A Study on Metacognitive Awareness and Academic Grit among B.Ed. Trainees

[1]P. Sumitha, [2]Rita Rani Mandal

[1]*Ph.D., Scholar, Lady Willingdon Institute of Advanced Study in Education, Chennai-5,*
psumitha1980@gmail.com
[2]*Assistant Professor, Department of Education, Lady Willingdon Institute of Advanced Study in Education,*
Chennai-5.

Abstract

In this study on "Metacognitive Awareness and Academic Grit among B.Ed. trainees". A sample of 300 teacher trainees studying in B.Ed. colleges were taken for this study. The B.Ed. colleges are three different categories namely Government, Government Aided and Self finance colleges of Chennai, affiliated with Tamil Nadu Teachers Education University. In order to test the formulated hypotheses Metacognitive Awareness Inventory (MAI) by Schraw. G and Dennison. R. S. (1994) and the Revised Turkish Version of Grit scale by Akin et al., (2011) were used. The result revealed that i. there is a significant difference in Metacognitive Awareness among B.Ed. trainees with respect to gender, ii. There is no significant difference in Metacognitive Awareness among B.Ed. trainees with respect to Government, Government Aided and Self finance Colleges of Education, iii. There is a significant difference in Academic Grit among B.Ed. trainees with respect to Tamil and English as the medium of instruction, iv. There is a significant difference in Academic grit among B.Ed. trainees with respect to below Rs. 1,00,000 and above Rs. 1,00,000 as family annual income.

Keywords: Metacognitive Awareness, Academic Grit, Government, Government Aided, Self-finance college, B.Ed. Trainees.

INTRODUCTION

"Education is a most powerful weapon which you can use to change the world".

- A.P.J. Abdul Kalam.

In this spinning world, every individual is blessed with unique character. In this dynamic world, every individual strives to achieve in their profession. Education is a tool to lead an individual to grow towards their goals and give an ample development in physical, intellectual, and spiritual as well as the changes in three broad domains respectively cognitive, affective, and psychomotor. Nowadays, when compared to rote memory, the concept of comprehension is currently lagging behind. Memory just stores the information despite real understanding of the concept. To avoid this situation, educational psychologists assess how the information is stored, processed, and produced for specific purposes. As the result, the new concept of metacognition is important for the teacher as well as the students.

Learners are expected to select courses based on their preferences and propensities sustaining their studies without any struggle and with the self-satisfaction of ensuring superior academic achievement. The purpose of self-regulation is to enhance the learners' self-reliant strategies. Learners should have been focused on establishing strategies based upon previous and personalised estimations of educational needs and allowing them to take responsibility for their learning. As a result, the present study

aimed to investigate the Metacognitive Awareness and Academic Grit among B.Ed. Trainees.

Metacognitive Awareness and Academic Grit

Metacognition is derived from the origin 'meta' means beyond. Metacognition is simply defined as "thinking about thinking" and "knowing about knowing". Flavell (1976, p 232) defines Metacognition as, "one's knowledge concerning one's own cognitive techniques or anything related to them, e.g., the learning relevant properties of information or data". Many researchers (Schraw, Metcalfe, 1994; Brown, 1987; Flavel, 1979, 1987) measured Metacognition as two dimensions "knowledge about cognition" and "Regulation of cognition". Angela Lee Duckworth, defines, "Grit is defined as passion and perseverance essential for the achievement of long term goals; it can involve working through challenges, over a long period of years, against tremendous odds, despite periods of prolonged plateaued progress". Learners who one be aware of their self-regulations become grittier. This paper aims to study on Metacognitive Awareness and Academic Grit among Teacher Trainees.

The learners must be aware of their own strengths and learning capability. Metacognition involves "knowledge and control of self" and "knowledge and process of control". Garner (1987) says, "Metacognition differs from cognitive skills, cognitive skills are necessary to perform a task, while Metacognition is necessary to understand how the task was performed". Different kinds of Metacognitive Awareness include Declarative, Procedural, and Conditional knowledge (Jacobs and paris, 1987). Declarative knowledge is knowledge "about" everything that. Knowing "how" to perform things is referred to as Procedural knowledge. Knowing the "why" and "when" components of cognition is referred to as Conditional knowledge.

Metacognitive Awareness and development create the path for successful learning, it's critical to investigate how students might be taught to better employ their cognitive resources through metacognitive control. Grit is one of the Metacognitive component that the learners can explore to achieve their long-term goals and overcome obstacles in their academics.

