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Copyright Policy

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EDITORIAL

Howard and Sharp (1983: 6) define research as 'seeking through methodical processes to add to one's own body of knowledge and hopefully, to that of others, by the discovery of non-trivial facts and insights' Education does not occur within a vacuum. It is influenced by social, political, historical, economical, technological and ecological factors. Research alone can help us to explore education and the education process. The research articles in this issue have made a global impact on quality education by discussing vital issues regarding the interventional procedures in classroom teaching.

Dr. Selvakumar and Mrs. Sugantha Esther in their study have proposed an innovative instructional design 'Integrated active learning' and have found that it has a significant role in enhancing the level of thinking skills of students. Binulal in his study on the stress experienced by women teachers ponders on strategies to be worked out to minimise physical and mental strain of women teachers. The study on personality and Achievement in Zoology throws light on the significant correlation between them.

The article on 'Pedagogical designs for optimizing E-learning' by Dr. Sivakumar and Dr. Minnelkodi focuses on the various types of modalities of e-learning activities. Dr. Premila reflects on the positive effects of early educational intervention programmes for visually impaired children. The contributors in this issue have shared their experiences, thoughts and findings which are likely to widen the knowledge of the readers in the specific areas of new learning.

To sustain and strengthen the journey of this journal, the Editor invites from the contributors quality research articles that will have a global bearing on education.

Dr. J.E. Vallabi

Associate Editor.

Research Article

Effectiveness of Integrated Active learning on Students' Thinking skills and Achievement in Chemistry

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Abstract

The main purpose of this study is to propose an innovative instructional design "Integrated active learning (IAL)"and to assess the effects produced by integrated active learning (IAL) designed by the researcher on thinking skills and students achievement in Chemistry against the traditional teaching method. Integrated active learning (IAL) is a class room based learning-goals- driven instructional design. It uses many active learning strategies to fashion active learning environment appropriate to learn chemistry concepts in-depth and to enhance thinking skills simultaneously. Instructional strategies included in IAL framework are intent to create a highly collaborative, learner-centred, inquiry-oriented, thinking and communicating classroom. The study used quasi- experimental research design that is pre-test-treatment (IAL intervention)-post- test-control group. Purposive sampling technique was used wherein the sample were two intact divisions of VIII grade classes, one representing control group and the other representing experimental group, each with a sample of 46 from a private matriculation higher secondary school in Chennai, Tamilnadu. It is evident from the analysis that integrated active learning (IAL) has a significant role in enhancing the level of thinking skills and students' achievement in chemistry against the traditional teaching method.

Keywords: *Teacher Stress, Women Teachers, High School Education, Psychological Stress, Age Differences, Marital Status, Teaching Experience, Educational Management, Survey Study, Occupational Health.*

INTRODUCTION

Bonwell and Eison define active learning as "instructional activities involving students in doing things and thinking about what they are doing." The active learning has become a universally preferred teaching technique to change the traditional teacher- centred into the newer student- centred approach to learning where students are provided with activities to learn by themselves and to think. The present study, "Integrated active learning" (IAL) supports chemistry learning and thinking by the implementation of appropriate active learning pedagogical strategies within the learning environment. The conceptual foundation for the IAL is based on the scientific fact that deep and effective learning is best promoted by situating learning in a goal oriented purposeful engaging activity that is by active learning (Bransford et al., 1999). This integrated approach in science teaching make students to learn science as a product (knowledge) as well as a process, results in a better pedagogy and promote a more holistic learning process.

Chemistry learning essentially includes thinking and Students' scientific understanding of chemistry and requires an increased focus on students' higher-order thinking skills (Anderson & Krathwohl, 2001) that is, applying, analyzing, evaluating, and creating or synthesizing (Bloom, Engelhart, Furst, Hill and Krathwohl, 1956). All students need to employ higher-order thinking skills (Layman, 1996; Zohar, 2004) to acquire scientific literacy for better lifelong learning. More thinking-centred learning (Zohar, 2004) is particularly needed to promote students' understanding in chemistry. When a chemistry student can become an active thinker, learning will become more motivating and will result in improved chemistry understanding. Acquisition of new thinking skills, however, is often a slow and gradual process (Kuhn, Garcia-Mila, Zohar & Andersen, 1995; Siegler & Jenkins, 1989; Zohar, 2004). Students need learning environments that stimulate their thinking skills and such an environment can be provided by using suitable active learning strategies in chemistry classroom. It engages students in the learning and thinking process simultaneously. Use of these techniques in the classroom is vital because of their powerful impact upon students' learning and thinking.

Significance of the study

"The whole of science is nothing more than a refinement of everyday thinking". -Albert Einstein

The perennial issues in teaching core subject like science are what and how students learn and how they are taught. Chemistry teaching, as it is practiced, has often been focused on

chemistry as a product that is facts, vocabulary, definitions and algorithms, rather than on higher-order thinking through practical work or inquiry within authentic investigations. There is often a lack of necessary inquiry skills, i.e. science process skills. Mostly Students learn chemistry by rote learning of factual knowledge (Gabel, 1999). Most activities found in laboratory manuals do not support to acquire required higher-order thinking skills (Domin, 1999). Students often do not want to think for themselves they just want to know the right answer (Lawson, 2002). All these issues can be rectified by reforming the present traditional method of teaching and incorporate teaching strategies that are student -centered, interactive, and structured around clearly stated measurable learning outcomes in a conducive learning environment so that students can learn chemistry with understanding and can enhance their thinking skills .

"Integrated Active Learning- (IAL)"

Present study proposes an innovative instructional design "Integrated active learning (IAL)", a class room based learning-goals-driven model, to integrate thinking skills across the established curriculum using various active learning strategies to fashion inquiry-based active learning environment appropriate to learn chemistry concepts in-depth and to enhance thinking skills simultaneously. The approach embeds thinking skills within the existing curriculum which uses teacher's time optimally as it does not require additional lessons to be taught on thinking skills. It supports planning and teaching existing lessons with an emphasis on thinking. This aims to raise children's awareness of their thinking so that they apply it to their learning. Instructional strategies included in IAL framework are intent to create a culture of a highly collaborative, learner-centred, inquiry-oriented, thinking and communicating classroom. IAL is based on the idea that academic study specially learning chemistry offers many chances to practise mental operations; thus, learning chemistry can also develop cognitive skills.

Objectives

The objectives of the present research study have two major foci.

1. To formulate an integrated active learning (IAL) module in chemistry to enhance students' thinking skills and achievement in chemistry.
2. To investigate the effectiveness of integrated active learning (IAL) in chemistry on students1 thinking skills and sub scales of thinking skills and achievement in chemistry.

Hypotheses

The following hypotheses have been set in the present study.

