

A study of academic achievement of 10+1 students in relation of their metacognition, self-confidence and family environment

Dr. Babita Chaudhary

Assistant Professor, Department of Education, Noida College of Physical Education, G.B. Nagar, Noida, Village, Dhoom Manikpur, Uttar Pradesh, India

Abstract

The main aim of the present study was to explore the relative contribution of academic achievement in relation to their metacognition, self-confidence and their family environment. In the present study, a sample of 200 students studying in class XI has been selected from Ghaziabad District. The collection of data were based on Metacognition inventory by Govil (2003), Self-confidence inventory by Agnihotri (1987) and Family Environment scale by Bhatia and Chadha (1993). To draw inferences from the obtained results inferential statistics like Analysis of Variance (ANOVA) and t-test were used. The statistical data of the study reveals the following main findings: There exists significant and positive relationship between academic achievement and metacognition and Family Environment of 10+1 students. There exists significant and negative but low relationship between academic achievement and self-confidence of 10+1 students.

Keywords: academic achievement, metacognition, self-confidence, family environment

Introduction

Education plays a paramount role in educating and talenting children. It is being treated as a basic human need as it endows people with knowledge, skills and attitudes, which would increase their capabilities and capacity to adapt to the changing environment. It forms an effective means to improve the status and character of the living patterns of the people by helping them in their intellectual, social and emotional development.

Foremost responsibility of teachers has always been to measure the results of their teaching efforts in so far as they are reflected by the progress and mastery of the subject matter by the students. This accomplishment in the school work is called achievement. The argument of measuring achievement of the students especially in recent times has much importance particularly when the world is becoming too much competitive. Quality of performance has become an important and major factor not only for students, teachers and parents but for the personal progress of every individual. This desire for attaining high level of achievement puts a lot of pressure on teachers, students, parents and school, including the educational system as a whole.

Giving too much importance to academic achievement of students has raised many questions before the Educationists, Psychologists, Curriculum framers and Researchers. They want to know the factors which are responsible for the enhancement of students' academic achievement in different subjects. An effort to understand the factors underlying the success or failure of students in different subjects does not simply amount to an academic exercise but has practical bearing in the sense that it makes possible the proper utilization of our human and material resources. Such factors when identified will have practical and theoretical implications for developing curriculum and designing educational programs to suit the needs of students with varied backgrounds.

Academic achievement

Academic achievement is excellence in all academic

disciplines, in class as well as extra-curricular activities. Academic achievement is knowledge attained or skills developed by pupils usually in the school subject measured by test scores or by marks assigned by teachers or by both. Academic achievement may be defined as the degree or level of proficiency attained in scholastic and academic work. It is the competence that is really revealed in school subjects in which students have received instructions. It is directly related to pupil's growth and development in educational situations, where learning and teaching are intended to go on.

Metacognition

Metacognition is a very complex phenomenon. It is a combination of two words: Meta and Cognition. The prefix 'Meta' refers to something that transcends the subject it is related to whereas 'Cognition' is the internal structure and process that is involved in the acquisition and use of knowledge including sensation, perception, attention, learning, memory, language, thinking and reasoning. Thus, metacognition refers to a level of thinking that involves active control over the process of thinking that is used in learning situation. The term metacognition refers to the psychological processes that are involved in the way a person controls, modifies and appraises his own thoughts (Kaur, 2010).

Thus, metacognition is the ability to evaluate one's own comprehension and understanding of subject matter and use that evaluation to predict how well one might perform on a task. This is the process where the student takes conscious control of the learning and thinks about how one is thinking in a cognitive sense.

Self-confidence

Self-confidence is the conviction that one is generally capable of producing desired results. Self-confidence is the confidence one has in oneself, one's knowledge and one's abilities. It is the confidence of the type: "I can do this"; "I have the ability to do this". Self-confidence is the one thing that is much more important than any other abilities and

traits. Self-confidence integrates the powers of mind and body and focuses them towards the goal. Only such a concentrated energy can reach the goal. Self-confidence is the first step to progress, development, achievement and success. Even if you have a lot of abilities and a lot of knowledge, if you do not have self-confidence you cannot be a success. Self-confidence is essentially an attitude which allows us to have a positive and realistic perception of ourselves and of our abilities.

Family environment

The family is the first to affect the individual. It is the family, which gives the child his first experience of living. It gets him when he is completely uninformed, unprotected, before any other agency has had a chance to affect him. The influence of the family on the child is, therefore, immense. The influence of other agencies, although indispensable, must build upon the ground work furnished by the family (Bhatia & Chadha, 1993).

Family environment refers to the climate prevailing in the home, which varies from culture to culture, society to society, family to family. Family environment is influenced by a number of factors like the nature of family constellation; number of children in the family; marital relationship between husband and wife; parental employment and socio-economic and religious background of the family.

Need of the study

Adolescence is the most important period of human life during which the young individual develops physically, intellectually, mentally, socially and emotionally. It is a period of great excitability and turbulent emotions. The individual is faced with a perennial conflict in all spheres of life. So, it is crucial time to draw out attention towards the youngsters so that they can develop positive and healthy attitude towards life. Educationists are always interested to study different problems of school going population especially of adolescents. One of the most challenging problems of adolescents faced by educationists today is that of accurate prediction of their academic achievement.

