



ENVIRONMENTAL IMPACT AND ACQUIRED MENTAL INABILITY



Dr. Abhimanyu R. Dhormare

Dept. of Psychology,
Babuji Avhad Mahavidyalaya,
Pathardi, Dist - Ahmednagar (Maharashtra)
Email ID : ardcana@gmail.com

ABSTRACT

The purpose of this study was to examine the inability to use the mental abilities or acquired knowledge due to the environmental impact and to examine whether this environmental impact produces/developed acquired mental inability in students (persons). To conduct this study 60 male students (10th class) were selected as sample of simple random sampling method of probability sampling. This study was separately done in two

experimental phases and conclusions were drawn.

Experimental Phase I:

In this phase students were manipulated using Ojha and Raychoudharys verbal intelligence test and after manipulation they were classified into three groups i. e. , Normal, Superior and Very superior. By manipulation social setting confederates different environmental condition was created for each group and the effect of created environmental condition was

studies with reference to educational achievement.

Experimental Phase II:

Taking into consideration the in previous educational achievement each students and students were classified in three groups i. e., lower, medium and higher educational achievement. Each group was given separate instructions about examination and after instructions observed students behaviour in

examination hall as well as their examine educational achievement.

Conclusion:

1) The students use his abilities and knowledge only when there is healthy environment. 2) Due to impact unhealthy environment, the student is enabling to use / utilize his abilities and knowledge, and 3) Impact of environmental affect the inborn abilities of the students which results into acquired mental inability.

KEYWORD

Environmental impact, acquired mental inability

RESEARCH PAPER

Introduction

One of the longest and at times most contentious, debates in Western intellectual history concerns the relative influence of genetic and environmental factors on human behavioral differences, the so-called nature-nurture debate (Degler, 1991). Remarkably, the past generation of behavioral genetic research has led many to conclude that it may now be time to retire this debate in favor of a perspective that more strongly emphasizes the joint influence of genes and the environment. According to psychological research, biological boundaries of human personality and abilities determine by heredity where as development inside the boundaries determined by the environment

(Honzik, 1978; Ramey & Campbell, 1979; Skeels, 1996; Wachs & Gruen, 1982; Gottfried, 1984).

But, according to recent research show that brain is a learning organ and it is a continuous developing and evolutionary organ. Brain research indicates that the brain does not act as a computer, in a linear fashion, as some educators previously thought. Rather, the brain uses multiple strategies to create meaning (Caine, 2000; Caulfield et al., 2000; Slavkin, 2004). In particular, the concept of neural plasticity posits that the brain is continually rewiring itself throughout our lives to access new memories and experiences. Accordingly, brain-based instruction must also be 'rewired' on a

continual basis to remain effective. In short, behaviour of human being decided by brain, brain behaviour decided by genes and genes behaviour decided by stimulus in environment or changes in behaviour. Therefore this debate not nature verses nurture that is nurture verses nurture.

In the concept proposed by social learning theorist Martin Seligman of learned helplessness this thing is indirectly point out. Because according to learned helplessness theory, people exposed to uncontrollable events learn that their responses and outcomes are independent of each other. This learning can lead to an expectation that responses will be futile and can generalize to new situations to interfere with future learning (Seligman, 1975). Recent laboratory investigations have shown that induced helplessness is sometimes general (e.g., Hiroto & Seligman, 1975) and sometimes circumscribed (e.g., Cole & Coyne, 1977). It is very necessary for the human abilities and personality development to connection between to heredity and environment. People cannot reach up to self actualization need those struggled extremely in childhood about love, independency, hate and control (Maslow, 1968). Mental set is also an environmental influence, results in to rigidity in thinking. In the experiment of mental set, effect of mental set is

verified by control the subjects experience or by providing the verbal instructions. This effect of mental set can be advantageous or disadvantageous (Maier, 1930; Luchins, 1942; Duncker, 1945).

As per above modern research related to brain one thing can be find out that persons with different mental abilities can be used his / her abilities in better way or may be failure to use that abilities due to environmental influence.

Mental ability sometimes called cognitive ability represents a person's brain power in different areas of competency. Some typical mental abilities include verbal reasoning, mathematical reasoning, spatial reasoning and logical reasoning. Sometimes, psychomotor skills such as reaction time are also considered to be mental abilities. In general, however, psychologists agree that the term mental ability describes a person's ability to learn and remember information, to recognize, concepts and their reaction and to apply the information to their own behaviour in an adaptive way (Neisser, et.al. 1996).