Section 1: IAL intervention on students' thinking skills

a) Experimental group will show significantly higher mean test scores in thinking skills and its sub scales having received the IAL intervention compared to that of the control group

Section -2: IAL intervention on students' academic achievement in chemistry

a) Experimental group will show significantly higher mean achievement scores in chemistry having received the IAL intervention compared to that of the control group

Research Design

The researcher used quasi- experimental research design that is pre-test-treatment (IAL intervention)-post-test control group for investigation. The intervention duration was one academic year from June 2010 to April 2011.

Sample

The sample were two intact divisions of VIII grade classes, one representing control group and the other representing experimental group. Each group consists of a sample of 46 from an urban Matriculation Higher Secondary School in Chennai, Tamilnadu. Among the five VIII grade sections in the school, where the research was carried on, the groups which showed statistically no significant difference in their pre- test mean scores in chemistry achievement and pre- test mean scores in thinking skills were selected as the experimental and control group. Students belonged to the age group of 13-14 years, an overall of 92 students, boys (N=59) and girls (N=33) took part in this study. Purposive sampling technique was used.

Tools Used

The instruments used for the investigation consists of "Thinking Skills Test" TST and an achievement test in chemistry. Both were constructed by the researcher and the content is validated by a panel of experts. The test retest reliability coefficients (r) were found to be 0.86 and 0.94 respectively, for thinking skills Test TST and the achievement test in chemistry. Thinking skills Test TST evaluates general thinking skills of children of age between 12 and 15 years in terms of the sub scales - verbal analogy, verbal classification, logical reasoning, critical reasoning, analytical reasoning and abstract reasoning. For the present study the sub

scales- verbal classification, logical reasoning, analytical reasoning and abstract reasoning were analysed. The test retest reliability coefficient (r) for the above mentioned sub-scales were found to be 0.87, 0.84, 0.80, and 0.91 respectively.

Main Study

The study was conducted for an academic year from June 2010 to April 2011. The chemistry syllabus for the control group was taught by traditional teaching method with occasional activities. The experimental group was taught by the researcher by integrated active learning method, where active learning strategies such as higher order questioning, Socratic dialogue, brain storming, mind mapping, concept mapping ,think-pair-share , class discussion, student debate, group discussion ,problem-based and project-based activities , science talk, group learning, independent reading (self-study) and peer teaching were used. Inquiry- based laboratory activities and experiments were conducted in chemistry rather than recipe-based laboratory sessions. The activities which stimulate thinking skills of students as given by Marzano (Marzano et al. 1992, p. 81) such as comparison, classification, induction, deduction,abstracts and analysis of different perspectives were used in preparing the unit plan for the units to be taught in chemistry.

Analysis and Interpretation

Section 1: JAL intervention on students' thinking skills

Hypothesis- 1

Experimental group will show significant difference in the mean scores in thinking skills test, and its subscales having received the IAL intervention compared to that of control group

Table 1

Comparison between Mean, Standard Deviation, t-Value of pre-test and post-test scores of thinking skills test and its subscales of experimental and control groups

Thinking skills and its subscales	Test	Group	N	Mean	Std. Deviation	t - value	Level of significance
Verbal Classification	Pre-test	Experimental Control	46 46	1.89 1.96	0.9 1.05	-0.31	NS
	Post-test	Experimental Control	46 46	2.65 2.04	0.94 1.28	592	0.01 S
Analytical Reasoning	Pre-test	Experimental Control	46 46	2.52 2.28	1.02 1.18	1.03	NS

	Post-test	Experimental Control	46 46	2.98 2.33	1.27 1.05	2.67	0.01 S
Logical Reasoning	Pre-test	Experimental Control	46 46	2.26 1.96	1.12 0.94	1.4	NS
	Post-test	Experimental Control	46 46	2.57 1.89	1.29 1.08	2.71	0.01 S
Abstract Reasoning	Pre-test	Experimental Control	46 46	3.91 3.78	1.41 1.64	0.4	NS
	Post-test	Experimental Control	46 46	4.87 3.87	1.73 1.83	2. 68	0.01 S
Overall Thinking Skills	Pre-test	Experimental Control	46 46	17.8 17.98	5.44 5.00	-0.61	NS
	Post-test	Experimental Control	46 46	22.61 19.17	5.80 5.76	2.84	0.01 S

The independent-sample t test analysis (Table 1) indicates that the pre- test mean scores of thinking skills and its sub scales such as verbal classification, logical reasoning, analytical reasoning and abstract reasoning for experimental group and control group did not differ significantly at the fi value of 0.05 level.

On the other hand, the post-test mean scores of thinking skills and its sub scales such as verbal classification, logical reasoning, analytical reasoning and abstract reasoning for the experimental group and control group did differ significantly at the fi value of0.01 level. Hence the alternative hypothesis is accepted and concluded that there is a significant enhancement in the thinking skills and its sub scales such as verbal classification, logical reasoning, analytical reasoning and abstract reasoning of the students who were in the experimental group. The increase in the post-test mean scores of thinking skills was found to be 11% compared to the control group which showed an increase of 4%.

Section-2: IAL intervention on students' achievement in chemistry

Hypothesis- 2

Experimental group will show significantly higher mean achievement scores in chemistry having received the IAL intervention compared to that of control group.

Table 2

Comparison between Mean, Standard Deviation, t-Value of pre-test and post-test scores of achievement in chemistry of experimental and control group

Chemistry Achievement Test	Group	N	Mean	Std. Deviation	t-value	Level of significance
Pre-test	Experimental Control	46 46	8.17 8.37	1.70 1.43	0.59	NS
Post-test	Experimental Control	46 46	36.78 31.78	8.60 9.26	2.68	0.01 (S)

Table 2 indicates that the experimental group pre- test mean scores and control pre- test mean scores in chemistry achievement test did not differ significantly. On the other hand, there is a significant difference in the post- test mean scores in chemistry achievement of the experimental group (73.56%) compared to that of the control group (63.56%), and they did differ significantly at the fi value of 0.01 level. Hence the alternative hypothesis is accepted and concluded that there is a significant improvement in experimental group due to the integrated active learning (IAL) intervention and the increase in their chemistry achievement mean scores is found to be approximately 10% compared to that of control group.

MAJOR FINDINGS

- It was observed that the Integrated Active Learning (IAL) model used is effective in increasing students' thinking skills and achievement in chemistry simultaneously.
- There is a significant difference in the students' chemistry achievement having been introduced to the integrated active learning approach than traditional teaching method and the increase in their chemistry achievement due to IAL intervention is approximately 10% compared to that of control group.
- There is a significant difference in the students' thinking skills and its sub scales such as verbal classification, logical reasoning, analytical reasoning and abstract reasoning having been introduced to the integrated active learning approach than traditional teaching method.
- The significant increase in students 'over all thinking skills by Integrated Active Learning (IAL) is found to be 11% compared to the control group which showed an increase of 4%.

