

A Study on Achievement Motivation as Related to General Mental Ability of B.Ed. Teacher Trainees in Kerala

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Abstract: *This study studied the how achievement motivation related to Mental Ability of B.Ed Teacher Trainees in Kerala. The sample consisted of 502 B.Ed Teacher in Kerala. The tools used for the study were Achievement Motivation Scale (AMS) by Dr.Shah Beena.(1986). ii) General Mental Ability Test by Roma Pal and Rema Tiwari (1987) (iii) Personal data Sheet to collect the data on selected variables like locality, stream of study, types of institution and parental income. The results revealed that. (i) There is significant difference between parents income groups in Achievement Motivation. (ii) There is no significant difference among Achievement Motivation of B.Ed Teacher from Rural and Urban areas, Arts and Science Stream and Parental income. (iii) There is significant difference between types of institutions regarding Achievement Motivation. (iv) There is significant difference in Mental Ability of B.Ed Teacher Trainees in Arts stream and Science Stream, types of Institution and parental income group Students have more Mental Ability than Government and Self Financing Colleges of Education.*

Keywords: Achievement motivation, General Mental Ability, B.Ed teacher Trainees, Academic Achievement, Personality

1. Introduction

Achievement Motivation is the desire to excel in performance. It is the psychological need that prompts an individual to strive successful accomplishment of a goal. The theory of achievement Motivation was developed by Mc Clelland in (1951) in the University of Harvard. According to him human behavior is not intended to reduce tension and reach a state of physiological and psychological equilibrium, rather it is the desire to do better, to achieve unique accomplishment, to compare with standards of excellence and to involve oneself with long term achievement goal. According to Mc Clelland (1961) "Achievement motivation or need for achievement". Achievement Motivation is based on reaching success and achieving all of our aspirations in life. Achievement goals can affect the way a person performs a task and represent desire to show competence (Harsckiewicz et al, 1997). "Achievement Motivation can be defined as the striving in increase or keep as high as possible one's capability in all activities in which a standard of excellence is thought to apply and where the execution of such activities can, therefore succeed or fail." Hechhausen (1963). Achievement motivation can be defined as the need for success or the attainment of excellence.

In today's world achievement is considered to be a key factor for personal and social progress. The whole system of education revolves round academic achievement of students at schools and universities. The learning of the pupil depends on various psycho-physical, socio-cultural and economic factors. Individual differences result in diversity among students in their academic achievements and studies have shown general mental ability, as a major factor in determining achievement. (Khadar, 1992). But apart from

the general mental ability, their factor such as personality traits, attitude or interest towards the study, achievement motivation etc. are also the determinants of academic achievement. Motivation is always considered to be a central factor in academic achievement. Achievement is a task oriented behavior that allows the individual performance to be evaluated according to some internally or externally imposed criteria that involve the individual in competing with others or with some standard excellence. (Smith, 1969). Mc Clelland (1965) has rightly said that if in a given country the students in the schools or universities have concern for excellence, that country will show a considerable amount of progress. So, the progress of a country depends upon their academic achievement. A great deal of research has found that students with high achievement motivation are more likely to have increased level of academic achievement and have lower dropout rates.

level of energy, strong desire for independence. It is a stable learned characteristic feature in which satisfaction come from striving for and achieving a certain level of excellence. Achievement motivation is a drive to excel in learning tasks combined with capacity to experience tried on accomplishment. (Eggen and Kauchak, 1964).

Spinatha et.al (2006) suggested that level of achievement motivation is based on emotions and achievement related goals. Students with high achievement goals study hard and definitely persist longer when they approach difficulties whereas low achievement goals students perform worse at learning task, tend to avoid difficult task, and do not really regulate their learning behavior.

According to Salvin (2006) motivation is a significant factor that contribute to academic success, Motivation is what gets one going keeps on going and determine where one is to go. It is important to encourage the student's academic success at any age. Acharya (2009) reported that achievement motivation is the integration of affect arouse by cues in situations involving standards of excellence. Such standards of excellence typically learned from parents who urge the child to compete against the standards. Parents with high motivation set high standards and influence positively the achievement motivation.

According to Atkinson, "Achievement motivation is the result of interaction between personality factors and situational factors.

1. Personality factors

According to Atkinson, "Achievement motivation is the result of two personality constructs: the motive to achieve success and the motive to avoid failure." The motives to achieve success and to avoid failure are present in all individual existing independently of each other. The one cannot predict on the basis of the other and should be seen as separate achievement relate dimensions or characteristics. However, poor competitors usually have a strong need to avoid failure, while strong competitors have a strong motive to strive for success and a weak motive to avoid failure.

