacognition.

#### **Method4**

In the present study, the investigator has used the survey technique to identify the level of metacognition of the B.Ed. students. The selection of the process is based on the nature of the problem selected and the kind of data necessary for its solution. The selection of methodology describes in detail the activities of research.

#### **Population for the Study**

The population consisted of all the Prospective teachers studying in B.Ed., Colleges in Sivaganga District affiliated to Tamilnadu Teachers Education University, Chennai.

#### **Sample**

The researcher has used a simple random sampling probability technique for selecting the sample. The investigator aimlessly designated 15 B.Ed., colleges located in Sivaganga District affiliated to TNTEU, Chennai

#### **TOOLS USED ON THE PRESENT STUDY**

The data were collected in order to study the above-mentioned objectives by using the following tools.

1. Metacognition Inventory (MCI) developed by Investigators (2019).

#### **Validity**

The author of the tool established the validity of the tool. To legitimacy of the device. The instrument was given to a board of specialists comprising of the various universities every master was approached to show how much every thing surveyed the metacognition of the respondents. The level of understanding of specialists on every thing showed the legitimacy of the device revisions were made in the things of the device as per their recommendations. As indicated by their perspectives, the apparatus has acceptable substance legitimacy.

#### **Reliability**

The researcher of the tool set up the unwavering quality of the questionnaire. The unwavering quality of the test was controlled by two techniques. Cronbach alpha coefficient and test-retest technique.

Table 1

**CRONBACH ALPHA CO-EFFICIENT AND TEST-RETEST**

Sl.No.	Method	N	Reliability Co-efficient
1.	Cronbach alpha co-efficient	700	0.8
2.	Test-retest method	300	0.82

The individual needs to know the unwavering quality of the device in the current circumstance. So the specialist haphazardly chooses 50 B.Ed. understudies in Shantha College of Education for Women, Sivaganga and controlled the instrument. The time taken for finishing the device was noted. The reactions gathered from the understudies were scored by the specialist. Following 15 days a similar instrument was regulated to similar respondents. These reactions were scored. The relationship coefficient was acquired for two arrangements of scores. It was processed to be 0.91. Along these lines the unwavering quality of the instrument was built up by the examiner and measurement savvy dependability of the apparatus is given underneath.

**Testing the Hypothesis**

**Objectives**

Table 2

**LEVEL OF METACOGNITION OF THE PROSPECTIVE TEACHERS**

Dimensions of Metacognition	Prospective teachers					
	Low		Moderate		High	
	N	%	N	%	N	%
Knowledge of cognition	68	22.7	163	54.3	69	23.0
Regulation of cognition	71	23.7	161	53.7	68	22.7
Metacognition	67	22.3	160	53.3	73	24.3

It is gathered from the above table that 22.7% of the Prospective educators have low, 54.3% of them have moderate and 23.0% of them have an elevated level of information on cognizance. 23.7% of the Prospective educators have low, 53.7% of them have moderate and 22.7% of them have a significant level of guideline of comprehension. 22.3% of the Prospective instructors have low, 53.3% of them have moderate and 24.3% of them have an elevated level of metacognition.

**Null Hypothesis 1**

There is no significant difference between male and female Prospective teachers in their knowledge of cognition, regulation of cognition and metacognition.

**Table 3**

**DIFFERENCE BETWEEN MALE AND FEMALE PROSPECTIVE TEACHERS  
IN THEIR METACOGNITION**

Dimensions of Metacognition	Male (N = 92)		Female (N = 208)		Calculated 't' value	Remarks at 5% level
	Mean	S.D	Mean	S.D		
Knowledge of cognition	40.79	6.50	38.2	5.23	3.57	S
Regulation of cognition	46.6	7.02	44.1	6.25	3.03	S
Metacognition	87.4	12.2	82.4	10.3	3.64	S

(At 5% level of significance the table value of 't' is 1.96)

It is construed from the table that there is a huge contrast among male and female Prospective educators in their insight into comprehension, guideline of discernment and metacognition. While contrasting the mean scores of male and female Prospective instructors the male understudies (M = 40.7) are superior to the female understudies (M = 38.2) in their insight into perception. While looking at the mean scores of male and female Prospective educators the male understudies (M = 46.6) are superior to the female understudies (M = 44.1) in their guideline of comprehension. While contrasting the mean scores of male and female Prospective educators the male understudies (M = 87.4) are superior to the female understudies (M = 87.4) is superior to the female understudies (M = 82.4) in their metacognition.

