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Achievement Motivation Among Students

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ABSTRACT

Motivation plays a significant role in students' academic life. Achievement motivation is the basic need for success or the attainment of excellence. Achievement motivation forms to be the basis for a good life. The present study investigated whether achievement motivation differed on individual variables (disciplines/courses, academic performance and gender). A questionnaire was administered to 656 pure science and applied science under graduate students from Bangalore city. Academic achievement referred to their results in the previous semester. Gender was also considered for the analysis. The tool used for the present study was Deo - Mohan Achievement Motivation scale (n-Ach) (1985). For non-normal variable Mann Whitney U and Kruskal Wallis were used to test various hypotheses of the study. Pure science and applied science course students significantly differed on achievement motivation. There was no significant difference in achievement motivation among high and low academic performance students. Boys and girls differed significantly on achievement motivation.

Keywords : Achievement Motivation, Academic Performance, Pure Science and Applied Science.

INTRODUCTION

Humans are social beings whose thoughts and beliefs are susceptible to many varying factors around them. The perceptions & conclusions dynamically influence human mind and the resultant actions. More often than not, an action or a set of actions taken by a human beings eventually determine their performance. Motivation is a process which positively influences the thoughts, beliefs & perceptions, thereby boosting the performance of human beings. The areas where the power of motivation is effectively used range from different walks of life like creative arts to military to academics. It is often said that great battles are won by well motivated troops and not only by the military hardware. It is equally or more applicable in academics, where the motivation of a student greatly contributes to his or her own academic performance.

There are many factors which would adversely affect the motivation level of a person or a group of persons. Some of these factors could be uncertainty or fear of unknowns, lack of clarity of purpose, complexity of tasks in hand , dislike in performing an action or pursuing a curriculum due to perceptions or even based on an informed inference, mismatch in the skill set available versus the skill requirements to perform a job or to pursue an academic curriculum , lack of proper training to perform a job or inadequacy in teaching to impart a particular curriculum, Psychological pressures due to domestic situations, peer group pressures, adverse sociological influences etc.

The motivation plays an overbearing role in the education system, wherein the magnificent power of motivation can shape the future of budding students. It is a fact that all the students or persons may not be self motivated or may not show the traits of achievement motivation. It gains more significance to understand what makes a person motivated or how a person can be motivated. While leadership provides motivation for a person in work arena, the parents, teachers and friends contribute to the motivational support environment for a student at his /her home and in the academic environment. The overbearing influence of domestic environment, academic environment & peer group influence on students to derive achievement motivation within them need no further emphasis.

In context of classroom, "Motivation" refers to characteristics of students' behavior as interest, alertness, attention, concentration and persistence. Some students have a need to achieve in all that they do. Their desire for success drives them to accomplish every task, no matter what the task is, or the difficulties involved in completing it. Other students also feel a need for success, but consider the value or worth of the task before attempting it. If the student feels the task has no value, the student chooses not to do the task, even though they are perfectly capable of accomplishing the task (Atkinson, 1974). Still others, who may or may not be capable, plod on with their tasks, some achieving accomplishment, others not. Then there is a final group; those who choose not to do the task. These students are afraid they will not be able to accomplish the task. They have a fear of failure. Rather than face the humiliation of not being able to complete the task, thus failing the task, these students choose not to do the task at all. They would rather risk a poor grade than a poor image (Veroff, McClelland, and Marquis, 1971; Grabe, 1979).

Everyone has a need to achieve and a fear of failure, but these needs vary from person to person and from situation to situation. Each student acts on the levels of motivation differently, but some students are predisposed to having little desire to accomplish certain tasks (Atkinson, 1999). Motivation, as it relates to students, is very important. Students who have high motivation to achieve generally do well academically. Students with low motivation do not do well academically. But motivation does not guarantee achievement. Similarly, achievement does not reflect motivation (Keefe and Jenkins, 1993). All students are influenced by a need to achieve. It causes them to want to be successful at what they attempt. But each student is affected to different degrees. For some students, the desire to achieve overwhelms other factors that could cause failure, such as lack of skills, lack of experience, lack of ability, or lack of time. The individual does whatever it takes to work through or eliminate these setbacks (Atkinson, 1974). (cited in Zenzen, 2002).

John Atkinson (1964) insisted that the value of success to the individual is important influence on achievement motivation outcomes. We are more likely to pursue and strive hard to

achieve goals we really care about than goals that are unimportant and so a strong need for achievement predicts success only when the value on achievement is high. (cited in Carol Sigelman 1999).

