Developing Country Studies
ISSN 2224-607X (Paper) ISSN 2225-0565 (Online)
Vol 2, No.1, 2012

A Study of Home Environment and Reasoning Ability among Secondary School Students

Bandhana, Sr.Lecturer,

KCS College of Education (Women), Jammu

Mobile:-09419108959

*E-mail:bandhana1@gmail.com

Darshana P.Sharma

University of Jammu, Jammu.

Mobile:-09419106715

darshanapsharma@yahoo.co.in

Abstract

The improvement of reasoning ability has been highly valued as a major educational goal. This ability is increasingly needed in this era of science and technology and the home environment is one of the important components in developing this ability of the child. This study is an attempted to study the impact home environment on reasoning ability of secondary school students. Inheler, Piaget, Milgram, & Parsons (1958) claims that the development of reasoning ability in individuals have been shown to be correlated with a multitude of variables, some related directly or indirectly in context to Piaget's cognitive theory of development. The sample of the present investigation was drawn from government and private schools of Jammu city and comprised of 250 students (121 girls and 129 boys). Reasoning Ability Test developed and validated by Dr. L.N. Dubey, Home Environment Inventory developed and validated by Dr. Karuna Shankar Misra was used in the study, and results revealed that the students with high home environment have higher level of reasoning ability in comparison to one's having low home environment. Furthermore, it was revealed that private school students have higher level of reasoning ability in comparison to the one's belonging to the government schools.

Keywords: Reasoning ability, Home environment, Secondary school students

Introduction

Reasoning is recognized as the core element of human nature, whether it is in the teachings of Socrates, Confucius, or Buddhism (Chen, 2000). A goal of education is to prepare citizens with reasoning skills and to create society that is more rational or culture. The nature of reasoning skills and the reasoning skills improvement approaches have brought increasing concerns of educators, psychologists, and philosophers for decades (Kemler, 1998). Reasoning skills are recognized as the key abilities for human being to create, learn, and exploit knowledge. These skills are also an important factor in the process of human civilization. Therefore, the importance of reasoning skills has been of great concern in educational settings and the world of work. The era of information explosion is filled with ever changing and confusing information fragments, and multiple values (Bauman, 1999; Beck, 1992; Rorty, 1989). It becomes increasingly important to improve reasoning ability through lifelong learning in response to such challenges and lead a meaningful life, and construct a rational better world (Shu, 2000). Therefore, current educational systems across the world have recognized the need to enhance students' reasoning ability (European Commission, 1995; Greenan, 1994; Moshman, 1990; Wu, 2001). While endeavoring to improve reasoning skills, several questions need to be clarified: "How do students learn

reasoning skills?" and "How should reasoning skills be taught and assessed in various technical education programs **is of importance** (Stasz & Grubb, 1991)? Reasoning ability is referred to as specialized thinking involving well-organized systematic steps for mental exploration of a cause and effect relationship for solution of a problem. Garret (1968), "Reasoning is step wise thinking with a purpose or a goal in mind." It plays a significant role in one's adjustment to one's environment. It is essentially a cognitive ability and is like thinking in many aspects.

Considerable research evidence suggests that parents' behavior with their children-stimulation, consistency, moderation and responsiveness- influence the children's cognitive and social development (Clarke-Stewart, 1983). The home environment is important in developing the personality of child. There is a face-to-face contact between the parents and children, which determine the personality and character of child, and developing upon the status of parent's active relations and other social set up of home. . The families not only socially recognized relations for the child rearing and essential agency of child's socialization and introducing the child to the culture of society to which he belongs. The role of heredity and environment in creating differences among human beings is a matter of debate. The hereditarianism claims that heredity is everything. The environmentalists are of the opinion that heredity does not any way affect the growth and development of an individual. Man is the product of his environment. Thinking on these lines, "Watson, one of the prominent environmentalists declared,'' Give me any child, I will make him what you desire''. However, if we assume that the heredity and environment both play a role in human development then Woodworth and Marquis (1948) **very old reference** put it like this-the relation of heredity and environment is not like addition but more like multiplication. Family being the first and major agency of socialization has great influence and bearing on the development of the child. It has been shown by various studies that most of the children who are successful /great achievers and well-adjusted come from the families where sustaining wholesome relationships exist. Therefore, it is the home, which sets the pattern for the Childs' attitude towards people and society, aids intellectual growth in the child and supports his aspirations and achievements. A highly significant positive relationship between the variables of academic achievement and family scores has been assessed (Shaha **&** Sharma, 1984). Studies have revealed that high home environment groups achieved greater success than middle and low home environment groups (Jagannathan, 1986). Children are our future. Some people hear and believe the words of Whitney Houston, "Treat them well, and let them lead the way." Words written by many prominent **observers t**ell us we are not treating the children of our nation very well at all. Our culture continues to reveal a "moral free fall" (Dobson, 1999). The home environments for children continue to change. Changes in the family culture affect the home environment. Studies (Baharudin & Luster, 1998; Featherstone & Cundick, 1992; Watkins, 1997) have shown that the home environment affects the academic achievement in children. Many people are raising children and looking to others for answers, whether it is day care centers, schools, evangelists, counselors, or the government. Shifting the blame for children's problems and decreasing parental responsibilities are becoming a societal norm. Traditionalists view these shifts as clear signs that we have lost our moral compass; that our society is doomed if we do not find our way back to what are called family values ("Decline and Fall," 1997). Change in the home environment affects many aspects of family life. Establishing a daily routine is difficult in a hurried generation. Monitoring out-of-school activities has decreased for latchkey children. The socioeconomic status (SES) of parents, their education, and the contacts they make with the schools affect how they encourage children's development and progress in school. The amount of parent interest and time directly affect the amount of reading, writing, and discussion between family members.