According to swami Vivekananda, 'Education is the manifestation of the perfection already in man. It means Swami Vivekananda expected wholesome development of child's innate abilities throughout the education process. Hence as much education process is influence, effective and standard, the development of

innate abilities are possible, because without intellectual stimulation the development of these innate abilities are not possible, so as per every child the school, family and altogether all social environment should be prosperous /plentiful.

Person use only ten percent of total intellectual, if we accept this thing for some time, we not get the answer which part he / she used main because in modern research this is proved that intelligence is not a unique, it is a combination of different types of intelligence (Gardner, 1993; Carey, 2002; Dubin, 2002; Carter, 2003). That is a general observation that so many people having different abilities but due to a particular environmental reasons they failure to use the abilities. In short, a tamarind seed having capacity to produce a big tamarind tree but without nutritive environment it cannot be developing. It means so many people not used their mental abilities without environmental effects.

If we give children's readymade toys, for play then children's are stop to make toys by using their imaginations, due to readymade educational aidslike guide, notes, essay, students writes the answers from the books as it is of subjective or open ended questions (analytical and synthesis thinking) and also for the simple calculations by using calculators or mobile

rather than manually, excess use of T.V. , mobile, computer, internet, reading culture is declining and persons are going to be make an introverts. Like these so many environmental things are the due to this person can't use his /her abilities, called as acquired mental inability.

Acquired Mental Inability

Inability to use in born ability due to environmental factors/ circumstances is called as acquired mental inability.

In the present research it has been examine (test out) that whether students are really not able to use their mental abilities or acquired knowledge due to environmental influence and in this view point, the concept of acquired mental inability has been explained.

Objectives

- To examine the inability to use the mental abilities or acquired knowledge due to the environmental impact or influence.
- To examine environmental impact produces/developed acquired mental inability instudents.

Hypothesis

- There is no Inability/obstacle occurs to use mental ability or acquired knowledge due to environmental circumstances

- Environmental circumstances/influences not results in students acquired mental inability.

Method

i) Sample

In the present study sample of 150 students who came for 10th class summer vacation (age group 15 to 17) in a private hostel named as 'Manas Sanskar Kendra', Beed. Ojha & Raychoudharys verbal intelligence test has been used for all students to obtain IQ, and scores are used to categories and select total 60 number of students for experimental phase-I i.e. normal (20), superior (20) and very superior intellectual category (20) by the way of simple random sampling method.

After than for experimental phase II, 60 students has been selected from 'Maui Nivasi Kendra', Beed, also came for 10th class summer vacation (age group 15 to 17). These students are categorized as per last two years educational achievements i.e. low educational achievement (20), average educational achievement (20) and high educational achievement.

ii) Tools

Verbal Intelligence Test - Ojha & Raychoudhary

This scale was developed by Ojha & Raychoudharys in 1993 is an instrument designed to measure the intelligence of the perceived by the adolescences. It contains 112 items related to eight dimensions of

intelligence - classification, analogies, synonyms, number test, completion test, paragraph test, best reasons and simple reasons. Time limit of this test is 40 minutes and this test is satisfactorily reliable and valid.

iii) Procedure

Present research conducted in two independent phases and results are interpreted according to this.

Experimental Phase I:

In this experimental phase Ojha & Raychoudharys verbal intelligence test manipulated on the students from Manas Sanskar Kendra, Beed, and categorized them in the three groups on the criteria of normal, superior and very superior intellectual.

Group I (normal group 90 to 109 IQ):

Last year we all are passed 10th class with good marks. We studied too much and there is no option for study. We also came from village. In 10th class if we studied from initially then there is no tension occurs at near of the examination. You do study as per our instructions you will become first in the test of first fortnight.

Group II (superior group 110 to 119 IQ):

There is no any special instruction or guidance provided for this group.

Group III (very superior group 120 to 139 IQ):

There is no need to take tension of 10th class examination. Since this is private

hostel for achieve more admissions in next year and for making famous for his hostel, chief of the hostels will bring your passing result with good marks. Paradoxically those goes onward that are not do more study. So don't take tension.