CONCLUSION

This study strongly advocates the superiority of active learning strategies to enhance thinking skills and academic performance of students in chemistry as the findings prove the effectiveness of "Integrated Active Leaming" on thinking skills and students achievement in chemistry against the traditional teaching method. Modem society needs active, responsible citizens, which requires individuals to think and assimilate information from multiple sources and makes judgements .Hence every student, should be given opportunities in school especially in al: science classes to enhance their thinking skills and core knowledge and understanding in the subject. Cultivating thinking skills in chemistry can help students understand basic principles of chemistry that they also encounter in everyday life, and to make personal, social, and economic decisions thus becoming active, responsible and thinking citizens. The present classroom based research urges educators who shape science learning to re-examine their work in the light of current thinking about teaching and learning science and to integrate active learning techniques in science classes.

REFERENCES

» Anderson, L. W. & Krathwohl, D.R. (Eds.). (2001). A Taxonomy for learning, teaching And assessing: A revision of Blooms taxonomy of educational objectives. New York Longman.

» Bloom B. S. (Ed.), Engelhart, M. D., Furst, E. J., Hill, W. H. & Krathwohl, D.R. (1956) Taxonomy of educational objectives: Handbook I: Cognitive domain. New York: Davie McKay.

» Bonwell, C. C., & Eison, J. A. (1991). Active Learning: Creating Excitement in th,

» Bransford, J. D., Brown, A. L., & Cocking, R.R. (1999). How people learn: Brain, mind, experience, and school. Washington, DC: National Academy Press.

» Domin, D. S. (1999). Are view of laboratory instruction styles. Journal of Chemical Education, 76,543.547.

» Gabel, D. L. (1999). Improving teaching and learning through chemistry education research: Alook to the future. Journal of Chemical Education, 76,548.554.

» Kuhn,D., Garcia-Mila, M.,Zohar,A. & Andersen,C.(1995). Strategies of knowledge acquisition. Monographs of the societies for research in child development (MSRCD). Serial no 245. 60(4).

» Layman, J. (1996). Inquiry and learning: realizing science standards in the classroom, The College Board.

» Lawson, A. E. (2002). Science teaching and development of thinking Wadsworth/Thomson Leaming.

» Siegler, R. & Jenkins, E. (1989). How Children Discover New Strategies. Hillsdale, NJ: Erlbaum.

» Zohar,A. (2004). Higher Order Thinking in Science Classroom: Students Leaming and Teachers Professional Development. Science & Technology Educational Library (volume 22). Dorchrecht: Kluwer.

Research Article

A Study on the Stress Experienced by Women Teachers Working in High Schools

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ABSTRACT

A teacher can perform her duties well only if she is free from stress. Stress free teaching creates interest and enthusiasm among students towards teaching-learning. Stress is a negative psychological state with cognitive and emotional components and on its effects on the health. Present study is an attempt to identify the amount of stress experienced by the women teachers working in high schools. Survey method was adopted for the study and 150 women teachers from Kollam district were selected as the sample. Results of the study reveals that there is significant difference exists with respect to the age group, marital status and type of management. Teachers below 35 years of age feel high stress than those of above 35. Married teachers are in a state of high stress than the unmarried. The variables such as teaching experience, educational qualification and type of family have no significant difference on the scores of stress.

Keywords: T*eacher Stress, Women Teachers, High School Teachers, Stress Factors, Age and Stress, Marital Status, Type of Management, Occupational Stress, Psychological Well-being*

INTRODUCTION

Teachers that exhibit enthusiasm can lead to students who are more likely to be engaged, interested, energetic, and curious about learning the subject matter. Recent research has found correlation between teacher enthusiasm and students' intrinsic motivation to learn and vitality in the classroom. The teacher has a significant role in all levels of education. At primary level, the teache1 role is concerned with socialisation process. At the secondary level, importance is given to instruction and the assessment of performance. Each role is constrained by a number of matters and problems.

The teacher has to face these problems. These pressures may exert stress among teachers The teachers under stress may not fulfil their duties and responsibilities according to the demands.

Stress is an inevitable and unavoidable component of life due to increasing complexities and competitiveness in life styles. In the fast changing world, no individual is free from stress and no profession is stress free. The concept of stress was first introduced by Seyle Hans in 1936. Sayle: defined stress as the non-specific response of the body to any demand placed upon it. Stress refers to any environmental, organisational and individual or internal demands which require the individua to readjust the usual behaviour pattern. Stress results because of the individuals interaction with environmental stimuli or factors such as social or technological changes, political and economical uncertainties, community conditions, etc. Kyriacou and Suteliffe (1979) describe teacher stress as: response syndrome of negative affect such as anger and depression, usually accompanied b) physiological changes (such as increased heart rate) resulting from aspects of the teaching job and mediated by the perception that the demands made upon the person constitute a threat to his or he self-esteem.

NEED & SIGNIFICANCE

Women today are more goal oriented and independent. The modern women want to be a multitasker, an efficient career woman, a loving mother, a caring wife and an active member in the society. In this process, she gets stressed without even realising it. Working women have to face many crisis. It has been seen that majority of working women in our society are engaged to teaching. Generally it is considered that teaching is comparatively smooth and relax job for women, but practically this is not true. Since teaching demands an appropriate responsibility in fostering the development of young, women teachers should be an active member at schools. Teachers are not immune to stress. Work stress in teachers produces many negative effects. These effects may be physical or psychological. The advanced technological and complex society and personal and work stressors have contributed to an increasing teacher crisis in schools. It has also produced adverse stressful classroom situation that have led to increased emotional and physical disabilities among teachers.

The focus of the present study is only on women secondary school teachers. The problem of women teachers are far more than their counterparts i.e. men teachers. Some of these problems are social; eg. social conservation, rigid and oppressive cultural traditions, that may restrict the functioning of women teachers and some of the problems are related to the job

environment; eg. school location, transportation, long distance travelling, accommodation and security of the problems of unmarried women, etc. All these problems may lead to stress among teachers. Hence the need for the study.

THE PROBLEM

A study on the stress among women teachers working in high schools in relations to some select variables

OBJECTIVES OF THE STUDY

- To find out the level of stress among women teachers working in high schools
- To compare the level of stress of women teachers in relation to age, teaching experience, marital status, type of management, qualification and type of family.

HYPOTHESES

- There is no significant difference between stress and age group of women teachers working in high schools
- There is no significant difference between stress and teaching experience of women teachers working in high schools
- There is no significant difference between stress and marital status of women teachers working in high schools
- There is no significant difference between stress and type of management of womer teachers working in high schools
- There is no significant difference between stress and qualification of women teacher: working in high schools
- There is no significant difference between stress and type of family of women teacher: working in high schools

METHODOLOGY

Method: Normative survey method was adopted for the present study

Sample: The total sample consists of 150 teachers of Kollam district in Kerala.