Several studies (Baharudin, 1998; Gerris & Dekovic 1997; Harris & Liebert 1987; Hines 1997) show the role of the family and the specific interactions between a child and parent have been determined to be powerful indicators of development. Some specific interactions include regular family discussions, encouragement, limit setting, warmth, daily routine, praise, and intellectual stimulation. These studies have shown all of these connections to produce an impact on academic achievement. Children have an unbelievable thirst for knowledge. If parents do not tap into that drive in early childhood it could be lost before the children even enter the school system. The parents that do not foster learning are easily identified. It is truly amazing how little children mention their parents. Parents' encouragement to achieve and interest in school performance are significantly related to student motivation and student achievement (Hawley et al., 1984). Hawley cited Walberg when he found: What might be called "the curriculum of the home" predicts academic learning twice as

well as the socioeconomic status of families. This curriculum includes informed parent/child conversations about everyday events, encouragement and discussion of leisure reading, monitoring and joint analysis of televiewing; deferral of immediate gratification is to accomplish long-term goals, expressions of even occasional doses of caprice and serendipity. In 29 controlled studies conducted during the past decade, 91% of the comparisons favored children in programs designed to improve the learning environment of the home over children not participating in such programs. Although the average effect was twice that of socioeconomic status, some programs had effects 10 times as large.

Because few of the programs lasted more than a semester, the potential exists for even greater benefits from programs sustained over all the years of schooling. Rosenblatt (1990) spoke about the importance of taking time for children and playing with them. He quoted Neitzsche when he said that there is nothing as serious as a child at play is. The decision parents make to either thrust themselves into their children's worlds of amusement or allow them to be unsupervised will make a profound impact on the children's life. Walberg, Bole and Waxman (1980) declare the importance for families to share interests in hobbies, activities and games. Reading material should be abundant and discussed on regular intervals. Dubow, Tisak, Lausey, Hsyshko, and Reid (1999) found that parental emotional and practical support predicts positive outcome like high social cognition, better self-esteem and intellectual competence. Researchers have only begun to explore the relationship between home and school experiences of Mexican-American adolescents (Plunkett & Bámaca- Gómez, 2003); however, scholars have identified several parenting variables that are related to academic outcomes in adolescents such as parental support, parental monitoring, parental involvement and parental ability to help (education levels) (Plunkett and Bámaca-Gómez, 2003). **A** study **carried out** by Nelson and Low (2004) revealed the importance of emotional intelligence during transition period of high school graduates in the first year of college. They emphasized the importance of emotional intelligence skills as influencing variables in students' achievement and retention. Parker, Summerfeldt, Hogan and Majeski (2004) found emotional intelligence a predictor in identifying academically successful and academically unsuccessful students during transition period. A **recent study** conducted by Jaeger and Eagan (2007) revealed Interpersonal, Stress Management and adaptability scales of BarOn EQi as significant predictors of academic performance of students in the first year of university. Abdullah (2006) also found that some dimensions of emotional intelligence significantly predict academic performance of college students.

