

Evaluate the Effectiveness of IT based material for Learning Disabled Students of Secondary Schools

Abstract

The purpose of the study was to evaluate the effectiveness of IT based material for learning disabled students. A sample of 23 girl students studying in secondary schools of Agra city was purposively selected. The researcher used the self-constructed tool achievement test and IT based material for this study. Mean, S.D. and t-test were calculated to analyse the data. The study revealed that IT based material was significantly improving the achievement of the learning disabled students of secondary school.

Keywords: Learning Disabled Students, IT based material

Introduction

People with learning disabilities have trouble with one or more of these steps; they have difficulty taking in, organizing and acting on information their brains receive through the senses. That information can be nonverbal, but more commonly, the difficulty has to do with understanding or using writers or spoken language. The problems are based on brain structure and function: a case of poor wiring in one or more areas of the brain. Hallahan and Kauffman, (1976) define a learning disabled child as one who is not achieving his potential. Meir (1991) reported that it is not surprising that most of them develop low expectations and problems in self-esteem by the age of nine. Moreover, their academic and personal problems tend to worsen as time passes.

The National Joint Committee on Learning Disabilities (NJCLD, 2001) defines the term learning disability as: "A heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning or mathematical abilities. Waldrop and Halverson (1971) have reported a series of studies that link the presence of minor physical to early anomalies with hyperactivity in students ranging in age from preschool to early elementary years. Reddy, Ramar and Kusuma (1999) reveal that social skill deficits are common in students with learning disabilities and that these deficits have a negative effect on learning disabled students' relationship with both peers and teachers as well as on their ability to function in the regular classroom environment.

There were many questions raised in conducting research in the field of learning disability. How their problem can be solved in normal classroom? What strategies can be used in classroom for fulfil their educational needs. The schools are full of students, but these schools only focus on their objectives such as increasing the number of students, they do not want the quality in knowledge and education. These schools cannot fulfil the needs of students and they blame the students. They face several challenges related to selecting good models of instruction that can be most effectively and efficiently applied to students with learning disabilities. The teachers are unable to gauge the needs of individuals with learning disabilities and this adversely impacts the academic achievement of learning disabled students.

Aim of the Study

The Objectives of the present study are following as:

1. To study the achievement of learning disabled in Home Science
2. To evaluate the efficacy of IT based material for learning disabled students of secondary schools.

Methodology

Design of the Study

In the present study, descriptive survey method was used.



Sumati Rani

Assistant Teacher,
Deptt.of Education,
Governmnet Girls Inter College,
Parkham, Mathura

Sample

The present study deals exclusively with learning disabled populations; the purposive method sampling has been used. The sample consists of 23 Home Science students from X classes of secondary schools of Agra City.

Tools & Techniques of Data Collection

These following self-constructed tools were used in the study:

1. Achievement test in Home Science (ATHS)
2. IT Based Material (self- developed)

Achievement test attempts to measure what an individual has learnt or what is his or her present level of performance. It is content based achievement test. The test-retest method was used to estimate reliability of the test. The reliability was determined by using product moment method. The obtained score is 0.87. This shows very high reliability. The other tool, IT Based Material was designed in the form of Video and instructions based Power point presentation to enhance knowledge of learning disabled students related Home Science subject by increased attention span and easy comprehension etc. The video and instructions based power point presentation were prepared with the help of software (PINNACLE-14 Version and Window Microsoft office power point presentation respectively). There were various instructions like moving to next slide, previous slide,

home and quit for students to enable them to more at their own pace of learning. Self check exercise under the section 'Check Your Progress', have been provided at the end of each topic. Prompts were provided on the programme frame to guide the student for making correct response. Where the response was incorrect, In case of incorrect response, student was asked to make another attempt. Developed material was administered on small group of learning disabled students. This exercise was continued for a fortnight. During each of these sessions the researcher was present to observe that the instructions were meticulously followed by the students and to assist wherever needed. Practical sessions were also organized to develop psychomotor skills. To gauge their understanding of the subject matter post test was administered thereafter. The scores of this post achievement test were compared with their pre achievement scores.

Statistical Techniques used

Mean, S.D., and t-test were calculated to analyse the data.

Result and Discussion

To see the effectiveness of IT based material in improving academic achievement of learning disabled children, Developed material was administered. After which the achievement of these learning disabled was observed as follows:

Table 1

Exhibiting Scores of Pre and Post Achievement Test in Home Science of LD students.