Tool used: The investigator used a modified version of the tool developed by Vijayalakshmi Ghali to measure the level of stress among high school women teachers. The instrument consists of 40 item with three responses mainly 1,2 and 3 depending on the intensity on the stress inducer.

DATAANALYSIS

The data were analysed in terms of means, standard deviation and 't' values.

Table 1

Mean and S.D values of the level of stress of high school teachers

Variable	N	Mean	Standard Deviation
Stress scores of Women high school teachers	150	64.65	2.98

The above table reveals that the mean obtained on the scores of teachers is 64.65 and the standard deviation is 2.98.

Table 2

Mean, SD and 't' values of the level of stress of high school women teachers with respect to age group

Age Group	N	Mean	S.D	t-value	Level of Significance
Below 35 yrs	76	65.37	2.83	3.08	0.01
Above 35 yrs	74	63.91	2.98		

The above table reveals that the calculated t value, 3.08 is greater than the table value2.58 at 0.01 level of significance. Therefore the null hypotheses that 'there is no significant difference between stress and age group of high school women teachers' is rejected.

Table 3

Mean, SD and t values of the level of stress of high school women teachers with respect to teaching experience

Teaching Experience	N	Mean	S.D	t-value	Level of Significance
Below 10 yrs	81	65.04	2.81	1.78	NS
Above 10 yrs	69	64.17	3.14		

The above table reveals that the calculated 't' value, 1.78 is less than the table value 1.96 at 0.05 level of significance. Therefore the null hypotheses that 'there is no significant

difference between the stress and teaching experience of high school women teachers' is accepted.

Table 4

Mean, SD and t values of the level of stress of high school women teachers with respect to marital status

Marital Status	N	Mean	S.D	t-value	Level of Significance
Married	77	66.83	2.15	13.94	0.01
Unmarried	73	62.34	1.76		

The above table reveals that the calculated t value, 13.94 is greater than the table value 2.58 at 0.01 level of significance. Therefore the null hypotheses that 'there is no significant difference between stress and marital status of high school women teachers' is rejected.

Table 5

Mean, SD and F values of the level of stress of high school women teachers with respect to Type of management

	Type of Management									F Ratio	Level of significance	Groups differed Significantly
	Govt (1)			Aided			Unaided					
	N	Mean	S.D	N	Mean	S.D	N	Mean	S.D			
Level of stress	49	64.06	2.85	55	65.60	2.96	46	64.13	2.94	4.64	0.05	1 & 2 (0.01) 2 & 3 (0.05)

The obtained 'F' value for the stress of the women high school teachers with regard to type of management is 4.64 which is significant at 0.05 level. Hence the null hypotheses that 'There is no significant difference between stress and type of management of women teachers working in high schools' is rejected. Post-hoc comparison of means revealed that teachers working in aided schools had significantly high stress score than that of teachers working in government schools ($p<0.01$). Also it is found that teachers working in unaided schools possess significantly low stress scores than that of teachers working in aided schools ($p<0.05$).

Table 6

Mean, SD and 't' values of the level of stress of high school women teachers with respect to Qualification

Qualification	N	Mean	S.D	t- value	Level of Significance
PG	75	65.03	3.04	1.56	NS
UG	75	64.27	2.91		

The above table reveals that the calculated 't' value, 1.56 is less than the table value 1.96 at 0.05 level of significance. Therefore the null hypotheses that 'there is no significant difference between the stress and qualification of high school women teachers' is accepted.

Table 7

Mean, SD and t values of the level of stress of high school women teachers with respect to Type of family

Type of family	N	Mean	S.D	t- value	Level of Significance
Nuclear	78	64.95	2.92	1.33	NS
Joint	72	64.30	3.05		

The above table reveals that the calculated 't' value, 1.33 is less than the table value 1.96 at 0.05 level of significance. Therefore the null hypotheses that 'there is no significant difference between the stress and type of family of high school women teachers' is accepted.

FINDINGS

From the analysis of data, it is found that

- The mean and standard deviation of stress scores of teachers for the total sample are 64.65 and2.98 respectively.
- There is significant difference between teachers of different age groups with regard to stress. It was found that the stress experienced by women teachers who are below 35 years was greater than that of the other group.
- There is no significant difference between stress and teaching experience of women teachers working in high schools.

- There is significant difference between stress and marital status of women teacher working in high schools. It was found that the stress experienced by married teachers was greater than that of unmarried.
- There is significant difference between stress and type of management of women teachers working in high schools
- There is no significant difference between stress and qualification of women teacher: working in high schools
- There is no significant difference between stress and type of family of women teacher working in high schools

CONCLUSION

A teacher can perform his duties well only if he or she is free from stress. Stress free teaching creates interest and enthusiasm among students towards teaching-learning. Teachers must be provided with some ways to cope up with stress and by which they can regulate external and internal stressors. From the above findings it can be concluded that the variables such as teaching experience, qualification and the type of family the teachers belong to have no significant difference on the scores of stress. While considering the age group of teachers, teachers below 35 years feel high stress may be due to the lack of knowledge and experience in the field of teaching. They should get professional support and in service training to manage the stress. Married teachers are in a state of high stress probably due to their domestic work. Their physical and mental strain should be minimised to work effectively in the school. It is impossible to remove all the pressures from life, but we can learn strategies to stop excessive pressure leads to stress.

REFERENCE

- Best, J.W. & Kahn, J.V. (2004). Research in Education. New Delhi: Prentice Hall of India private Ltd.
- Charlesworth, A. Edward &Nathan, G. Ronald. (1990). Stress Management. New York: Ballantine books.
- Clawson, G.S. James & Haskins, E.Mark (2008). Teaching Management_. New Delhi: Cambridge University Press.

» Davidson, Jeff. (1998). Managing Stress. New Delhi: Prentice Hall oflndia private Ltd.
» Ghali, Vijayalakshmi. (2004). "Stress among women lecturers working in colleges in relation to some variables". Edutracks. Vol.4, (3), 36-40.
» Luthans, Fred. (2005). Organisational Behaviour. New York: McGraw Hill International .
» Sabu,S. & Jangaiah,C. (2005). "Stress and teaching competence". International Educator. Vol.17, (1), 19-21.
» Selye, Hans. (1974). Stress without distress. New York: Lippincott.