The present study focus on the motives of a student's achievement motivation in order to help the student perceive that certain learning experiences can help him/her be what they want to be or become what they want to become. It is not a matter of creating or developing motives, it is a matter of building or motivating them that already exists in them. The cause-effect analysis of three variables, namely the stream of study of a student, the gender of the student and also the academic performance of a student on his/her achievement motivation is dealt with in this paper.

Objective of the Study
To find out the achievement motivation between pure science and applied science course students.

To determine the differences in achievement motivation between high and low academic achievement students.

To verify the differences in the achievement motivation between boys and girls.

Operational definition
Achievement motivation
Achievement motivation is a disposition to strive for success in competition with others with some standard of excellence, set by the individual.

Pure science and applied science
Students pursuing Bachelor of Science (B.Sc) course with Physics, Chemistry, and Mathematics (PCM) combination in II/III/IV semester, affiliated to Bangalore University were considered as pure science students. Applied science students were those from Visweshwaraya Technological University, under graduate colleges, studying in II/III/IV semester, Bachelor of Engineering (B.E) in computer science and information technology.

Academic achievement
Examination is used to gauge how far and how much the learning objectives have been achieved. It acts as a benchmark to qualify students to enter university or apply work either in the public sector or private firms. In this study, students' academic achievement is based upon the final end semester examination result (based on theory, practicals and internal assessment) marks were obtained from the educational institution/students marks sheet. During the interview researcher also obtained the information from the students regarding their previous semester results to come to the conclusion on the performance of the students stated here for the purpose of the study. Educational institution considers the total marks obtained in each semester examination to declare their academic achievement, where a score of 70% and above are considered distinction, 50% and below are considered as pass class. In the present study the same criteria is considered to determine the academic achievement. Students who have scored 70% and above were considered as "high academic achievers" and 50% and below were considered to be "low academic achievers".

Hypotheses
The specific hypotheses formulated were:
1. Pure science and applied science course students do not differ significantly in their achievement motivation.

2. High and low academic achievement students do not differ significantly in their achievement motivation.

3. Boys and girls do not significantly differ in their achievement motivation.

Research Design

The research is exploratory in nature.

Method
Participants
Participants comprised of 656 under graduate students aged between 19-23 years. Three pure science colleges and five engineering/applied science colleges in Bangalore city participated in the present study. Students of high academic achievement constituted 38%, and low achievement made up 22% of the total number of participants. Among these participants, 48% were from pure science course and 52% were from applied science course. Boys constituted 47% and girls 53%.

Tools
Socio-demographic data sheet was used to obtain the information about the subject's age, education, gender, class, college and family income.

Deo - Mohan Achievement Motivation scale (n-Ach) *(1985)* -The questionnaire was developed by Deo & Mohan (1985). This is a self rating questionnaire. It has 50 items and has no time limit. There are 37 positive items and 13 negative items. The positive items has a response choice on a 5 point scale, given as always, frequently, sometimes, rarely and never which carries the scores as 4,3,2,1, and 0 ,whereas, the negative items has a response choice , given as similar to the positive items but the scoring is done as 0,1,2,3, and 4. There are two separate stencil keys provided for the scoring of positive and negative items scores. The minimum score obtained can be 0 and maximum score can be 200. The reliability coefficient is reasonably high (r = 0.69, 4 weeks interval) using the test retest method and the item validity is established by high low discrimination method and it was accepted as the validity of the whole measure.

Procedure
The researcher obtained permission from the educational institution to collect data from the students. An interactive orientation briefing was organized that focused on the purpose of the study and the need to answer all the questions frankly. Participants enrolled by class as a unit and groups of 35-40 students filled up the questionnaires. Prior to responding to the questionnaires, they signed up the consent form.

Results and Discussion
The present study investigated the achievement motivation among pure science and applied science course students, academic performance (high and low) and gender differences (boys and girls). Responses from the students were analyzed to meet the objectives of the study. Descriptive statistics and for non- normal variable non parametric tests like Mann Whitney U test and Kruskall Wallis tests were used for comparison.

Testing of Hypothesis 1
Pure science and applied science course students do not differ significantly on achievement motivation.

To explore the significance of differences on achievement motivation among pure science and applied science course students, Mann Whitney U test was computed and the results are presented in Table 1.

Table 1 Descriptive statistics and Mann Whitney U test on achievement motivation among pure and applied science course students.