Experimental Phase II:

In this experimental phase, last two years educational achievement checked of 120 number of student who came for summer vacation in the Mauli Nivasi Kendra',Beed, among these 60 number of students are selected i.e. low educational achievement, average educational achievement and high educational achievement . 50 marks fortnight test has been conducted on thought topic for this experimental phase and an independent instruction has been given as per following

in examination hall. Conclusions are drawn from evaluation of the student'sbehaviour in the examination hall and those educational achievements in the test.

Group I (low educational achievement 50to 60%):

Examination has been conducted with paying due attention to avoid copy or misbehavior.

Group II (medium educational achievement 61 to 70%):

No any types of instructions are given.

Group III (high educational achievement 71and above %):

Do anything with keeping silence. By giving these type of instructions studied the performance in the examination hall.

Results

Table 1: Comparison of educational achievement between student of normal intelligence group and superior intelligence group.

Group	N	Mean	SD	df	't' Value	P
Normal intelligence group	20	39.80	3.89	38	5.70**	< .01
Superior intelligence group	20	35.92	5.47			

Table 1 revealed that the value of't' for the educational achievement5.70 which is significant at 0.01 level. It can says, that there are significant differences in educational achievement among normal

and superior intelligence group. Table 1 revealed that normal students more educational achievement in comparison to superior students.

Table 2: Comparison of educational achievement between student of normal intelligence group and very superior intelligence group

Group	N	Mean	SD	df	't' Value	P
-------	---	------	----	----	-----------	---

Normal intelligence group	20	39.80	3.89	38	2.20*	< .05
Very superior intelligence group	20	38.30	5.50			

Table 2 revealed that the value of 't' for the educational achievement 2.20 which is significant at 0.05 level. It can say, that there are significant differences in educational achievement among normal

and very superior intelligence group. Table 2 revealed that normal students more educational achievement in comparison to very superior students.

Table 3: Comparison of educational achievement between student of superior intelligence group and very superior intelligence group

Group	N	Mean	SD	df	't' Value	P
Superior intelligence group	20	35.92	5.47	38	3.21**	< .01
Very superior intelligence group	20	38.30	5.50			

Table 3 revealed that the value of 't' for the educational achievement 3.21 which is significant at 0.01 level. It can say, that there are significant differences in educational achievement among superior

and very superior intelligence group. Table 3 revealed that very superior students more educational achievement in comparison to superior students.

Table 4: Comparison of educational achievement between student of low educational achievement group and medium educational achievement group

Group	N	Mean	SD	df	't' Value	P
Low educational achievement	20	35.33	4.89	38	2.27*	< .05
Medium educational achievement	20	36.92	5.31			

Table 4 revealed that the value of 't' for the variable of educational achievement 2.27 which is significant at 0.05 level. It can thus be said, that there are significant

differences in educational achievement among low and medium educational achievement group.

Table 5: Comparison of educational achievement between student of low educational achievement group and high educational achievement group

Group	N	Mean	SD	df	't' Value	P
Low educational achievement	20	35.33	4.89	38	3.29**	< .01
High educational achievement	20	37.76	6.13			

Table 5 revealed that the value of 't' for the variable of educational achievement 3.29 which is significant at 0.01 level. It can thus be said, that there are significant

differences in educational achievement among low and high educational achievement group.

Table 6: Comparison of educational achievement between student of medium educational achievement group and high educational achievement group

Group	N	Mean	SD	df	't' Value	P
Medium educational achievement	20	36.92	5.31	38	1.12	N.S.
High educational achievement	20	37.76	6.13			

Table 6 revealed that the value of 't' for the variable of educational achievement 1.12 which is no significant at both level of 0.05 & 0.01. It can thus be said, that there

are no significant differences in educational achievement among medium and high educational achievement group.

Discussion

Inability to use of available higher mental abilities for self-development as per situation demands is called as acquired mental in ability.

$p < 0.01$, Normal intelligence and very superior intelligence students ($t'=2.20, df=38, p < 0.05$) and superior intelligent student and very superior intelligence students ($t'=3.21, df=38, p < 0.01$).

This research has completed on very primary level. Contribution of heredity and environmental influence should be considered during the discussion of results of this research. Although various abilities are innate, developments of these abilities are depending upon environmental factors, because evolution in the brain occurs from experience of thousands of years, for example reptilian brain, cerebrum and neo cortex.

