Journal of Education and Practice
ISSN 2222-1735 (Paper) ISSN 2222-288X (Online)
Vol.7, No.4, 2016

Factors Affecting the Academic Achievement: A Study of Elementary School Students of NCR Delhi, India

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Abstract
Aim: The foremost aim of the study was to investigate and analyze the relationship of General Mental Ability, Interest and home environmentwith Academic Achievement.**Methods:**The participants were 110 students drawn from three KendryaVidyalayas of Delhi. Their ages ranged between 13 and 14 with a mean age of 13.6 years. Two validated instruments were used to elicit responses from the participants-General mental ability test prepared by R. K Tandon (1972),Multiphasic Interest Inventory of S. K. Bawa (1998) and Home EnvironmentInventory of K S Mishra (1989) were administered on the selected sample. Whereas their annual examination grades of class VIIwere considered as academic achievement.**Findings:** Four major hypotheses were formulated and tested at 0.01 level of significance. Pearson-Moment Correlation Co-efficient and t-test were used to analyze the data. The study reveals that General Mental Ability, home environmentInterest and academic achievement are significantly and positively correlated. Whereas the high score of girls indicates that they are superior to boys.
Keywords: General Mental Ability, Gender, Home Environment, Interestand Academic Achievements.

Introduction

Academic achievement of students especially at the elementary school level is not only a pointer to the effectiveness or otherwise of schools but a major determinant of the future of youths in particular and the nation in general. Learning outcomes have become a phenomenon of interest to all and this account for the reason why scholars have been working hard to untangle factors that militate against good academic performance (Aremu&Sokan, 2002). This phenomenon has been variedly referred in literature as academic achievement, or scholastic functioning. Academic achievement of learners has attracted attention of scholars, parents, policy-makers and planners. Adeyemo (2001) opined that the major goal of the school is to work towards attainment of academic excellence by students. According to him, the school may have other peripheral objectives but emphasis is always placed on the achievement of sound scholarship. Besides, virtually everybody concerned with education places premium on academic achievement; excellent academic achievement of children is often the expectation of parents (Osiki, 2001).

Gender is one of the personal variables that have been related to the differences found in motivational functioning and academic achievement. Different researcheshave demonstrated the existence of different attribution patterns in boys and girls, such that while girls tend to give more emphasis to effort when explaining their performance (Lightbody, Siann, Stocks, & Walsh, 1996; Georgiou, 1999; Powers & Wagner, 1984), boys appeal more to reasoning ability as cause of their academic achievement (Burgner&Hewstone, 1993). Many researches have also pointed out that girls usually make external attributions for successes and failures, and that when they make internal attributions, these refer not so much to effort, but to ability (Wiegers&Friere, 1977; Postigo, Perez &Sanz, 1999). However, boys usually attribute successes to stable internal causes like effort, thus showing an attributional pattern which enables them to enhance their own image of themselves (Smith, Sinclair & Chapman, 2002).

Researches on gender differences in cognitive processes, intellectual abilities, area of interest, stereotypical perceptions of every-day behaviours and the ability to perform various tasks has been a neglected area. Two theories explaining personality differences between men and women have been proposed. The first suggests that the male is the prototypical human, and females should be understood in relation to men. The second discourses that men represent the cognitive domain, which is positively valued in Euro-American culture, and women represent the less-valued affective realm (Klein, 2004). The differences in the scholastic achievements of boys and girls are generally attributed to biological causes and/or to cultural and stereotypes (Klein, 2004).

The last two decades have been devoted to addressing gender inequality in education (Nayar U 1996). Some studies have shown an all – time low participation of women in education. Educators have therefore expended tremendous efforts in the study of the personal factors affecting academic achievement. A rich harvest of explanation of causes, understanding of cost to the society and possible intervention has brought about several researches, workshops, seminars and training in this area.

The influence of home environment on students' academic achievement at the individual level is still prevalent, but less strong in much of the literature. There is an awareness of the importance of the home environment or family structure on student's academic achievement. The home has a great influence on the

students' psychological, emotional, social and economic state. In the view of Ajila&Olutola (2000), the state of the home affects the individual since the parents are the first socializing agents in an individual's life. This is because the family background and context of a child affect his reaction to life situations and his level of performance. Although, the school is responsible for the experiences that make up the individual's life during school periods, yet parents and the individual's experiences at home play tremendous roles in building the personality of the child and making the child what he is. Thus, Ichado (1998) concluded that the environment in which the student comes from can greatly influence his performance in school.