Parents, guardians, teachers, educationists, institutions and society at large are concerned about how best to enhance academic standards and achievement. Knowledge of factors that influence learners' success has important implications for learning and education. Many educators are interested in knowing beforehand who will perform well and who will perform poorly, in academic progress. It has been realized that there is a need to go beyond the traditional criterion of academic success. Students should be engaged in intellectually and socially satisfying activities so that they can become confident enough to forge ahead in their thinking on the basis of information, facts, clues and concepts. The students who are aversive and think negatively cannot concentrate for a long time and have more difficulty in reaching their potentials than others. Some studies have been conducted on adolescent to study their academic achievement with different variables. Few studies have been conducted on academic achievement and metacognition, academic achievement and self-confidence and academic achievement and family environment. After reviewing the related literature the investigator concluded that no attempt has been made so far to study the variables metacognition, self-confidence, family environment and

academic achievement together. This gap in the area led the investigator to take the combined study of metacognition, self-confidence and family environment in relation to academic achievement. Thus, keeping in mind these points, the present problem is selected for investigation.

Statement of the problem

“A Study of Academic Achievement of 10+1 Students in Relation to Their Metacognition, Self-Confidence and Family Environment”

Objectives of the study

Followings are the objectives of the study:

1. To study the relationship between Academic Achievement and Metacognition of 10+1 students.
2. To study the relationship between Academic Achievement and Self-Confidence of 10+1 students.
3. To study the relationship between Academic Achievement and Family Environment of 10+1 students.
4. To study and compare the Academic Achievement, Metacognition, Self-Confidence and Family Environment of Male and Female 10+1 students.
5. To study and compare the Academic Achievement, Metacognition, Self-Confidence and Family Environment of Rural and Urban 10+1 students.
6. To study and compare the Academic Achievement, Metacognition, Self-Confidence and Family Environment of 10+1 students studying in Government and Private Schools.
7. To study and compare the interactional effect of Gender, Locale and Type of School on Academic Achievement, Metacognition, Self-Confidence and Family Environment of 10+1 students.

Hypothesis

1. There exists no significant relationship between Academic Achievement and Metacognition of 10+1 students.
2. There exists no significant relationship between Academic Achievement and Self-Confidence of 10+1 students.
3. There exists no significant relationship between Academic Achievement and Family Environment of 10+1 students.

Sample of the study

In the present study, a sample of 200 students studying in class XI has been selected from Ghaziabad District.

Tools used in the study

The following tools have been employed in the study:

1. Metacognition inventory by Govil (2003)
2. Self-confidence inventory by Agnihotri (1987) ^[2]
3. Family Environment scale by Bhatia and Chadha (1993)

Statistical techniques used

To draw inferences from the obtained results inferential statistics like Analysis of Variance (ANOVA) and t-test were used.

Analysis and interpretation of data

1. There exists no significant relationship between academic achievement and metacognition of 10+1 students.

Table 1

Variable	N	Mean	Coefficient of correlation
Academic Achievement	200	72.30	0.28
Metacognition	200	85.86	

Table No. 1 represents the coefficient of correlation between academic achievement and metacognition of 10+1 students. The calculated value of coefficient of correlation is 0.28 which is significant at 0.01 levels of significance. It shows that metacognition and academic achievement of 10+1 students are positively and significantly related to each other. Thus, the hypothesis (Hoi) stating that “There

exists no significant relationship between Academic Achievement and Metacognition of 10+1 students” stands REJECTED at 0.01 level of significance.

2. There exists no significant relationship between Academic Achievement and Self-Confidence of 10+1 students.

Table 2

Variable	N	Mean	Coefficient of correlation
Academic Achievement	200	72.30	-0.22
Self-Confidence	200	24.58	

Table No. 2 depicts the coefficient of correlation between academic achievement and self-confidence. The obtained value of coefficient of correlation is -0.22 which is significant at 0.01 level of significance. The result revealed significant and negative but very low relationship between academic achievement and self- confidence scores of 10+1 students. Thus, the hypothesis (Ho2) stating that “There exists no significant relationship between Academic

Achievement and Self-Confidence of 10+1 students” stands REJECTED at 0.01 level of significance. The mean score of self-confidence shows average level of self-confidence.

3. There exists no significant relationship between Academic Achievement and Family Environment of 10+1 students.

Table 3

Variable	N	Mean	Coefficient Of Correlation
Academic Achievement	200	72.30	0.25**
Family Environment	200	252.64	

Table No. 3 shows the coefficient of correlation between academic achievement and family environment of 10+1 students. The value of coefficient of correlation is found to be 0.25 which is positive and significant at 0.01 level of significance. It shows that academic achievement and family environment are related to each other. Thus, the hypothesis (Ho3) that “There exists no significant relationship between Academic Achievement and Family Environment of 10+1 students” stands REJECTED at 0.01 level of significance.