In short, personality components balance two underlying motives that we possess within ourselves:

- 1) The need to Achieve (n-Ach) i.e. the motivation to achieve success for the feelings of pride/satisfaction experienced.
- 2) (n-Af) i.e. the motivation to failure in order to avoid the feelings of shame/humiliation if failure occurs.

Atkinson say people are motivated by a combination of both of these motives. Atkinson's research indicates that:

- 1) High achievers – have high level of n-Ach (need to achieve) and low level of n-Af (need to Avoid failure.)
- 2) Low achievers have low n-Ach (need to Achieve) level and high n-Af (need to Avoid failure) level.

2. Situational Factors

The min situational factor is the probability of success or task difficulty that can range from impossible to certain success. The second factor is the incentive value of success or failure. The incentive value of success is determined by the significance of the task for the individual as well as the difficulty of the task. If the probability of success is high (easy task) the reward (or incentive value) of the task decrease.

Considerable research has investigated the relationship between achievement motivation and selected variable. Absul and Kamble (2006) studied the Achievement Motivation as a function of gender, economic background and caste differences in college students. With the using of Random sampling technique was used 192 under graduate students of various college from Sangli city were selected. The age of the subjects ranged from eighteen to twenty two years. Achievement Motivation Test (AMT) developed by V.P. Bhargava (1994) was used for measuring the

Achievement Motivation. Mean, Standard deviation and t-test were used for data analysis. The findings of the study were: (1) The findings of the study were: (1) Gender difference in Achievement motivation is significant, in male and female students having higher and average level of Achievement Motivation respectively. (2) Caste rendered significant effect on Achievement Motivation; Forward and Scheduled Caste students have higher Achievement Motivation, while other backward and nomadic tribes students have below average Achievement Motivation. (3) Impact of economic background of family were found not to be significant.

Bansal. et.al (2006) studied relationship between quality of home environment, locus of control and Achievement Motivation among high achiever urban female adolescents. The sample for the study consisted of adolescent girls in the age group of fifteen to eighteen years from Ludhiana city, who were enrolled in class 10+1. The sample for study consisted 100 respondent on the basis of marks obtained in their Tenth Standard Examination. The students scoring eighty percent or above aggregate marks were considered as high achievers. Rotter's Locus of Control (2002), Bhargava Achievement Motivation Scale (2004) and Home Environment Inventory by Misra (1989) were used to assess the locus of control, Achievement Motivation and quality of home environment respectively. Correlation statistical technique was used for data analysis. The findings of the study were: (1) Good quality of home environment had significant correlation with high level of Achievement Motivation of high achievers. (2) Significantly greater proportion of high achievers with average level of Achievement Motivation showed internal locus control. Distribution of high achievers with high and low levels of Achievement Motivation showed no significant difference for the internal and external locus of control.

Balakrishnan and Velmurgan (2015) Conducted a study to investigate the Achievement Motivation of higher secondary students in relation to certain selected variables. The study was conducted on a random sample of 600 students studying in Ariyalur and Perambalur Districts in Tamil Nadu. The Achievement Motivation Test constructed and validated by Gopal Rao (1974) was used to collect the data. The result of the study revealed that there is no significant difference among the higher secondary students in their Achievement Motivation with reference to locality, type of family, community, parental education, parental occupation and parental income.

Academic achievement become extremely important for student. Their academic achievement motivation can be related to their choices or streaming and even their secondary school, university and scholarship.

General Mental Ability

Mental Ability is relatively a new concept in psychology. It is a term referring to a complex mental abilities of an individual. According to Stern (1914), "Intelligence is the general capacity of an individual to consciously adjust his thinking to new requirements. According to Mc Millan (1990) intelligence means the ability to reason and to profit by experience. According to Gardner, (1999) theory of

multiple intelligence there are at least nine separate intelligence logical, linguistic, spatial, bodily, Musical Kinesthetic, interpersonal, intrapersonal, natural and existential. Gardner contends that intelligence is the ability to solve problems that are valued by culture. The idea of mental ability or intelligence was first conceptualized by Spearman in 1904. He reflected on the popularly held notion that some people are academically able than others, nothing that people tend to perform well in one intellectual domains (e.g. Science) also tend to perform well in other domain (e.g. languages, mathematics, etc.). According to Thurston (1952), mental ability refers to the kind of thinking, flexibility and versatility an individual possesses that makes it possible for him to adjust to new situations. Mental Ability or Intelligence is a term referring to a complex mental abilities of an individual. As suggested by Binet (1905) Intelligence us an unidimensional concept, but Gardner (1983) termed intelligence as a multiple concept, Weschler (1944) suggested intelligence is the global capacity of an individual to act purposefully, to think rationally and to deal effectively with his environment.