Objectives of the study

i) To find significant differences in reasoning ability among secondary school students belonging to high and low home environment groups.

ii) To find significant sex differences in reasoning ability among secondary school students.

iii) To find significant differences in reasoning ability among students studying in government and private secondary schools.

iv) To find significant interaction between home environment and sex among secondary school students with reasoning ability as the dependent variable.

v) To find significant interaction between sex and type of school among secondary school student with reasoning ability as the dependent variable.

vi) To find significant interaction between sex and type of schools among secondary school students with reasoning ability as the dependent variable.

vii) To find significant interaction between home environment, sex and type of schools among secondary school students with reasoning ability as the dependent variable.

Hypotheses of the study

(i) There will be no significant differences in reasoning ability among secondary school students belonging to high and low home environment groups.
(ii) There will be no significant sex differences in reasoning ability among secondary school student.
(iii) There will be no significant differences in reasoning ability among students studying in government and private secondary schools.
(iv) There will be no significant interaction between home environment and sex among secondary school students with reasoning ability as the dependent variable.
(v) There will be no significant interaction between home environment and type of school among secondary schools students with reasoning ability as the dependent variable.
(vi) There will be no significant interaction between sex and type of school among secondary school students with reasoning ability as the dependent variable.
(vii) There will be no significant interaction between home environment, sex and type of school among secondary school students with reasoning ability as the dependent variable.

Method

Sample

The sample of the present investigation was drawn from eight government and private schools of Jammu city. The sample comprised of 250 students (121 girls and 129 boys) and was drawn by stratified random sampling technique.

The investigator used following tools in the present study:

Reasoning Ability Test developed and validated by Dr. L.N. Dubey. The test has predictive value of reasoning ability. Reasoning ability is highly correlated with problem solving and mathematical ability. With the help of this test, we can found that whether the child is capable of solving problems. It also enables us to find the ability to see the cause-and-effect. This test can be used on students who are performing for service selection boards. High reasoning ability indicates high intelligence. There are sixty questions in the test. First 40 questions are of number series and there are two answers in each question. One mark for each correct answer should be awarded. In the same way for remaining 20 questions, one mark for each correct answer. The time limit to complete the test is only 60 minutes.

Home Environment Inventory developed and validated by Dr. Karuna Shankar Misra Prof. & head, department of Education, Allahabad University, Allahabad. The Home Environment Inventory is an instrument designed to measure the psychosocial climate of home as perceived by children. It provides a measure of the quality and quantity of the cognitive, emotional and social support that has been available to the child within the home. HEI has 100 items belonging to ten dimensions of home environment. The ten dimensions are (A) control, (B) Protective (C) Punishment (D) Conformity (E) Social isolation (F) Reward (G) Deprivation of privileges (H) Nurturance (I) Rejection and (J) Permissiveness. Each dimension has ten items belonging to it. The instruments requires pupils to tell the frequency with which a particular parent –child interaction behaviour has been observed by them in their homes i.e. he/she is requested to tell whether a particular parental behavior (as mentioned in an item) occurs- 'Mostly', 'often', 'sometimes', 'least', and 'never,'. There are five cells belong to five responses. Assign 4 marks to ,mostly',3 marks to 'often', 2 marks to 'sometimes',1mark to 'least', and 0 mark to 'never' responses. Count the marks assigned to A,B,C,D,E,F,G,H,I and J dimension. There is no time limit to complete this tool, but on an average participant took 30 minutes to complete the tool.

Results.

Table 1 displays the results of our comparisons

Summary of Three– Way ANOVA for (2 × 2 × 2) Factorial Design for Reasoning Ability Scores

Source of Variation	**SS**	***df***	**MS**	**F**	**Significance**
Home Environment	1602.05	1	1602.25	20.98	Significant at .01 level
Sex	92.45	1	92.45	1.21	NS
Type of School	4118.44	1	4118.44	53.93	Significant at .01 level
Home Environment x Sex	9.75	1	9.75	0.13	NS
Home Environment X Type of School	204.81	1	204.81	2.68	Significant at .01 level
Sex & Type of School	51.21	1	51.21	0.67	NS
Home Environment × Sex × Type of School	54.5	1	54.5	0.71	NS
Within	5498	72	76.36		
	11631.2	**79**			

Table 2Showing the Mean Values of Home Environment in different group with N = 10 in each cell

	High Home Environment	**Low Home Environment**	**Combined**
Boys	57.5	47.5	52.28
Girls	58.6	50.35	54.48
Combined Mean	57.88	48.92	

Table 3

	Government Schools	**Private Schools**
Boys	44.35	60.3
Girls	48.1	60.85
Combined Mean	46.23	60.57

Interpretation

Perusal of Table 1 reveals that the value of F for the main effect home environment is 20.98, which is significant at.01 level of significance for df 1 and 72. It can thus, be inferred that there are significant differences in reasoning ability among secondary school students belonging to high and low levels of home environment.