Research Article

Personality and Achievement in Zoology of Higher Secondary Students

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ABSTRACT

Personality and achievement are the two sides of a coin as far as the learners are concerned. The investigator, who has done his academic studies in Zoology discipline, has genuine interest to know the relation between achievement in Zoology and their personality. He has many years of teaching experience and has paid visit to many higher secondary schools and has discussed with many teachers of Biology working there and also collect relevant data for his study. The present study reveals that there is a relation between achievement and personality and both are influenced by so many variables such as sex, locality, medium of instruction, type of school and monthly income.

Keywords: *Personality and academic achievement in Zoology, secondary school students, influence of gender, locality, medium of instruction, type of school, and socioeconomic status.*

INTRODUCTION

A contemporary definition for personality is offered by Watson (1990) "Personality is the sum total of all activities that can be discovered by actual observations over long enough period of time to get a reliable information" and G.W. Allport (1988) "Personality is a dynamic organization, with in the individual of those psychophysical system that determine the unique adjustment to the environment"

Personality and achievement are the two important factors which are closely associated with education. Education has to be so arranged for the processes of personality development. Educated persons are having good personality when compared to uneducated persons. So, education plays are important role in the development of personality.

The investigator, who did his academic studies in Zoology discipline, has genuine interest to know the relation between academic achievement in Zoology and personality.

He had visited man) Higher Secondary Schools and has talked to many teachers of Zoology working there and also collected relevant data for his study. Thereby he came to know that there are so many relation between achievement and personality and both are influenced by so many variables. Hence, this investigator felt the need of a study to seek the relationship between the two among the Higher Secondary school students, and thus his wish culminated in the selection of this particular topic for the present research investigation.

Statement of the Problem

The present problem is stated as "PERSONALITY AND ACHIEVEMENT IN ZOOLOGY OF HIGHEJ SECONDARY STUDENTS"

Objectives of the study

1. To test the relationship between achievement in Zoology and personality of Higher Secondary students of Kanyakumari District, Tamil Nadu.
2. To study the relationship between achievement in Zoology and personality of Higher Secondary students in Kanyakumari District, Tamil Nadu with regard to the variables such as sex, locality, medium of instruction, type of school, monthly income.

Hypotheses

1. There will be significant relationship between achievement in Zoology and personality of Higher Secondary students of Kanyakumari District, Tamil Nadu.
2. There will be significant relationship between achievement in Zoology and personality of Higher Secondary students of Kanyakumari District, Tamil Nadu with respect to variables viz., sex, locality, medium of instruction, type of school, and monthly income.

METHODOLOGY

Sample

The present study was conducted in Kanyakumari District, Tamil Nadu. The investigator selected 15 Higher Secondary Schools of Kanyakumari randomly. After seeking the coordination of the school administrators and teachers from these schools, the investigator selected 250 students. Out of 15 selected schools, four schools were government schools, three government aided schools and the remaining three schools private schools. The investigator selected a minimum of20 students from each school randomly.

Tools and Method

The investigator adopted survey method for the present investigation. For this study investigator used General data sheet in order to collect student's personal information. The researcher used a standardized Multi-Dimensional Personality Inventory developed by Manju Agarwal and also used an achievement test in Zoology in order to assess the student's level of achievement.

ANALYSIS

Table:-1 correlation between achievement in ZOOLOGY and personality of higher secondary students

Category	Number	df	r-value		Result at 5% Level
			Cale.	Table	
Whole Sample	250	148	0.359	0.126	Significant

TABLE:-2

CORRELATION BETWEEN ACHIEVEMENT IN ZOOLOGY AND PERSONALITY OF HIGHER SECONDARY STUDENTS WITH RESPECT TO SEX, LOCALITY, MEDIUM OF INSTRUCTION, TYPE OF SCHOOL AND FAMILY MONTHLY INCOME

Variables	Number	df	r-value		Result at 5% Level
			Cale.	Table	
Boys	128	126	0.241	0.173	Significant
Girls	122	120	0.228	0.178	Significant
Rural	125	123	0.369	0.176	Significant
Urban	125	123	0.391	0.176	Significant
Tamil	175	173	0.217	0.149	Significant
English	75	73	0.362	0.228	Significant
Government	100	98	0.379	0.197	Significant
Government Aided	75	73	0.285	0.228	Significant
Private	75	73	0.487	0.228	Significant
Up to Rs.3000	91	89	0.539	0.206	Significant
Rs.3001-5000	73	71	0.532	0.231	Significant
Rs.5001-10000	58	56	0.634	0.259	Significant
Above Rs. I0000	28	26	0.445	0.374	Significant

RESULTS AND DISCUSSION

The above two tables (Table1 and 2) revealed that there exist significant correlation betwee1 achievement in Zoology and personality of Higher Secondary students. The present study also proved that there is a significant relationship between achievement in Zoology and personality o Higher Secondary students with respect variables such as sex, locality, medium of instruction, type of school, monthly income.

Griffiths (1945) measured relationship between scholastic achievement and personality characteristics by using Bell Adjustment Inventory showed a positive correlation between scholastic achievement and personality. Hundal and Aggarwal (1972) administered 6 intelligence tests and personality tests to 115 female having 13-16 year old. Early academic achievement was also used as a predictor of achievement in Physics, Chemistry and overall grade level. The cros1 validating coefficients between predicted and obtained scores for Chemistry, Physics and overall achievement were statistically significant.

Borg and Shapiro (1996) and Ziegert (2000) examined students' learning from a differe1 perspective. Personality type was correlated with students' academic achievement in sever: principles of Economics courses. The research showed significant correlations between personali1 type and academic achievement, although different academic assessment tools yielded differe1 correlations. Outcomes of the present study also found out that there is a positive relationship between personality and achievement in Zoology of Higher Secondary school students.

REFERENCES

» Borg, M.O. and Shapiro, S.L. (1996). Personality type and students Performance in Principles of Economics. Journal of Economic Education. 27. 3-25.

» Mangal, S.K. (1999). Foundations of Educational Psychology. Ludhiana: Tandon Publications, Pvt. Ltd. PP 505.

» Griffiths, G. R. (1945). **The Relationship between Scholastic achievement and Personality Adjustment of college students.** Indian Journal of Applied Psychology. 29(5) 360-367.

» **Hundal, P. S. and Aggarwal, Vibha** (1972) Prediction of Academic Achievement of the Higher Secondary students using measures of Intellectual and Non-Intellectual variables. Indian Journal of Applied Psychology. 9(1).32-37.

Conceptual Article

Pedagogical Designs for Optimizing E-Learning

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ABSTRACT

E-learning is commonly referred to the intentional use of networked information are communications technology in teaching and learning. A number of other terms are also used to describe this mode of teaching and learning. They include online learning, virtual learning Distributed learning, network and web based learning. Fundamentally, they all refer to educational processes that utilize information and communications technology to mediate asynchronous as we as synchronous learning and teaching activities. On closer scrutiny, however, it will be clear the labels refer to slightly different educational processes and as such they cannot be use synonymously with the term e-learning.