J. P Guilford (1961) developed the structure of intellect model on the basis of the factor analysis, He suggested every mental process or intellectual activity can be described in terms of three basic dimensions or parameters Such as Operation, Content, Production

He argued that intelligence consisted 150 different and independent skills. Each of these intellectual abilities or structures is interlinked. Therefore, he thinks $5 \times 5 \times 6 = 150$ intellectual abilities

Mental Ability Involved

- Learn: The acquisition, and use of knowledge is an important component of Mental Ability.
- Recognize problems: To put knowledge, to use, people must first be able to identify possible problems in the environment that need to be addressed.
- Solve Problems: People must able to talk what they have learned to come up with a useful solution to the world around them.

Mental ability of the students being developed and enhanced through various classroom exercise, with the use of different teaching strategies and methodologies suitable to the level and nature of the learner. Therefore it is imperative that their intellectual capabilities be determined before classroom instruction starts. (Laguador, 2014). The abstract and numerical reasoning , numerical computation and verbal abilities are the basic foundations of knowledge that need reinforcement to establish confidence and intellectual process among the students. Students must not only be given enough knowledge and skills to become successful but also enhancing their character and values will make them more unbeatable (Laguador and D Castro,2014).

Various research has studied the relationship between Mental Ability and Academic achievement related to personable variables. LalKuar (2016) studied the Mental Ability of Higher secondary Students. The purpose of the study is to determine the mental ability of higher secondary students in Vellore District of Tamil Nadu. The sample was

comprised 300 higher secondary students. Out of these 148 male and 52 female. The investigator used the statistical techniques, mean, standard deviation, 't' test and 'F' test. The results was revealed that there is significant difference between the gender, type of school, locality, medium of school, nature of school, parental education, parental occupation, birth order and type of family towards mental ability.

Evelyn De Castro et al (2015) studied Mental Ability, Work Behaviour And Trait Survey of High and Low Performing First Year Computer Engineering Students. This study aimed to determine the level of academic performance of the First Year Computer Engineering Students during the year 2014-2015. Descriptive type of research was utilized in the study. Result showed that high performing students have significantly higher persistence in doing their work and they have significantly higher expectations of positive effect from achievement-oriented activity than those low performing students. Numerical computation, verbal ability, perseverance, affective and purposive traits are significantly related to the academic performance of the first year computer students. Verbal ability, affective trait and numerical computation are the predictors of the academic performance. Descriptive type of research was utilized in the study.

Lounsbury and Ridgitel (2004) conducted a study on predicting Academic Success in relation to General Intelligence; big five personality traits and work drive. The sample comprised of 140 undergraduate college students of south-Eastern University of America. Data was gathered by using General Intelligence Scale. The results General Intelligence was found to predict both course grade and grade point average. The results also indicated that Intelligence had significant relationship with Academic Achievement.

Statement of the Problem

The problem chosen for the study may be stated as “**A Study on Achievement Motivation as related to Mental Ability of B.Ed. Teacher Trainees in Kerala**”.

Objectives of the study

The objectives of the study were as follows-

- 1) To find out the significant difference in Achievement Motivation among B.Ed Teacher Trainees on the basis of selected variables like Stream of study, locality, type of Institution and Parental Income.
- 2) To find out the significant difference in General Mental Ability among B. Ed Teacher Trainees on the basis of selected variables like Stream of study, locality, type of Institution and Parental Income.
- 3) To find out the relation between Achievement Motivation and General Mental Ability B.Ed Teacher Trainees in Kerala.

3. Need and Significance of the study

In this modern age achievement is considered to be a key factor for personal and social progress. The whole system of education revolves round academic achievement of students in the school and colleges in modern society responsibilities

of teachers are innumerable. There is an exaggeration in saying that it is the teacher who makes or mass the nation for the teachers are vested with vital responsibility of growing the minds of the young to be self directed individuals with interest tow ads teaching and humanistic outlook. The teacher’s Achievement motivation, and Mental Ability becomes important in the behavior and achievement of individuals. Mental Ability is perhaps the still most effective predictor of academic achievement. Indian Education Commission (1964-66) reaffirms the importance of subject matter knowledge in teacher for a study of the subject to be equipped with in-depth motivation to achieve higher and competencies to become competent and thereby to achieve mental ability to cater of student teachers which will contribute toward better Mental Ability to the needs of the students. However review of literature revealed very little research is being done in India to assess the relationship of Achievement Motivation and Mental Ability Research showed that the Achievement Motivation and Mental Ability are interrelated and considered as a central factor for Academic Achievement, the researcher decided to conduct the research study as “ **A Study Achievement Motivation as related to Mental Ability of B.Ed Teacher Trainees in Kerala.**”

Hypotheses

H1. B.Ed Teacher Trainees do not differ in achievement Motivation owing to differences in selected variables like locality, stream of Study, Type of Institution and parental income.