Furthermore, Table 2 shows that the mean values of reasoning ability among students from high and low home environment groups are 57.88 and 48.93 respectively. It can thus, be said, that the students with high home environment have higher level of reasoning ability in comparison to one's having low home environment , their mean values of reasoning being 57.88 and 48.93 respectively. Hence, the hypothesis that there will be no significant differences in reasoning ability among high and low home environment groups was rejected.

Review of Table 1 also reveals that value of F for the variable for sex is 1.21 which is insignificant at .05 level of significant for df 1and 72.It can thus be said , that there are in significant sex differences in reasoning ability among secondary school students. Hence, the hypothesis that there will be insignificant sex differences in reasoning ability among secondary school students stands accepted.

In this connection Perusal of Table 1 reveals that the value of F for the variable of Type of school is 53.93 which is significant at .01 level of significant .It can thus, be inferred that there are significant differences in reasoning ability among secondary school students belonging to government and private schools.

Furthermore, Table 3 indicates that the mean value of reasoning ability government and private school students are 46.43 and 60.57 respectively.

It can thus, be said that private school students have higher level of reasoning ability in comparison to the one's belonging to the government school, the mean values of reasoning ability being 46.43 and 60.57 respectively. Hence, the hypothesis that there will be no significant differences in reasoning ability among students studying in government and private schools stands rejected.

A review of Table 1 presents that the values of F for the interaction between home environment and sex with reasoning ability as the dependent variable is not significant (F = 0.13). Thus, it means that variable home environment and sex is independent of each other with reasoning ability as the dependent variable.

Hence, the hypothesis that there will be no significant interaction between home environment and sex among secondary school students with reasoning ability as the dependent variable was accepted.

Review of Table 1 further shows that the value of F for the interaction between home environment and type of school is 2.68, which are significant at 0.01 level of significance. It means **that t**he variable home environment and types of schools are not independent of each other with reasoning ability as the dependent variable.

Hence, the hypothesis that there will be no significant interaction between home environment and type of school among secondary school students with reasoning ability as dependent variable was rejected.

Table 1 also shows that the value of F for the interaction between sex and type of school with reasoning ability as the dependent variable is 0.67 is insignificant .Thus, the variable of sex and type of schools are independent of each other with reasoning ability as the dependent variable among higher secondary school students.

Hence, the hypothesis that there will be no significant interaction between sex and type of school among secondary school students with reasoning ability as the dependent variable was accepted.

Review of Table 1 further shows the value of F for the interaction between home environment, sex and type of school with reasoning ability as the dependent variable is 0.71, which is also insignificant, as, it is less than the Table value of F at .05 level of significant i.e. for df 1 and 72.

Hence, it can be said that the variables of home environment, sex and type of schools are independent on each other with reasoning ability as the dependent variable among secondary school students.

Hence, the hypothesis that there will be no significant interaction between home environment, sex and type of schools among secondary school students with reasoning ability as the dependent variable **was** accepted.

Discussion

Solution pertaining to the problem taken in hand can be solved by using different stages of research. The proper data analysis and its interpretation lead to drawing out most valid and justified conclusions. There were significant differences in reasoning ability among secondary school students belonging to high and low levels of home environment. The students with high home environment have higher level of reasoning ability in comparison to one's having low home environment. Development of reasoning ability is very important in the era of hard competition. Reasoning skills are recognized as the key abilities for human being to create, learn, and exploit knowledge. The research in the field of home environment and reasoning ability of students has made to believe that home environment affects the reasoning ability of students. This generalized fact over different periods is corroborated empirically. In other words, it may be said that the children who have better home environment have high level of reasoning ability. Reasoning is dynamic cognitive processes involving cultural backgrounds and issue contexts. Reasoning skills assessment should not be globally standardized, but localized and diverse due to personal characteristics and cultural differences. The Reasoning skills improvement needs the beneficial environment at home and opportunities to encourage children to critically think and self-reflect on the multifarious values. Doronila (1998) highlights the fact that students need to develop a "range of skills and competencies which would enable them to live and work as human persons, develop their potential, make critical and informed decisions, and function effectively in society". Education experts and teachers agree that students learn skills more efficiently when they are assisted and helped by experts and mentors. This perspective is theoretically grounded in Vygotsky's theory of the Zone of Proximal Development in student learning and in the concept of "scaffolding". Vygotsky (1978) emphasizes that a student's cognitive development is a result of a dialectical process involving a student who learns better when helped by a mentor such as teachers and parents. Studies have also noted how support, aid, or "scaffolding" provided by experts or parents to children who are learning how to carry out a task is very important in these children's learning.