S. No.	Test	Group	Total Scores of LD students	Mean	SD	t-Test	Level of significance
1.	Pre	LD Students (N=23)	268	11.65	2.56	9.1	P<0.01
2.	Post		749	32.56	2.84		

From table 1 it can be inferred that t-test value of pre score and post score of achievement of LD students in Home Science is 9.1. The t test value is found significant at 0.01 levels. Hence it can be said that there is high significant difference between Pre and Post scores in achievement test of LD students in Home Science. These results find support with the results obtained by Bhattacharya (1982). He also found that learning through audio-visual methods caused prolonged retention than traditional methods.

From the above analysis of data it can be inferred that LD students have lower achievement in Home Science subjects. Pre test shows that learning disabled students who had low scores (268) when administered developed material their post scores has changed significantly (749). Significant difference between pre and post shows the effectiveness of developed material in increasing the academic achievement and its efficacy among LD children. This result has found support in the following researches, Brien (2006) explored that academic achievement of students is increased when video models are used to improve ability of students with learning disabilities. Russel (2007) revealed that the interventions used in the research studies constantly produced strong effects on the quality of students' writing as well as students' efficacy and understanding of the writing process.

Conclusion

The study explores that students were taught using these materials for 15 days and thereafter, the post test was administered to students. Mean value of post test was found significantly increased. t test value was also found highly significant. On this basis of result, it concludes that the developed material effectively improves the academic achievement of the learning disabled students and minimizes the learning disabilities. Present findings are in conformity with the findings of Mathew (2003). He found the effectiveness of SIM and modern teaching strategy in minimizing LDs of students in the subject of biology in secondary school. Newben (1998) also found that effect of service delivery alternatives on the efficiency of instructional strategy using paraphrasing strategy was implemented. The result indicated that strategy instruction improved the performance of students with learning disabilities. Similar inferences were also drawn by Pandit (2000) regarding mathematics teaching.

References

1. Anastasi, A. 1961. *Psychological Testing. The Macmillan Company. New York.*
2. Bhattacharya, A. 1982. *Diagnosis and Prevention of Learning Disabilities of Primary School Students in Arithmetic. Doctoral Dissertation, Calcutta University, 1982 in M. B. Buch Ed. Third Survey of Research in*

- Education, National Council For Educational Research And Training. New Delhi.
3. Brien 2006. *Investigations of The Impact of Video-based Anchored Instruction on the Implementation of Inclusive Practices by Students with Learning Disabilities Dissertation Abstracts International 2007 Vol. 67, (9). University Microfilms International Ann Arbor Michigan, U.S.A.*
 4. Hallahan, P. D. and Kauffman, M. J. 1976. *Exceptional Children Introduction to Special Education*, Prentice Hall. Englewood Cliffs.
 5. Mathew, A. 2003. *Effectiveness of Self Instructional Material and Modern Teaching Strategies in Minimizing Learning Disabilities Students in Secondary School. Mahtma Gandhi University. Kottiyam.Trivananthpuram.*
 6. Meir, J.H. 1991. *Prevalence and Characteristics of Learning Disabilities, Journal of Learning Disabilities, 1921, Vol. 4, (78).*
 7. Newben, S.L. 1998. *The Effects of Instructional Settings on the Efficacy of Strategy Instruction for Students with Learning Disabilities. John Hopkins University, 1998, Dissertation Abstracts International, Vol. 59. University Microfilms International Ann Arbor Michigan, U.S.A.*
 8. NJCLD, 2001. *Education for All and Learning Disabilities in India (<http://www.eld.ed>.)*
 9. Pandit, R.P. 2000. *A Model for the Identification of Learning Disabilities in Mathematics. Shishak Journal. Mahendra Ratna Campus. Kathmandu. Vol. 3.*
 10. Reddy, G. L. Ramar, R., and Kusuma, A 1999. *Learning disabilities: A Practical Guide to Practioners. Discovery Publishing House. New Delhi.*
 11. Russel 2007. *A Meta-Analysis: Teaching Expressive Writing to Students with Learning Disabilities. www.jstor.org*
 12. Sakhuja, S. 2004 *Education for All and Learning Disabilities in India. Article 9 (<http://www.msub.ed>.)*
 13. Waldrop and Halverson 1971. *Learning Disabilities. Hallahan and Kauffman (1988). Exceptional Children Introduction to Special Education, Printice Hall. New Jersy.*
 14. Wilson, B. A. 1998. *Peer Tutoring in the Context of Co-operative Learning Including Middle School with Moderate to Severe Disabilities in Content Area Class. Leigh University, 1998. Dissertation Abstracts International 2000, Vol. 60, (1). University Microfilms International Ann Arbor Michigan, U.S.A.*