H2. B.Ed Teacher Trainees Do not differ in Mental Ability owing to differences in selected variables like locality, Stream of study, Type of Institution and Parental Income.

H3. There is no significant relation between achievement Motivation and Mental Ability of B.Ed Teacher Trainees

4. Methods

Sample

Keeping in mind the size of the people and the nature of client, stratified Random Sampling technique was used for the selection of sample. Thus a sample of 502 B.Ed. Teacher Trainees studied in various Colleges of Education sample for the present study. Students were selected in accordance with stratification on the basis of locality, stream of study (Arts and Science), type of Institution, and parental income. The data was collected through Descriptive Survey Method by adopting Stratified Random Sampling Techniques Tools for the main study

The following tools were used for the present investigation.

- 1) Achievement Motivation Scale (AMS) by Dr. Shah Beena. (1986).
- 2) General Mental Ability by Roma Pal and Rema Tiwari (1987)
- 3) Personal data Sheet to collect the data on selected

Statistical Measures

To interpret and discuss the results in the light of objectives of the study, the data was treated statistically. Calculation of ‘t’-test and ‘F’ test. Post HOC and Carl Pearson’s Product moment Correlation was computed for comparing the

Achievement Motivation and Mental Ability of B.Ed Teacher Trainees in Colleges of Education.

Analysis and Interpretation

H1. B.Ed Teacher Trainees do not differ in Achievement Motivation owing to differences in selected variables like Locality, Stream of Study, Type of Institution and Parental Income.

Table 1: Comparison of ‘t’ ratios for the differences in Achievement motivation between the subgroups of Locality and Stream of Study

Variables	N	Mean	Standard Deviation	t’	p-value
Locality					
Rural	197	155.17	15.879	0.53	0.597
Urban	305	154.48	3.092		
Stream of Study					
Arts	280	154.32	14.127	0.76	0.447
Science	222	155.29	14.392		

The result of ‘t’ test for the comparison of means of Achievement Motivation between localities.

Since the p-value (0.597) is more than 0.05 we accept the null hypothesis that the means are equal at 5% level of significance. Therefore there is no significant difference in Achievement Motivation of B.Ed Teacher Trainees in rural and Urban areas.

The result of the comparison of means of Achievement Motivation between stream of study.

Since the p-value (0.447) is more than 0.05 we accept the null hypothesis that the means are equal at 5% level of significance. Therefore there is no significant difference in Achievement Motivation of Arts and Science Stream B.Ed Teacher Trainees.

Table 2: Comparison of ‘F’ ratios for the differences in Achievement motivation between the subgroups of Types of Institution and Parental Income

Variables	N	Mean	Standard Deviation	‘F’	p-value
Types of Institution					
Government	107	150.42	16.281	6.598	0.001
Aided	195	155.50	13.639		
Self Financing	200	156.34	13.220		
Parental Income					
Rs.5,000-10,000	187	154.26	14.848	0.502	0.606
10,001-20,000	149	155.72	15.276		
Above 20,000	166	154.42	2.512		

ANOVA results showed that the null hypothesis that there is no significant difference in Achievement Motivation between different types of institutions is rejected at 5% level of significance since p-value (0.001) is less than 0.05. Therefore there is significant difference between types of institutions regarding Achievement Motivation.

Table 3: Post-Hoc Analysis

Groups Compared	Means		Mean difference	Standard Error	p-value
	M1	M2			
Government-Aided	150.42	155.50	5.077	1.694	.003
Government-Self Financing	150.42	156.34	5.914	1.687	.000
Aided-Self Financing	155.50	156.34	.838	1.417	.555

The multiple comparison tests revealed that Government College B.Ed Teacher Trainees different from Aided and Self Financing Colleges, however there is no significant difference between Aided and Self Financing College Students.

From the table 3 of ANOVA results, it is seen that p-value is more than 0.05 (0.606) and hence there is no significant difference between parents income groups in Achievement Motivation

H2. B.Ed Teacher Trainees do not differ in Mental Ability owing to differences in selected variables like Stream of study, locality, type of Institution and Parental Income.