Keywords: *E-learning, Online learning, Virtual learning, Distributed learning, Network-based learning, Web-based learning, Information and Communications Technology (ICT)*

INTRODUCTION

The term e-learning comprises a lot more than online learning, virtual learning, distribute learning, networked or web-based learning. As the letter "e" in e-leaming stands for the wor "electronic", e-learning would incorporate all educational activities that are carried out b individuals or groups working online or offline, and synchronously or asynchronously vi networked or standalone computers and other electronic devices. These various types or modality of e-leaming activity they are

1. Individualized self-paced e-learning offline
2. Individualized self-paced e-learning online
3. Group-based e-leaming synchronously
4. Group-based e-leaming asynchronously

Table - E-Learning modalities

Individualized self-paced e-learning *online*	Individualized self-paced e-learning *offline*
Group-based e-learning *synchronously*	Group-based e-learning *asynchronously*

Individualized self-paced e-learning online refers to situations where an individual learner is accessing learning resources such as a database or course content online via an Intranet or the Internet. Atypical example of this is a learner studying alone or conducting some research on the Internet or a local network.

Individualized self-paced e-learning offline refers to situations where an individual learner is using learning resources such as a database or a computer-assisted learning package offline (i.e., while not connected to an Intranet or the Internet). An example of this is a learner working alone off a hard drive, a CD or DVD.

Group-based e-learning synchronously refers to situations where groups of learners are working together in real time via an Intranet or the Internet. It may include text-based conferencing, and one or two-way audio and videoconferencing. Examples of this include learners engaged in a real-time chat or an audio-videoconference.

Group-based e-learning asynchronously refers to situations where groups of learners are working over an Intranet or the Internet where exchanges among participants occur with a time delay (i.e., not in real time). Typical examples of this kind of activity include on-line discussions via electronic mailing lists and text-based conferencing within learning managements systems.

E-learning pedagogies

E-learning can surpass many of the pitfalls of regular classroom training such as boring slides, monotonous speech and two-dimensional representations. The beauty of e-leaming is that the new software allows the creation of very effective learning environment. Web audio-video conferencing and live broadcasts enhance the interaction levels. To understand the

pedagogies let's look at the four categories into which e-learning falls. They are arranged from the most basic to advanced here.

i) Knowledge database

This is most basic form of e-learning. It provides explanation and guidance on various type of content. Knowledge database can be used in teacher education programs to:

- Provides step-by-step instructions to perform specific task.
- Extract knowledge on any topic by either typing a keyword or phrase or by making a selection from an alphabetical list.
- Organize knowledge in psychologically receptive from using clear headings with limited distracters, 3-D visuals, and screen friendly fonts, appropriate spacing etc.

ii) Online support

- It comes in the form of forums, chat rooms, online bulletin board or e-mail. As it is more interactive than knowledge database, teacher educator can use it for:
- Acquiring immediate answers and solutions to problems. Transmitting live messages instantaneously.

iii)Asynchronous training

It involves self-paced learning, either CD ROM- based, network-based, the internet o intranet-based. It is useful in education because

- It provides access to instructors through online bulletin boards.
- It has provision for online discussion and e-mail.
- It may be totally self-contained with links to reference materials in place of a liv instructor.

iv)Synchronous training

It is the most advanced type of e-learning. It is done with live instructor who facilitates the training. The main features of synchronous training are:

- Every one logs in at a set time and can communicate directly with the instructor and wit each other. You can raise your cyber hand and even view the cyber white board.
- It last for a set amount of time from a single session to several weeks, months or even years.
- It usually takes place via the internet websites, audio or video conferencing or even two way live broadcasts to students in a classroom, the main focus being linking learners and practitioners to experts.

The above four categorical levels of e-leaming facilitate application of any specific pedagogical approach. There are four fundamental pedagogical perspectives, which have historically influenced the approach to computer-based pedagogy and distance education too. The) continue to provide guiding principles for the pedagogy of e-learning. The four pedagogical perspectives are:

a) ***Cognitive perspective***

It focuses on the cognitive processes involved in learning as well as how the brain works.

b) ***Emotional perspective***

It focuses on the emotional aspects of learning like motivation, engagement, fun etc.

c) ***Behavioural perspective***

It focuses on the skills and behavioural outcomes of the learning process.

d) ***Contextual perspective***

It focuses in the environmental and social aspects, which can stimulate learning: interaction with other people; collaborative discovery and the importance of peer support as well as pressures are its integral part.

Pedagogical designs for optimizing e-learning

This concept of learning by doing" has been popularized, among others, by Roger Schan and his collaborators and it is at the heart of pedagogical designs that stand to optimize e-learning (see Schank, 1997). These pedagogical designs include "scenario based learning"

(see Naid1 Menon, Gunawardena, Lekarnge & Karunanayaka, 2005),"goal-based learning" (see Naidu, Olive & Koronios, 1999; Schank, Fano, Jona & Bell, 1994),"problembased learning" (see Barrows, 199L Hmelo, Holton & Kolodner, 2000; Naidu & Oliver, 1996; Naidu & Oliver, 1999), "case-based learning" (see Lynn, 1996: Rangan, 1995; Carrol & Rosson, 2005), "learning by designing" (see Naidu, Anderson & Riddle, 2000; Newsletter, 2000), and "role-play-based learning" (see Ip & Linser, 1999; Linser, Naidu & Ip, 1999). These pedagogical designs are grounded in the principles of constructivism and situated cognition, and in the belief that learning is most efficient and effective when it is contextualized and when it is based on real world or similarly authentic settings.

Scenario-based learning

A very good example of learning by doing is scenario-based learning. Scenario-based learning is a pedagogical design where one or more learning scenarios serve to anchor and contextualize all learning and teaching activities (see Naidu, Menon, Gunawardena, Lekamge & Karunanayaka, 2005). The scenarios in these educational settings are usually drawn from real life situations. They may be contrived but they aim to be as authentic as possible and reflect the variety and complexity that is part of real life situations. For the teacher and the tutor this scenario provides a meaningful context which can be used to explain abstract concepts, principles and procedures a lot more easily. For the learner, it serves to make learning relevant, meaningful and useful.

Typically a good learning scenario will reflect a common occurrence from the relevant field (see Naidu, Menon, Gunawardena, Lekamge & Karunanayaka, 2005). It may be a case, problem or incident that is commonly encountered in the workplace. Using such cases, problems or incidences from the workplace in the education of learners serves to more adequately prepare them for the workforce as opposed to focusing their attention on the mastery of the subject matter content. The use of such scenarios is particularly relevant and meaningful in professional education.