Even though the present research has completed at primary level, results occurred from this are in favor / supporting of different previous research. It has been checked in experimental stage 2 whether reasons of misbehavior of the students are instructions provided on the spot in the examination hall. This difference is also found out significant. (Low educational achievement group and medium educational achievement group- ($t'=2.27, df=38, p < 0.05$), low educational achievement group and high educational achievement group

In the present research significant difference noticed in all three groups. (Normal intelligence and superior intelligence students- $t'=5.70, df=38,$

($t=3.29, df=38, p<0.01$), medium educational achievement group and high educational achievement group ($t=1.12, df=38, N.S.$). Besides it is also found out that students among high educational achievement group were doing more misbehavior compared with low educational achievement group and medium educational achievement group. Hence hypothesis No.1 and 2 has not been accepted and it can be said that Inability occurs to use mental abilities or acquired knowledge due to environmental circumstances/Influences, and environmental influence (negative) results in to acquired mental inability or deformity. School environment, peer groups, socio-economical status, no relation between

knowledge and practical life, passivity towards creativity, misbehavior in the examination hall and different places, neglecting by parents, lack of willpower, tendency to go in a particular field, these are the possible causes of acquired mental inability. It will be important to discuss and carry out the future research on these environmental causal factors.

Conclusion

- Person is unable to use the mental abilities in the lack of favourable external environment. (Lack of consolidation of nerve cells in the brain)
- Acquired mental inability generates in the course of environmental influence.

REFERENCES

- Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. D. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology*, 87, 49-74.
- Baker, C. (1999). *A framework for literacy in a brain-compatible environment*. San Francisco: ASCD. (ERIC Document Reproduction Service No. ED 432000).
- Bruer, J.T. (1998). Brain science, brain fiction. *Educational Leadership*, 56(3), 14-18.
- Caine, G. & Caine, R.N. (1995). Re-inventing schools through brain-based learning. *Educational Leadership*, 52(7), 43-47.
- Carey, J. (2002). *Brain facts: A primer on the brain and nervous system*: Society for Neurosciences, II DuPont Circle, Washington.
- Cave, T., Ludwar, J., & Williams, W. (2007) *Brain-based Learning*, University of Lightbridge.

- Chance, P. (2001). The brain goes to school why neuroscience research is going to the heads of the class. *Psychology Today*, September/October 2001, 72.
- D'Arcangelo, M. (2000). How does the brain develop? A conversation with Steven Petersen. *Educational Leadership*, 58(3), 68-71.
- Dale, Fogle, (1978) Learned helplessness and learned restlessness. *Psychotherapy: Theory, Research and Practice*.
- Diamond, Marian; (1999). *Magic trees of the mind: How to nurture your child's intelligence, creativity, and healthy emotions from birth through adolescence*. Penguin, USA.
- Gardner, H. (1993). *Frames of mind: The theory and Multiple Intelligences*: Basic Books, New York.
- Jensen, E. (2000). Moving with the brain in mind. *Educational Leadership*, 58(3), 34- 37.
- Languis, M.L. (1998). Using knowledge of the brain in educational practice. *NASSP Bulletin*, 82(598), 38-47.
- Panse, R., Kshirsagar, R., Deshmukh, A. (2006). *Karta Karwita: Adhunik Mendusanshodhanani Aple Jivan*. Bhartiya Arthvidnyanwardhini, Pune, India.
- Saunders, A. & Vawdrey, C. (2002). Merging brain research with educational learning principles. *Business Education Forum*, 57(1), 44-46.
- Valiant, B. (1996). *Turn on the lights! Using what we know about the brain and learning to design learning environments* (CEFPI Issue Track No. EF-005-146). The Council of Educational Facility Planners. (ERIC Document Reproduction Service No. ED 460568)
- Weiss, R.P. (2000). Brain-based learning. *Training & Development*, 54(7), 21-24. 6
- Winters, C. (2001). *Brain-based teaching: Fad or promising teaching method* (Report No. SP040143). University Park, IL: Governors State University. (ERIC Document Reproduction Service No. ED 455218).
- Wolfe, P. (2001). *Brain matters: Translating research into classroom practice*. Association for supervision and curriculum development, Alexandria.