Though, just ten percent of undergraduate students do not complete their bachelor's degrees, because of poor academic Grit (Almeida, D. J. 2016). Additional elements connected to students' meta-cognitive skills and qualities, according to a growing body of evidence, impact to college student's chances of success. In the context of higher education, one of the Metacognitive element called as Grit. The investigator examines the literature on grit and related constructions and ideas, and proposes three components for the optimal sort of grit: (a) intrinsic interest and enthusiasm, (b) preference for long-term goals, and (c) view of barriers as doable. Assessment issues are examined, as well as interventions and contextual factors that encourage or inhibit grit development in learners.

Reviews of Literature

Strayhorn, T.L (2014) This study tests the importance of a non-cognitive trait, grit, in predicting grades for a sample of Black males attending a predominantly White institution. Using multivariate statistics and hierarchical regression techniques, results suggest that grit is positively related to college grades for Black males and those background traits, academic factors, and grit explain 24 % of the variance in Black male's college grades. Grit, alone, added incremental predictive validity over and beyond traditional measures of academic success such as high school grade point average and American College Test scores.

Das, A. (2015) Relationship between metacognitive ability and academic achievement of B. Ed. students-a study The purpose of this study is to assess the Met cognitive ability of B. Ed students and its relation to their academic achievement. A sample of 300 B. Ed Students has been selected randomly from six teacher training colleges of Kamrup district of Assam. Metacognitive

Inventory, constructed and standardized by Punita Govil has been used for the collection of data. A significant positive relationship has been observed between Metacognitive ability and academic achievement of B. Ed students.

Wolters, C. and Hussain, M. (2015) examines the Grit and Metacognitive Awareness and Academic achievement of University students. An ethnically assorted example of 213 undergrads finished an online self-report review that incorporated the Grit Short scope (Duckworth and Quinn Journal of Character Assessment, 91(2), 166–174, 2009), seven pointers of SRL and their past and present scholastic accomplishment. Results demonstrated that one part of coarseness, the diligence of exertion, was a reliable and versatile indicator for all markers of SRL including esteem, self-adequacy, psychological, metacognitive, inspirational, time and study climate the board systems, what's more, dawdling. The second part of coarseness, consistency of interest, was connected uniquely with the last two aspects of SRL. Tirelessness of exertion anticipated accomplishment previously, however not afterwards, representing SRL; consequently, understudies' commitment in SRL may fill in as an intervening pathway through which this part of coarseness is related with improved scholastic results. Interestingly, consistency of interest showed no connection to accomplishment. Ramifications of the discoveries for extra exploration and guidance are talked about.

Ruttencutter and Gwendolyn (2018) study on the relationship with Academic Achievement include Metacognitive Awareness and Grit among research scholars. For this study there are 118 scholars were selected as the sample from the college of education, health and human science. The result revealed that a strong positive relationship found between Self-regulated Learning and Grit (r=.70, p<0.001). Self-regulated Learning were significantly positive relation (r=.23, p=.013) with Age. A significant difference found between Gender, as women scholars were more Grittier than male scholars.

Statement of the Problem

The problem of the present study stated as, "A Study on Metacognitive Awareness and Academic Grit among B.Ed.".

Objectives of the Study

1.   To find out the level of Metacognitive Awareness among B.Ed. trainees.

2.   To find out the level of Academic Grit among B.Ed. trainees.

3.   To find out there is any significant difference between the mean score of Metacognitive Awareness among B.Ed. trainees with respect to Gender, Type of college, Type of family, Locality, Medium of instruction, Family annual income.

4.   To find out there is any significant difference between the mean score of Academic Grit among B.Ed. trainees with respect to Gender, Type of college, Type of family, Locality, Medium of instruction, Family annual income.

Hypotheses of the Study

1.   There is no significant difference in Metacognitive Awareness among B.Ed. trainees with respect to gender.

2.   There is no significant difference in Metacognitive Awareness among B.Ed. trainees with respect to type of college.

3.   There is no significant difference in Academic Grit among B.Ed. trainees with respect to Medium of instruction.

4.   There is no significant difference in Academic Grit among B.Ed. trainees with respect to family annual income.

Need and Significance of the Study

Grit has been demonstrated to be a significant predictor of academic success in many research studies (Duckworth et al., 2007). Students must be "conscious meta-strategic level of higher order thinking" (Zohar and David 2009). By the use of Metacognitive Awareness, teaching and learning becomes deliberate and active, who is conscious of

his/her learning, self-regulates the degree of understanding, explain the material themselves and rework the concepts to ensure his/her mastery. The application of Metacognitive Awareness pave the way for the development of consistent interest and persevere their effort throughout their academics. An experts, who are excellence in their fields automatically engage in Metacognitive Awareness. Teaching through "Metacognitively" facilitates teaching and learning in the class room while much better preparing them for life than standard methods. Self regulation makes an individual more grittier. The result of the study also reveals that Metacognitive Awareness and Academic Grit are positively related with each other.