A typically good learning scenario will sound like a story or a narrative of a common occurrence. It will have a context, a plot, characters and other related parameters. It usually

involves a precipitating event which places the learner or a group oflearners in a role, or roles that will require them to deal with the situation or problems caused by the event. The roles that learners might be asked to assume are those that they are likely to play in real life as they enter the workforce. Attached to these roles, will be goals that learners will be required to achieve. In order to achieve these goals they will be assigned numerous tasks and activities, some of which may require them to collaborate with their peers and other relevant groups, if these are part of the intended learning outcomes of their subject. While these activities essentially serve as learning enhancement exercises, a selection of them could be made assessable and given a mark which would contribute to the student's final grade in the subject.

In order to attain the goals that learners are assigned in the scenario, and complete all the required activities, learners will have access to a wide range of relevant resources. These resources could include textbooks and other relevant reading material, multimedia content, and also experiences from the field of how expert practitioners have gone about solving or dealing with similar cases, situations, problems or incidences (see Schank, 1997; Schank, Fano, Jona & Bell, 1994).

Related pedagogical designs

1. **Problem-based and goal-based learning**

Of all learning by doing type pedagogical designs, these two designs are in fact most similar in orientation to scenario-based learning. In problem-based learning, a problem situation serves a the context and anchor for all learning and teaching activities (see Barrows, 1994). Problem-based learning begins with the presentation of a problem to students, which can be in the form of short video clip, a picture with text, or just text. Upon encountering this problem situation, students ar expected to analyze it and decide what needs to be done next. A critical feature of problem-'base learning is small group problem-solving and inquiry (Hmelo, Holton & Kolodner, 2000). Student work in small groups to analyze the presenting problem, make decisions on what needs to be done next, and act upon them to resolve the problem situation satisfactorily. In so doing they will have been expected to achieve the intended learning outcomes (see Naidu & Oliver, 1996; Schank, Fano Jona & Bell, 1994).

While problem-solving is implicit in problem-based learning, learners are not tole explicitly what is their role in the problem, or what they are supposed to do as they seek to analyze the presenting problem. In goal-based learning, on the other hand, they are told very specifically what i their role in the scenario and what they are supposed to do in order to resolve the problem satisfactorily. How they go about analyzing the problem to achieve a satisfactory solution to the problem is left to their imagination and relativity (see Naidu, Oliver & Koronios, 1999; Naidu /J Oliver, 1999). Both, problem-based and goal-based learning designs have been widely used in the study of medical, education and environmental sciences.

2. Case-based learning

In case-based learning, a case serves to provide the context and anchor for all learning an teaching activities (see Lynn, 1996: Rangan, 1995; Carrol & Rosson, 2005). Cases have been very widely used in the study and teaching of Law, Business, Accounting and Economics. In these instances, students are required to use the case to explore issues, concepts and problems that they at likely to encounter. Cases that stand to optimize learning and teaching opportunities are those the, have the richness, complexity and variety that is embedded in real life situations and encounters. It therefore most important that the cases that are selected for study and teaching are carefully selected to match the intended learning outcomes for the subject.

3. Learning by designing

In learning by designing, the design task affords the essential anchor and scaffold for all learning and teaching activities (Newsletter, 2000). In this learning design students are required to engage in a learning activity which comprises conceptualizing and building something. This is a common learning and teaching activity in the study of architecture, and engineering sciences. As in goal-based learning, in the case of learning by designing, the goal is made very clear to the students. How the students chose to pursue that goal and achieve the targeted learning outcomes is left to their imagination and creativity (see Naidu, Anderson & Riddle, 2000).

4. Role-play-based learning

In role-play-based learning, the role-play provides the anchor and scaffold for all learning and teaching activities (see Ip & Linser, 1999; Linser, Naidu & Ip, 1999). Role-play is widely

used as a valuable learning and teaching strategy in social sciences and humanities subjects where very complex processes are prevalent. This learning design comprises the playing out of identified roles by learners which is followed with reflection upon the activity and its analysis in order to focus attention on the expected learning
Outcomes for the study.

CONCLUSION

It is widely acknowledged that the role and influence of media (i.e., information and communications technology) on learning and teaching is optimized especially when it is skilfully integrated into the educational experience (see The Cognition and Technology Group at Vanderbilt, 1991: Schank & Cleary, 1995; Schank, 1997). For this to happen we need to focus our attention foremost, on the careful design of the learning experience rather than the presentation of the subject matter content or the technology. This means careful orchestration of what the learners are going to do in the learning environment.

- Clever use of media can serve to motivate learner's interest.
- Information and communication technologies provide various opportunities for Capturing and representing real-world scenarios.
- Certain media (such as video) has attributes that are especially valuable for capturing authentic contexts and situations from the real world.
- Skilful integration of media and teaching methods is critical in the optimization of learning.
- This integration can be achieved through pedagogical designs such as: scenario based learning, problem-based learning, case-based learning, role-play based learning, and design-based learning.

REFERENCE

- **Sansanwal D.W.)2000** (Intergrading Education Technology and Higher Education. University News Vol. 38 pages 1-6 New Delhi: Association of lndia Universities.
- **Jaiswal.S.(2000).** Fundamental of Information Technology for BCA, **Galgortia Publication, New Delhi.**
- **Ip, A. & Naidu, S. (2001).** Experience-based pedagogical designs for elearning. Educational Technology, 41(5), 53-58.
- **Naidu, S. (2001)**. Scaffolding student learning in open, distance and flexible learning environments. The Global E-Journal of Open and Flexible Learning (GEJOFEL). 1(1) 84-91. Published by the Madhya Pradesh Bhoj (Open) University, Red Cross Building, Shivaji Nagar, Bhopal 462016 India.
- **Naidu, S. (2002).** Designing and evaluating instruction for e-leaming. In P. L. Rodgers (Ed.), Designing Instruction for Technology-Enhanced Learning (pp. 134-159). Hershey, PA: Idea Group Publishing.
- **Naidu, S. (2003)**. E-Learning: A Guidebook of Principles, Procedures and Practices. New Delhi, India: Commonwealth Educational Media Centre for Asia (CEMCA), and the Commonwealth of Leaming. ISBN: 81-88770-01-9.

Conceptual Article

Early Educational Intervention for a Child with Visual Impairment

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ABSTRACT

The write up, "Early Childhood Education for Visually Impaired Children" attempts to give a model for systematic intervention to empower such vision-impaired kids right from their pre-school days. The article specifies the broad objectives of such interventions, particularly in a country like India that was till some years ago, steeped in superstitious beliefs. Though remnants of such superstitions exist, the modern-day social workers are also active in India to help such vision-impaired kids lead a near normal life. The write-up looks into needs for early intervention in the form of pre-schooling similar to nursery schools for other normally endowed children to not only teach them the all-important 'daily-life' skills but also the main aspects of using other sound faculties like auditory and smells to find their bearings in a fast-moving modern 21st century. The article examines two case-studies also to support its claims.