Variable	Disciplines		P value
Achievement motivation	Pure (N=317)	Applied (N=339)	0.000**
	Mean± SD		
	127.79±20.20	121.54±19.65	

** *p*<.001 (Significant)

Table 1 shows the results of two groups that opted for two different courses/disciplines (Pure science and applied science) with regard to achievement motivation. The results indicate a statistically significant difference in achievement motivation among pure science and applied science course students. It can be inferred that pure science course students are more achievement oriented compared with applied science course students. Hence we reject the null hypothesis and accept the alternate hypothesis which states pure science and applied science course students differ significantly on achievement motivation. Shekar & Devi (2012) reports in their study that Student's choice of academic major has its relation with their level of achievement motivation (Upadhyay and Tiwari, 2009).

Testing of Hypothesis 2
High and low academic achievement students do not significantly differ on achievement motivation.

To test the significance difference in achievement motivation among high and low academic performance students, Kruskal Wallis test was computed. The results are presented in Table 2.

Table 2 Descriptive statistics and Kruskal Wallis test values on achievement motivation between high and low academic performance students.

Variable	Academic performance		Chi value	P value
Achievement motivation	High (N=248)	Low (N=141)	2.759	0.252
	Mean± SD			
	125.46±20.41	122.50±19.65		

*p<.005 (significant at 0.05) ** p<.001 (Significant at 0.01)

The chi square values in table 2 clearly indicate that the achievement motivation does not differ significantly between high, and low academic performance students. Therefore, the null hypothesis is accepted, which states that there is no significant difference in achievement motivation between high and low academic achievement students. Examination of means shows that high academic performers (125.46±20.41) have significantly high achievement motivation when compared to low academic performers (122.50±19.65). A similar trend of results has been found with investigation of Rosen (1991) reported no significant relationship between academic achievement motivation and subjects' academic performance. (cited in Onete et al., 2012). Wu & Lin (1982) Teachman (1987), and Anand (1998) reported that high degree of achievement motivation was observed in high achievers. (cited in Varghese, 2005). The same is evident in the mean values of the present study. As cited in Guay & Vallerand (1997) Studies have shown that intrinsic motivation toward education (i.e., doing academic activities out of pleasure) positively influence academic achievement (Gottfried, 1985, 1990; Lloyd & Barenblatt, 1984). Niehbur (1995) in his study found that student motivation showed no significant effect on the relationship with academic achievement (cited in Broussard 2002).

Testing of Hypothesis 3
Boys and girls do not significantly differ on Achievement motivation.

To explore the significance difference between gender and achievement motivation, Mann Whitney U test was computed and the results are presented in Table 3.

Table 3 Descriptive and Mann Whitney U test scores for achievement motivation between boys and girls.

Variable	Gender		P value
Achievement motivation	Boys (N=305)	Girls (N=351)	0.000**
	Mean± SD		
	121.98±20.54	126.80±19.55	

** *p<.001 (Significant)*

The study results reveal that there is a significant difference in achievement motivation among boys and girls. It can be inferred from the above results that girls are more achievement oriented than boys. A similar trend of results has been found with investigation of achievement motivation and gender. Lindgren, Mortitsh, Thulin and Mitch (1986) found that while comparing achievement motivation women scored higher than men. (cited in Ellis 2007). Nagarathanamma & Rao (2007) found no significant difference between boys and girls with regard to achievement motivation level. Whereas Liu & Zhu (2009) found significant differences in achievement motivations of male and female. (cited in Shekar & Devi (2012).

Conclusions
The findings of the present study indicate that pure science and applied science course students differ significantly on achievement motivation. Boys and girls differed significantly on achievement motivation. There is no significant difference between high and low academic performers in achievement motivation.

Limitations of the study
This study has some limitations that merit consideration. namely,

1. The population is limited to pure science and applied science course students in Bangalore city.
2. Participants in this study were from middle to upper-middle class and upper class backgrounds residing in urban environment. Therefore these results can be generalized to similar population only.

Implications
As motivation has been shown to play a significant role in students' achievement, techniques that focus on increasing student motivation should be developed. The findings reported in this study justify the importance of motivation to academic performance. The findings have implications for the teachers that they should try as much as they could to motivate their students during the course of instructions. The parents as well as the government should engage in programmes that can motivate the students to improve their academic performance. It is therefore, hoped that these findings will serve as resource materials for teachers, education stake holders, psychologists, counsellors, government, parents and significant others who are concerned with the academic progress of the students. Also it is found that girls are more achievement oriented compared to boys, therefore girls needs to be given more opportunities. This knowledge can also be utilized in planning a suitable intervention in the areas for students as well as educators.

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