Methodology

In this study, the investigator employed the survey method. Survey method used to collecting and analysing data obtained from the large number of participants through the questionnaire.

Sample

In this study, there are 300 teacher trainees as the sample from B.Ed. colleges namely Government, Government- Aided and Self-finance college of education in Chennai.

Tools for Data Collection

Metacognitive Awareness Inventory (MAI) by Schraw. G and Dennison. R. S. (1994) and the Revised Turkish Version of Grit scale by Akin et al., (2011). The reliability and validity of MAI is 0.78 and 0.8 respectively. In Grit scale the test – retest reliability coefficients were 0.76 for consistency of interest and 0.79 for perseverance of effort.

Testing of Hypotheses

Hypothesis 1: There is no significant difference in Metacognitive Awareness among B.Ed. trainees with respect to gender.

Table 1: *Metacognitive Awareness among B.Ed. trainees with respect to gender*

Variable	Gender	N	Mean	S.D	t value	LOS
Metacognitive Awareness	Male	137	45.20	3.35	2.056	0.05* S
	Female	163	45.94	2.90		

The calculated t value is greater than the table value at 0.05 level of significance, the null hypothesis is rejected. Hence there is a significant difference in Metacognitive Awareness among B.Ed. trainees with respect to gender.

Hypothesis 2: There is no significant difference in Metacognitive Awareness among B.Ed. trainees with respect to type of college.

Table 2: *Metacognitive Awareness among B.Ed. trainees with respect to Type of College*

Source	DF	Sum of Square	Mean Square	F ratio	LOS
Between Groups	2	82.46	14.23	2.45	NS
Within Groups	297	4997.54	16.83		
Total	299	5080.00			

Since, the calculated 'f' ratio is lesser than the table value at 0.05 and 0.01 level of significance, the null hypothesis is accepted. Thus, there is no significant difference in Metacognitive Awareness among B.Ed. trainees with respect to Type of College.

Hypothesis 3: There is no significant difference in Academic Grit among B.Ed. trainees with respect to Medium of instruction.

Table 3: *Academic Grit among B.Ed. trainees with respect to Medium of instruction*

Variable	Medium of Instruction	N	Mean	S.D	t value	LOS
Academic Grit	Tamil	180	71.89	12.38	5.66	0.01* S
	English	120	63.42	13.19		

The mean score of Academic Grit in Tamil medium B.Ed. trainees is greater than the English medium B.Ed. trainees and the calculated t value is greater than the table value at 0.01 level of significance. Hence, the null hypothesis is rejected that, there is a significant difference in Academic Grit among B.Ed. trainees with respect to Medium of Instruction.

Hypothesis 4: There is no significant difference in Academic Grit among B.Ed. trainees with respect to family annual income.

Table 4: *Academic Grit among B.Ed. trainees with respect to Family Annual Income*

Variable	Medium of Instruction	N	Mean	S.D	t value	LOS
Academic Grit	Below 25,000	125	26.79	2.09	3.12	0.01** S
	Above 50,000	175	26.01	3.23		

The mean score of Academic Grit who's Annual Income is below 25,000 is greater than the Annual Income of above 50,000 and the calculated t value is greater than the table value at 0.01 level of significance, hence the null hypothesis is rejected. Thus, there is a significant difference in Academic grit among B.Ed. trainees with respect to Annual Income.

Major Findings

1.   A Significant difference is found in the mean score of Metacognitive Awareness with regards to male (M=45.20, SD=3.35) and female (M=45.94, SD=2.90) B.Ed. trainees.

2.   No significant difference in Metacognitive Awareness among B.Ed. trainees with respect to type of colleges.

3.   A significant difference is found in the mean score of Academic Grit with respect to Tamil medium (M=71.89, SD=12.38) and English medium (M=63.42, SD=13.19) B.Ed. trainees.

4.   A significant difference is found in the mean score of Academic Grit with respect to Family annual income below 25,000 (M=26.79, SD=2.09) and above 50,000 (M=26.01, SD=3.23) of B.Ed. trainees.

Conclusion

One common research finding is that Metacognitive Awareness is correlated with Academic Grit. This correlation is reciprocal, it means an individual who are grittier in their academics tends to be more aware about their Metacognitive knowledge. Considering the fact, the teachers leads to teach the future youth. The learners must be high in Metacognitive Awareness and their Grit to be performing effectively. This study had pondered into the Metacognitive Awareness and Academic Grit among B.Ed. trainees who are studying in Government, Government Aided and Self finance colleges. Metacognitive Awareness plays a vital role in the Grit of B.Ed. trainees.

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