The state of the home may affect individual since the parents are the first socializing agents in an individual's life. This is because the family background and context of a child affect his reaction to life situations and his level of academic achievement. Since no nation can rise above the level of education of her citizens.

Interest is defined by Typhoon International Corp. (2004: 662) as the ―attention with a sense of concern; lively sympathy or curiosity; and the power to excite or hold such attention (in something). "Interest plays an important role in the field of psychology as a number of researches have showed that it is related to personality, motivation, cognition, development, emotion, vocations, aesthetics, behavior, hobbies, reasoning, and information processing (Silvia, 2006). A few studies have found interest to be a factor that relatively influences reading and text processing. Though there is evidence that seductive details of interest has detrimental effect as it impairs comprehension; interest promotes comprehension and memory for several reasons: interest increases attention to a text; interest makes people process a text more deeply; and interest promotes good meta-cognitive strategies" (Silvia, 2006).

"Interest in learning, could most probably be a very powerful affective psychological trait and a very strong knowledge emotion as well as an overwhelming magnetic positive feeling, a sense of being captivated, enthralled, invigorated and energized to cognitively process information much faster and more accurately in addition to most effective application of psychomotor traits like self-regulatory skills, self-discipline, working harder and smarter with optimum persistence" (Kpolovie, 2010a). He recommended the need of conducting more researches for ascertaining the actual role that interest in learning plays in students' academic attainment at all levels of the educational system.

The nature and strength of one's interest in learning and in schooling may represent an important aspect of personality (Anastasi&Urbina 2007). The characteristic, interest, may substantially influence educational and occupational achievement, interpersonal relations, the enjoyment one derives from leisure activities, and other major phases of daily living. Values are clearly related to life choices and are often discussed in conjunction with interests and preference. From the view point of the student and what he intends to achieve educationally, a consideration of his interest might be of practical significance. The interest must be there for him to devote time for his study.

Growing knowledge leads to growing interest as new information increases the likelihood of conflict (i.e., conflict of coming across a fact or idea that does not fit into what the individual has already learnt) (Silvia, 2006; Paul, 2014). The more a person knows or learns about a domain, the more interesting the domain becomes to him. This is most probably because of the phenomenon of more learning leading to more questions, which in turn increases learning.

Thus this study is set to investigate Intelligence, Interest, Gender and Home environment as correlates of students' Academic achievement. Home environment is strongly associated with many measures of childhood cognitive and academic achievement, including IQ (Liaw and Brooks-Gunn, 1994 ; Smith, Brooks-Gunn, and Klebanov, 1997), achievement test scores (Brooks-Gunn, Guo, and Furstenberg, 1993), grade retentions and functional literacy (Baydar, Brooks-Gunn, and Furstenberg, 1993). These effects are typically quite substantial: in one study, SES was found to account for approximately 20% of the variance in childhood IQ (Gottfried, Gottfried, Bathurst, Guerin, and Parramore, 2003.

Significance of the study

Educators have expended remarkable exertions in the studying the personal factors on academic achievement of students. Sex related issues have contributed greatly to the creation of gender crisis by providing unequal opportunities for males and females. Similarly,gender and home environment differences in academic achievement will offer educators of young adolescents thought-provoking information on implications and guidance specific directions to take; need for parents to be exposed to parenting skills and their duties towards their children academics; parents will be able to encourage and support their children learning through purchase of learning materials and using of various learning websites and that learning is factual for both the sexes.

Research Questions

The following four research questions guided the study.

1. Is there a difference in academic achievements of boys and girls?
2. What is the relationship between students'General Mental Ability and their academic achievement?

3. What is the relationship between interest in learning and their academic achievement?
4. What is the relationship between the home environmentof students and their academic achievement?

Research Hypotheses

Ho_1. There is no significant difference betweenAcademic Achievementof boys and girls.
Ho_2.There is no significant relationship between Intelligence and Academic Achievement of Students.
Ho_3There is no significant relationship between Interest and Academic achievement of Students.
Ho_4. There is no significant relationship between Home environmentand Academic achievement of Students.

Methodology

The study used descriptive research design in form of an ex-post-facto method. None of the variables was manipulated. Instead, an objective description of the phenomenon was done.