Table 4: Comparison of ‘t’ ratios for the differences in Mental Ability between the subgroups of Locality and Stream of study

Variables	N	Mean	Standard Deviation	“t”	p-value
Locality					
Rural	197	104.25	35.575	0.451	0.652
Urban	305	105.63	29.968		
Stream of Study					
Arts	280	101.31	33.830	2.972	0.003
Science	222	109.86	29.547		

Result of ‘t’ test for the comparison of means of Mental Ability between Locality and Stream of Study.

Since the p-value (0.652) is more than 0.05 we accept the null hypothesis that means are equal at 5% level of significance. Therefore there is no significant difference in Mental Ability of B.Ed Teacher Trainees in Rural and Urban areas.

Result of ‘t’ test for the comparison of Mental Ability between Streams of Study.

Since the p-value (0.003) is less than 0.05 we reject the null hypothesis. are equal at 5% Therefore there is significant difference in Mental Ability of in . B.Ed Teacher Trainees in Arts stream and Science Stream.

Table 5: Comparison of ‘F’ ratios for the differences in Achievement motivation between the subgroups of Types of Institutions and Parental Income

Variables	N	Mean	Standard Deviation	F	p-value
Types of institution					
Government	107	101.3	32.560	10.114	0.000
Aided	195	113.0	26.633		
Self Financing	200	99.34	35.515		
Parental Income					
Rs.5,000-10,000	187	98.16	27.872	8.462	0.000
10,001-20,000	149	106.05	34.160		
Above 20,000	166	112.02	33.665		

The ANOVA result showed that the result for comparison of Mental Ability between Types of Institutions. Since the p-value (0.000) is less than 0.05 there is significant difference between Types of Institution in Mental Ability.

Table 6: Post-Hoc Analysis

Groups compared	Means		Mean difference	Standard Error	p-value
	MI	M2			
Government-Aided	101.39	113.01	11.618	3.812	.002
Government-Self Financing	101.39	99.34	2.053	3.795	.589
Aided-Self Financing	113.01	99.34	13.67	3.189	.000

The multiple comparison tests revealed that Aided College Students are different from Government and Self Financing Students, however there is no significant difference between Government and Self Financing Students.

From the table of ANOVA results, it is seen that p-value (0.000) is less than 0.05 and hence there is significant difference between parents income groups in Mental Ability.

Table 7: Post-Hoc Analysis

Groups Compared	Means		Mean Difference	Standard Error	p-value
	M1	M2			
Rs. 5000-10000	98.16	106.05	7.893	3.491	.024
10001-20000	98.16	112.02	13.864	3.390	.000
Above 20000	106.05	112.02	5.970	3.587	.097

Table 7, The multiple comparison tests revealed that Rs. 5000- 10000 income groups are significantly different from Rs.10001 -20000 and above 20000 income groups, however there is no significant difference between Rs.10001 to 20000 and above Rs.20,000 groups

H3. To find out the relation between Achievement Motivation and Mental Ability among B.Ed Teacher Trainees

Table 8: Correlation Coefficients (Karl Pearson)

	Achievement Motivation	Mental Ability
Achievement Motivation	1	0.04
Mental Ability	.04	1

There is no significant correlation between Achievement Motivation and Mental Ability

5. Findings

- 1) There is no significant difference in Achievement Motivation of B.Ed Teacher Trainees from Rural and Urban areas.
- 2) There is no significant difference in Achievement Motivation of B.Ed Teacher Trainees in Arts and Science Stream
- 3) There is significant difference between Types Institutions regarding Achievement Motivation. Government College Students are different from Aided and Self Financing College Students in Achievement Motivation. Aided and Self Financing College Students have more Achievement Motivation than Government College Students.
- 4) There is no significant difference between Parent’s Income groups in Achievement Motivation

- 5) There is no significant difference in Mental Ability of B.Ed Teacher Trainees from Rural and Urban areas.
- 6) There is no significant difference in Mental Ability of B.Ed Teacher Trainees in Arts and science Streams.
- 7) There is significant difference between Types of Institutions in Mental Ability. Aided School Students differ from Government and Self Financing College Students in Mental Ability. Aided College Students have more Mental Ability than Government and Self Financing College Students.
- 8) There is significant differences between parental age group in Mental Ability
- 9) There is no significant correlation between Achievement Motivation and Mental Ability.

Implications

- 1) The findings of the study revealed that there is a significant difference in Achievement Motivation of B.Ed Teacher Trainees belonging Aided Colleges. So the Government and Self Financing Colleges should be given more attention to foster Achievement Motivation among B.Ed Teacher Trainees
- 2) The findings also revealed that there is significant difference in Mental Ability of B.Ed Teacher Trainees belonging Rs 5,000-10,000 parental income group. The findings of the study imply the need for improving the Mental Ability of low parental income group.

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