Main findings

The statistical data of the study reveals the following main findings:

Findings based on coefficient of correlations

1. There exists significant and positive relationship between academic achievement and metacognition of 10+1 students.
2. There exists significant and negative but low relationship between academic achievement and self-confidence of 10+1 students.
3. There exists significant and positive relationship between academic achievement and family environment of 10+1 students.

References

1. Agarwal KL. A study of the effect of parental encouragement upon the educational development of the students. Srinagar: Garhwal University (Unpublished Ph.D. thesis), 1986.
2. Agnihotri Rekha. Manual for Agnihotri's self-confidence inventory. Agra: National Psychological

Corporation, 1987.

3. Ahmad Alay, Safaria Triantoro. Effects of self-efficacy on students' academic performance. Journal of Educational, Health and Community Psychology. 2013; 2(1):19-25.
4. Ahuja M, Goyal S. Subject-wise achievement of adolescents in relation to parental involvement and parental aspirations. Journal of Community Guidance and Research. 2006; 23(1):30-57.
5. Ali Riasat *et al.* The impact of motivation on students' academic achievement in mathematics in problem based learning environment. International Journal of Academic Research. 2011; 3(1).
6. Allon M, Gutkin TB, Bruning R. The relationship between metacognition and intelligence in normal adolescents: Some tentative but surprising findings. Psychology in the Schools. 2006; 31(2):93-97.
7. Baker L. Metacognition, comprehension monitoring and the adult reader. Educational Psychological Review. 1989; 1:3-38.
8. Baker L, Cerro LC. Assessing metacognition in children and adults. In G, 2000.
9. Bala Renu Nanda, Kaur Paramjeet. Impact of maternal employment on personality traits of urban adolescents. Indian Journal of Psychometry and Education. 2007; 38(2):148-152.
10. Bandura A. Social foundations of thought and action. New Jersey: Prentice-Hall, 1986.
11. Chahal Nisha. A study of emotional maturity, self confidence and academic achievement of adolescents in relation to their gender and urban-rural background. Rohtak: Maharshi Dayanand University (Unpublished M.Ed. dissertation), 2011.

12. Chang CY, Cheng WY. Science achievement and students' self confidence and interest in science: A Taiwanese representative sample study. *International Journal of Science Education*. 2008; 30(9):1183-1200.
13. Chauhan SS. *Advanced educational psychology*. New Delhi: Vikas Publishing House Pvt. Ltd, 1997.
14. Chhabra Sunita Academic achievement in Hindi in relation to achievement motivation, home environment and attitude towards Hindi. Chandigarh: Panjab University (Unpublished Ph.D. thesis), 2012.
15. Chopra SC. A study of some non-intellectual correlates of academic achievement. Lucknow: Lucknow University (Unpublished D. Lit. thesis) 1982.
16. *Encyclopedia of Education. A comprehensive dictionary of psychology*. New York: Macmillan Company, 1971.
17. Farmer Mary. *The family*. London: Longman group Limited, 1979.
18. Fatima I. Relationship of family climate to academic achievement. Aligarh: A.M.U. (Unpublished M. Ed. Dissertation), 2003.
19. Gupta SC. *Fundamentals of statistics*. Mumbai: Himalaya Publishing House, 2000.
20. Gurubasappa HD. Intelligence and self-confidence as correlates of academic achievement of secondary school students. *EduTracks*. 2009; 8-10:42-43.
21. Joshi S, Srivastava R. Self-esteem and academic achievement of adolescents. *Journal of the Indian Academy of Applied Psychology*. 2009; 35:33-39.
22. Kaur J, Rana JS, Kaur R. Home environment and academic achievement as correlates of self-concept among adolescents. *Studies on Home and Community Science*. 2009; 3(1):13-17.
23. Mandava Neelima. A study of self-confidence and mental health in relation to emotional intelligence of college student. Nagarjuna Nagar, Andhra Pradesh: Acharya Nagarjuna University (Unpublished Ph.D. thesis), 2011.
24. Mathur SS. *Educational psychology*. Agra: Vinod Pustak Mandir, 2001.
25. Nabuka Joeli. The influence of home background variables on the academic achievement of Fijian and Indian students. Presented at Suva Institute for Educational Research, 1984, 14.
26. Nair NS, Sudharma A, Poulouse PJ. Strategies for enhancing metacognition. *Edutracks*. 2004; 3(10):27-29.
27. Singhal M. Reading proficiency, reading strategies, metacognitive awareness and second language learners. *The Reading Matrix*. 2001; 1(1):18-25.
28. Schraw, Impara JC. (Eds.), *Issues in the measurement of metacognition* Lincoln NE: Buros Institute of Mental Measurements, 99-146.
29. Sinha D. *Academic achievement and non-achievers*. Allahabad: United Publishers, 1970.
30. Ziegler Albert, Heller Kurt A. Conditions for self-confidence among boys and girls achieving highly in chemistry. *Journal of Secondary Gifted Education*. 2000; 11(3):144-151.
31. Zimmerman BJ, Bandura A, Martinez-Pons M. Self-motivation for academic attainment: The role of self-efficacy beliefs and personal goal setting. *American Educational Research Journal*. 1992; 29:663-676.