**Null Hypothesis 2**

There is no significant difference between Tamil and English medium Prospective teachers in their knowledge of cognition, regulation of cognition and metacognition.

Table 4

**DIFFERENCE BETWEEN TAMIL AND ENGLISH MEDIUM PROSPECTIVE TEACHERS IN THEIR METACOGNITION**

Dimensions of Metacognition	Tamil (N = 92)		English (N = 208)		Calculated 't' value	Remarks at 5% level
	Mean	S.D	Mean	S.D		
Knowledge of cognition	38.5	6.41	39.4	5.13	1.49	NS
Regulation of cognition	43.9	6.55	45.7	6.52	2.36	S
Metacognition	82.4	11.6	85.2	10.6	2.16	S

(At 5% level of significance the table value of 't' is 1.96)

It is derived from the table that there is no noteworthy contrast among Tamil and English medium Prospective educators in their insight into comprehension. However, there is a critical distinction among Tamil and English medium Prospective educators in their guideline of perception and metacognition. While contrasting the mean scores of Tamil and English medium Prospective instructors the English medium understudies (M = 45.7) is superior to the Tamil medium understudies (M = 43.9) in their guideline of cognizance. While looking at the mean scores of Tamil and English medium Prospective instructors the English medium understudies (M = 85.2) is superior to the Tamil medium understudies (M = 82.4) in their metacognition.

**Null Hypothesis 3**

There is no significant difference between rural and urban Prospective teachers in their knowledge of cognition, regulation of cognition and metacognition.

Table 5

**DIFFERENCE BETWEEN RURAL AND URBAN PROSPECTIVE TEACHERS IN THEIR METACOGNITION**

Dimensions of Metacognition	Rural (N = 144)		Urban (N = 156)		Calculated 't' value	Remarks at 5% level
	Mean	S.D	Mean	S.D		
Knowledge of cognition	39.6	6.28	38.4	5.19	1.88	NS

Regulation of cognition	44.8	7.33	44.9	5.84	0.22	NS
Metacognition	84.5	12.3	83.4	9.97	0.83	NS

(At 5% level of significance the table value of 't' is 1.96)

It is derived from the table that there is no huge distinction among provincial and urban Prospective instructors in their insight into perception, guideline of discernment and metacognition.

**Null Hypothesis 4**

There is no significant difference between day scholars and hostel Prospective teachers in their knowledge of cognition, regulation of cognition and metacognition.

**Table 6**

**DIFFERENCE BETWEEN DAY SCHOLAR AND HOSTEL PROSPECTIVE TEACHERS IN THEIR METACOGNITION**

Dimensions of Metacognition	Day scholar (N = 197)		Hostel (N = 103)		Calculated 't' value	Remarks at 5% level
	Mean	S.D	Mean	S.D		
Knowledge of cognition	38.4	5.89	40.1	5.38	2.36	S
Regulation of cognition	44.2	6.64	46.2	6.30	2.60	S
Metacognition	82.6	11.1	86.3	10.9	2.75	S

(At 5% level of significance the table value of 't' is 1.96)

It is gathered from the table that there is a noteworthy contrast between day researcher and inn Prospective educators in their insight into comprehension, guideline of cognizance and metacognition. While contrasting the mean scores of day researcher and lodging Prospective instructors, the inn (M = 40.1) is better than the day researcher understudies (M = 38.4) in their insight into discernment. While looking at the mean scores of day researcher and inn Prospective instructors, the inn understudies (M = 46.2) are better than the day researcher understudies (M = 44.2) in their guideline of cognizance. While looking at the mean scores of day researcher and lodging Prospective educators, the inn understudies (M = 86.3) are better than the day researcher understudies (M = 82.6) in their metacognition.