Keywords: *Early Childhood Education, Visually Impaired Children, Systematic Intervention, Empowerment, Preschool Education, Daily-life Skills, Auditory and Olfactory Learning, Special Education, Case Studies, India.*

INTRODUCTION

"Catch them young, teach them well" is a mantra for making a child with visual impairment lead normal life as that of non-disabled. Rearing a blind child is an art rather than a spontaneous or careless act. Unlike animals, all human beings from womb to adolescence should be given more care by constituting psychological aspects, physiological growth, nutrition, conducive environment, etc. Scientific approach is to be adopted to help the child overcome any deficiency. A child needs help, love, and care which are given with wholehearted involvement and good spirits. Everyone is handicapped in one way or the other. Why should we look into the deformity or disability? Let us consider a child as a child first, disabled next.

The Governments and NGOs concentrate more on education and rehabilitation services. Early childhood intervention programme is still in its infancy. We have to understand the preschool children better in order to make our service 'reality-based'. It must be ensured that the general education system must not be neglected and has to be blended with the specialized activities in case of visually impaired children.

Early childhood covers a period of 2½ to 6years which is called preschool period. This period is also known as phallic period of personality development. Early childhood is labelled by parents as the problem age- the troublesome, or the toy age; by educators as the preschool age; and by psychologists as the pregang, the exploratory or the questioning age. Vision plays a basic role for their demands of independence, for walking and talking, their playing with toys, their exploration in environment and their questioning of things, which they hear and see. Children with visual impairment are at risk for developmental delays in using words to communicate, feelings and ideas, in cooperative and imaginative play, in daily living skills and in orientation and mobility.

Early childhood period is a crucial period for children with visual impairment to acquire many skills in order to be able to overcome the limitations of their handicap. The following are the objectives formulated for early childhood education programme.

1. To frame a structured informal learning curriculum and situation based on individual needs.
2. To set a conducive physical environment that is safe to the sightless child.
3. To train a child in daily living skills, orientation and mobility skills and sensory development skills to adjust and adapt to the environment.
4. To stimulate intellectual curiosity and the interest to explore, investigate and experiment, by giving of opportunities in the child's environment.
5. To foster in the child, a good physique and health.
6. To develop desirable social attitudes, manners, group participation, independence, confidence and creativity by providing all possible opportunities and experiences.
7. To impart parent education for handling the child in proper manner.
8. To build a 'CBR' approach to reach out to the rural children.
9. To modulate 'inclusive schooling' for children to have access in education along with sighted children in nearby schools.

Vision loss limits the opportunities for a child to develop classification, serration conservation and other cognitive skills naturally. A child with visual defect needs opportunities to develop concepts through auditory perception, tactual exploration, discrimination and comparison He needs to develop an understanding of whole or part relationships, sound localization an memory. The child needs to use non-visual sensory information to develop a greater understanding of his environment and of himself. This preschooler often has difficulty in social interactions with other children because he has little or no access to facial expression and body language, and has limited cooperative play skills. His ability to communicate with others and to comprehend what others communicate to him is still at a low level. He is not adept in the common daily living skills He needs assistance from others to move in his environment.

India has not looked into the necessity of educational facilities to the children with blindness up to the age of six years. Only voluntary agencies in some parts of the country are providing some services, which have not been recognized by the Government. When we analyze the need of preparatory schools for sightless, they are the privileged group to be trained in such schools to adjust and adapt to normal living conditions. Early education is less pedagogic and more psychological o social. A child with visual defect needs hands-on experience, social integration, help and assistance stimulation and motivation, and care and affection, which are the ultimate goals of early childhood education.

Parents of the child with visual impairment should have an optimistic approach, rational an1 constructive thinking, the vision and foresight to meet the needs and wants of their child to lead. Normal life. Parents should understand the limitations of their child due to his/her vision loss Mother alone is not caretaker of the child, the father and the other members of the family also have the equal responsibility. The parents should understand that the child is mentally like other children the parents should give hand on experiences to the child for his physical, mental and social developments. The parents should not give over protection which spoils the self-development.

Preparatory Education

The children with special needs should be brought to the campus for training in sensor skills, daily living skills, orientation and mobility skills and social skills. A well-designed preschool provides warming up activities to enter formal schooling. The group of personnel such, Ophthalmologists and trained staff in the field of visual impairment, has to plan on 'Treatment Behaviour Change and Skills Development' for the child. Since the individual needs are different the preparatory school should work on catering to the needs of the children, considering the severity of impairment and age.

CCBR Approach on Early Education

Community Based Rehabilitation (CBR) approach can work in the locality of rural families where the children with visual impairment are unserved. This programme is operated with the help of trained field workers or itinerant pre-school teachers. These staff members go to the doorsteps of the children to deliver the service in collaboration with the family and local community. This homebound programme of early education is cost effective, requires little infrastructure, and would penetrate deep into remote areas.

Inclusive Schooling

A separate programme is not needed for g1vmg preschool facilities. The existing preschools can adapt the teaching strategies and environment to make them accessible to the child with vision loss, which can also be conducive to non-disabled children. The regular teachers are to be given short-term training to handle the visually impaired children along with sighted children, Ophthalmologists, Psychologists and Special Educators are referred to when the teacher has difficulty in handling the child and clarifying the doubts of the parents. This inclusive schooling makes way for real integration by providing equal opportunities and experiences as that of sighted.

The curriculum should be child-cantered where the individual needs are well attended. It should be seldom rigid, but should provide rich and varied learning experiences. The physical environment is safe as well as attractive which promotes learning and a healthy development. Due importance is to be given to the development of language skills, mathematical concepts, muscle coordination and sensory skills.

Teaching Materials and Strategies

The child's environment should be surrounded by toys and objects for his own explorations so that he/she can compare the qualities of those objects, make new combinations and exercise his/her memory. These are sound producing and cause-and-effect toys. Portable and hold able toys having more tangible shapes are explorable by the child. The child needs concreteness among objects so as to form concept. Real objects, are meaningful for acquiring new concepts. While playing with sighted children, the child with visual impairment develops vocabulary, dramatizations that imitate life experiences. Sighted preschoolers are encouraged to be the sighted guides. Learning of orientation and mobility skills enable the child to become independent in moving around with the supervision of someone. The child should be appreciated by praise, reward, whenever he does anything correctly. If he does not do things properly, guide him till he does them properly. Realistic aspiration should be focused in accordance with his capacities so that the child has a reasonable chance of making a success of whatever he undertakes, thus fostering favourable self-concept.

Early childhood intervention programme for the children with visually impairment makes education totally flexible, optimally effective, and thoroughly individualized so as to enable every child with visual defect to lead as normal life as the sighted.

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