References:

Baharudin, R., & Luster, T. (1998). Factors related to the quality of the home environment and children's achievement. Journal of Family Issues *9*(4) 375-404.

Bauman, Z. (1999). Postmodernity and Moral and Cultural Crisis. In Zygmunt Bauman. In Search of Politics. pp140~153. Oxford： Polity.

Beck, U. (1999). World Risk Society. .*USA* Policy Press Blackwell Publishers Ltd.

Blooms, B.S. (1984). The search for the method of group instruction as effective as one to one tutoring. Educational Leadership, 41 (8), 4-17

Chen, T. C. (2000). Technology, reasoning, and freedom: Modern and postmodern conditions. Taipei: Laureate (In Chinese).

Clark-Steward,A.(1983). Exploring the assumptions of parental education.Parent education and polcy,edited by R.Haskins and D.Adams. Norwood,NJ: Ablex.

Decline and Fall. (1997), Canada & the world backgrounder, 62(5), .12-14.

Doronila, M. L. (1998). The emergence of schools of the people and the transformation of the Philippine educational system. U.P. CIDS Chronicle, 3.

Dubow,E,F. *et.al* (1991). A two-year longitudinal study of stressful life events, social support, and social problem-solving skills: contributions to children's behavioral and academic adjustment. Child development,2(3).583-99

Featherstone, D., & Cundick, B. (1992). Differences in school behavior and achievement between children from intact, reconstituted, and single-parent families. **27(105), 1-13**

Gerris, J., & Dekovic, M. (1997). The Relationship between Social Class and Childrearing Behaviors: Parent's perspective taking and value orientations. Journal of Marriage & the Family, 59(4), **834-848.**

Harris, A., & Gibbon, R. (1996, Sep/Oct). Start smart. Family life, 80-82

Hawley, W., Rosenholtza, S., Goodstein, H., & Hasselbring, T. (1984). Good schools:What research says about improving student achievement. Peabody Journal of Education, 61, 117-124.

Henderson, A.T., & Berla, N. (1994). A new generation of evidence: The Family is critical to student achievement. Columbia, MD: National Committee for Citizens in Education.

Hines, A. (1997). Divorce-related transitions, adolescent development, and the role of the parent-child relationship: A review of literature. Journal of Marriage & the Family, 59(2), 375-389.

Inheler,B., Piaget,J.,Milgram,S.& Parsons,A.(1958). The growth of logical thinking from childhood to adolescence, New York: Basic Books.

Kemler, W. (1998). Sabbatical leave Report: Suggested Guidelines for Selecting or Creating Program to Enhance Thinking and Reasoning Skills (ERIC information No. ED339431

Plunkett, S.W., & Bamaca-Gomez, M.Y. (2003). The relationship between parenting, acculturation, and adolescent academics in Mexican-origin immigrant families in Los Angeles. Hispanic Journal of Behavioral Sciences, 25, 222-239.

Rorty, R.,(1989).Contingency, Irony, and Solidarity. Cambridge: Cambridge University Press,UK

Rosenblatt, R. (1998, July). Time, p. 90.

Shaha, R. and Sharma, A. (1984): A study of the effect of family climate on students' academic achievements. Inst, Edu. Res., 8(3).11-15.

Shu, Y. M. (2000). Postmodern and Moral Education. Bulletin of the National Institute of Educational Resources and Research： Special Issue of Moral Education.

Vygotsky, L.S. (1978). Mind and society: The development of higher mental processes. Cambridge, MA: Harvard University Pres

Walberg, H., Bole, R., & Waxman, H. (1980). School-based family socialization and reading achievement in the inner city. Psychology in the Schools, 17, 509-514

Watkins, T.J. (1997). Teacher communications, child achievement and parent traits in parent involvement models. *Journal of Educational Research* 91 (1), 3–14.

Wu, M. (2001). The identification of reasoning skills mechanism, Educational Research Monthly, 83, 72-93