## Results and findings

It is gathered from the above table that 22.7% of the Prospective educators have low, 54.3% of them have moderate and 23.0% of them have an elevated level of information on cognizance. 23.7% of the Prospective educators have low, 53.7% of them have moderate and 22.7% of them have a significant level of guideline of comprehension. 22.3% of the Prospective instructors have low, 53.3% of them have moderate and 24.3% of them have an elevated level of metacognition.

It is construed from the table that there is a huge contrast among male and female Prospective educators in their insight into comprehension, guideline of discernment and metacognition. While contrasting the mean scores of male and female Prospective instructors the male understudies ( $M = 40.7$ ) are superior to the female understudies ( $M = 38.2$ ) in their insight into perception. While looking at the mean scores of male and female Prospective educators the male understudies ( $M = 46.6$ ) are superior to the female understudies ( $M = 44.1$ ) in their guideline of comprehension. While contrasting the mean scores of male and female Prospective educators the male understudies ( $M = 87.4$ ) are superior to the female understudies ( $M = 87.4$ ) is superior to the female understudies ( $M = 82.4$ ) in their metacognition.

It is derived from the table that there is no noteworthy contrast among Tamil and English medium Prospective educators in their insight into comprehension. However, there is a critical distinction among Tamil and English medium Prospective educators in their guideline of perception and metacognition. While contrasting the mean scores of Tamil and English medium Prospective instructors the English medium understudies ( $M = 45.7$ ) is superior to the Tamil medium understudies ( $M = 43.9$ ) in their guideline of cognizance. While looking at the mean scores of Tamil and English medium Prospective instructors the English medium understudies ( $M = 85.2$ ) is superior to the Tamil medium understudies ( $M = 82.4$ ) in their metacognition.

It is derived from the table that there is no huge distinction among provincial and urban Prospective instructors in their insight into perception, guideline of discernment and metacognition.

It is gathered from the table that there is a noteworthy contrast between day researcher and inn Prospective educators in their insight into comprehension, guideline of cognizance and metacognition. While contrasting the mean scores of day researcher and lodging Prospective instructors, the inn ( $M = 40.1$ ) is better than the day researcher understudies ( $M = 38.4$ ) in their insight into discernment. While looking at the mean scores of day researcher and inn Prospective instructors, the inn understudies ( $M = 46.2$ ) are better than the day researcher understudies ( $M = 44.2$ ) in their guideline of cognizance. While looking at the mean scores of day researcher and lodging Prospective educators, the inn understudies ( $M = 86.3$ ) are better than the day researcher understudies ( $M = 82.6$ ) in their metacognition.

### Suggestions for Further Research

The investigator has offered the following suggestions for further research

1. A study may be conducted on metacognition and soft skills of Prospective teachers.
2. A study may be conducted on metacognition and techno-pedagogical skills of Prospective teachers.
3. Influence of metacognition and multicultural behavior of Prospective teachers.

### CONCLUSION

The imminent instructor's metacognition may start in educator self-referential idea related with individual qualities or it might be activated adaptively by basic observing of instructing explicit scenes; however it might likewise be connected to instructors' more extensive reflection on outer factors, for example, sociocultural acts of the neighborhood instructing and learning network. A portion of the constraints of our investigation additionally offer associations from our discoveries to advance roads for research.

#### Acknowledgment:

This article has been written with the financial support of RUSA- Phase 2.0 grant sanctioned vide Letter No. F. 24-51 / 2014-U, Policy (TNMulti-Gen), Dept. of Edn. Govt. of India, Dt. 09.10.2018.

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