Sample

110 students from both the sexes (Boys=55 and Girl=55) studying in class VIII in KenderyaVidyalayas of Delhi were selected randomly for the study. General mental ability test constructed by R.K. Tondon(1972), Multiphasic Interest Inventory of S. K. Bawa (1998) and Home Environment Inventory of K S Mishra (1989) respectively were administered on the selected sample, whereas their annual examination grades(converted into Score) of class VII were considered as academic achievement.

Table 1 Significance of 't' of Boys and Girls in respect to Academic Achievement Score.

Variables	N	Mean	SD	Df	t value	Significant
Achievement Score of Girls Students	55	479.71	20.4	108	3.99	**
Achievement Score of Boys Students	55	470.48	23.3			
	**.Significant at the 0.01 level					
	*.Significant at the 0.05 level					

Table 1 reveals that the mean score of the boys is lower than the girls. It means that girls are superior in academic achievement. It may also be seen that the value of't' is significant at p <.01 level. This indicates that the achievement score of girls and boys differ significantly. Thus, the Null Hypothesis that there is no significant difference in the academic achievement of boys and girls is rejected. Looking at the analytical pictures of mean score, it can be concluded that girls are bright in academic.

Table 2 Correlation Matrix of the variables- General Mental Ability,Home Environment,Interest and Academic Achievement of students (N =110)

S. No.	Variables	1	2	3	4
1.	General mental ability	1			
2.	Home Environment	.80**	1		
3.	Interest	.78**	.64**	1	
4.	Academic Achievement	.83**	.71**	.68**	

Note:** P‹ .01, *P‹.05

Analysis of the Results

It may be observed from Table 2 that general mental ability is significantly and positively correlated with the academic performance of the students r = .83. Hence, it may be concluded that IQ and achievement increases or decrease proportionally. Thus, the above stated hypothesis that there is no significant relationship between General Mental Ability and Academic Achievement of Students is rejected. Results appear to be in the line with the findings of Tharyani, D.K. (1986) , (Tyagi H. 2001) who found correlation to be significant between Intelligence and academic achievement.

Table 2 indicates that home environment is positively correlated with academic achievement of students (r =.71). There is no significant relationship between Home environment and Academic achievement of Students is rejected**.**

This result indicates that the home or family structure has a great influence on the students' academic achievement. It is generally reported that the un-conducive home environment reduces the possibilities of learning capabilities. As shown in the analysis, Home Environmentof students is significantly correlated with the Academic Achievement.

These results are similar to those of Sinha (1991) and Muola(2010) who found that academic achievement of the students depend on conducive environment. Findings of the present study also tend to support those of Rubinstein (1996) who established an association between Home Environment and academic achievement. Bacete et.al (2001) also showed that the involvement of parents in school activities is directly associated with the academic achievement of the students. The present findings are also supported by the

findings of Murphy, S (2009) andTyagi H (2001) who found that parental encouragement has positive and significant relationship with academic achievement.

It may be seen from table 2 that Interest of students is positively correlated with academic achievement of students (r =.68). Therefore the null hypothesis that there no significant relationship between Interest Score and Academic achievement of Students is rejected. Henceforth it may be concluded that high score in achievement shows high level of interest of students towards the studies. The current findings equally tend to agree with the works of Harackiewicz, Durik, Barron, Linnenbrink-Garcia and Tauer (2008) on influence of interest on academic and professional performance; Loewensein (1994) on interest and curiosity in learning; Alamieyeseigha and Kpolovie (2013), U.S. Department of Education (2010a; 2010b) as well as Hayden, Ouyang, Scinski, and Bielelfeldt (2011) on interest and better preparation of the U.S. workforce to acquire extra skills in science, technology, engineering and mathematics. Emerick (2007) had also provided empirical support for relating the individual's perception of his inadequacy in school learning to the development of related interests, attitudes, and academic self-concept. The results of Krapp, Schiefele and Winteler (2009) and Krapp (1999) on the group of factors that influence achievement which is largely dominated by interest are also supported by the findings in the current work.

Conclusion

Based on the foregoing findings and discussion, it can be concluded that this investigation has indeed revealed overwhelming preponderance of data-based evidence that students'interest in learning and home environment of students predict academic performance in the elementary level examinations conducted by KVS on CBSE guidelines in the prescribed subjects (syllabus) that operationally constituted academic performance in this study. The findings of this study, persistent academic achievement of elementary school students may be due to fairly good Home environment and Interest of the students in the studies. Therefore, there is a hope that with the improvement in the available facilitieslike free books, uniform, educational counselling and mid-day meal particularly to the girl students will bring qualitatively changes in their academic.

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