Catering curiosity through computer intervention among students with learning disability: Fabricating hungry minds.

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ABSTRACT *A curious mind is the key to the world of education. If we are able to develop the curiosity among the students, for their learning then more than half of the job is done in the teaching learning process. With the aim of enhancing the curiosity among students with learning disability the study was conducted. The present study was conducted on, a sample consisting of sixty-four students with Learning Disability from Government Schools of Chandigarh. The pre test-post test experimental design was followed in the study and the effect of Computer supported intervention was analyzed on Curiosity among the students. The results of the present study depict that there is a significant (at 0.01 level) effect of the intervention, among the students with learning disability.*

Keywords:

Introduction

"Curiosity is the engine of achievement- Ken Robinson"

Learning disability is not a sin. A child with learning disability should not at all be abandoned in the society. Even a little helping hand can cater his needs. In the classroom, sometimes the children with learning disability lags behind as they are unable to cope-up with the fast pacing syllabi and they tend to lose interest and curiosity in the subject. A teacher can play an important role in fabricating a hungry mind by incorporating various attention catching teaching strategies. Teaching with the help of computer based games and teaching innovations can help the tender minds to blossom. In the present study Computer supported intervention refers to the material prepared by the researcher based on the subject of Science, for imparting instruction to the students, with the help of computer. Incorporation of specific techniques i.e. Hyperlinks, Three dimensional imaging and Graphical representation for teaching concepts and mechanisms in science, for better understanding and grasping by the students with learning disability.

The word Curiosity is derived from a Latin word '*curiosus*' which means diligent and careful. It deals with inquisitive mind and investigating nature. It is the nature of human mind to look for more and more knowledge and acquire better skills.(Oxford advance learner's dictionary,2010) As per the present study, Curiosity is the motive to explore the environment i.e. tendency of an individual to wonder, to inquire, to investigate and to seek further information about anything which is not much known.

As per the National Joint Committee for Learning Disabilities, Learning Disability is the multiple groups of disorders which can be neurological by origin and are manifested differently in different individuals. This kind of disorders is developmental in nature and can occur at any stage of life. (NJCLD,2001c). Kulik, J.(1991), in their study entitled, effectiveness of computer based instructions, did a meta-analysis of two hundred fifty four evaluation studies at the advanced centre for learning and research. The study revealed that the computer based instructions usually produced positive effects on the students. It was seen that the effect of computer based instruction was larger in the published studies, rather than the unpublished ones and in studies in which students were taught by the traditional instructional method. The meta-analysis also revealed that the computer based instructions were capable of bringing about small but positive change in the learners.

Thomas, E. et al,(1991) researched on the concept of acquiring science facts among students with learning disability. A sample of fifty-six students was taken for the study and presented the materials which described the different kinds of minerals of North America. The students had to identify three attributes associated with the minerals i.e. its color, hardness level and the most common use of it. The sample was randomly assigned the project. Half of the students taught through a direct instruction method and the remaining were shown the presentations and were given the thematic illustrations. The results revealed that the latter method of instructions produced better results than the previous one.

Barak et al., (2007) indicated that school or teaching should include not only the creation of knowledge capabilities of the students but also the ability to think, making independent decision , imagine and have curiosity for learning new things.

Objective of the study:

To study the effect of Computer supported intervention on Curiosity among students with Learning Disability.

Hypothesis:

There will be no significant effect of Computer supported interventions on Curiosity among students with Learning Disability.

Tools used:

1. **Children's Curiosity Scale (CCS)** by Rajeev Kumar (2012)
2. Self constructed lesson plans based on computer assisted instructions for students with learning disability.

Design of the study:

In the study, Pre-test and post-test Experimental design was followed to assess the effectiveness of Computer supported intervention on Curiosity among students with learning disability. The design is given below:

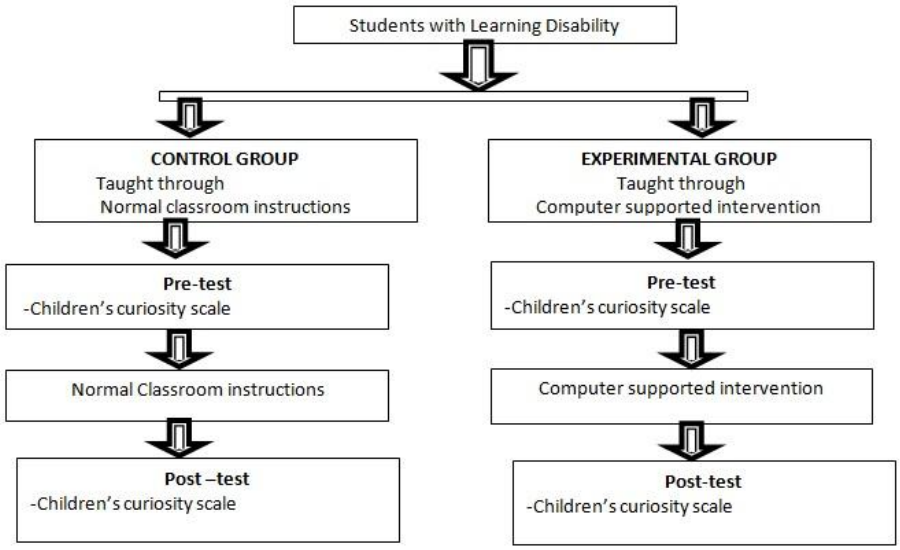


Figure 1 Showing the Design of the Study done through computer supported intervention in science among students with Learning Disability.

Methodology of the study:

The present study was delimited to the students with learning disability, studying in the government schools of Chandigarh. A sample consisting of sixty-four students studying in seventh and eighth standard was taken for the study by purposive random sampling. The effect of Computer supported intervention was analyzed on Curiosity among the students. The topics from the subject of Science from the CBSE syllabi were taught via computer based instructional lesson plans prepared and validated by the researcher. The pre test – post test experimental design was followed in the study, in which the students were divided into two groups i.e. experimental and the control group. The experimental group of the students was taught the subject of science for forty working days through computers which included the games and multimedia approach to teach the students and the aim was to enhance the interest and curiosity of the students. The other group that is the control group was studying under normal classroom lecture based instructions. The test for curiosity prior as well as at the end of the intervention was taken from both the groups and the results were analyzed.

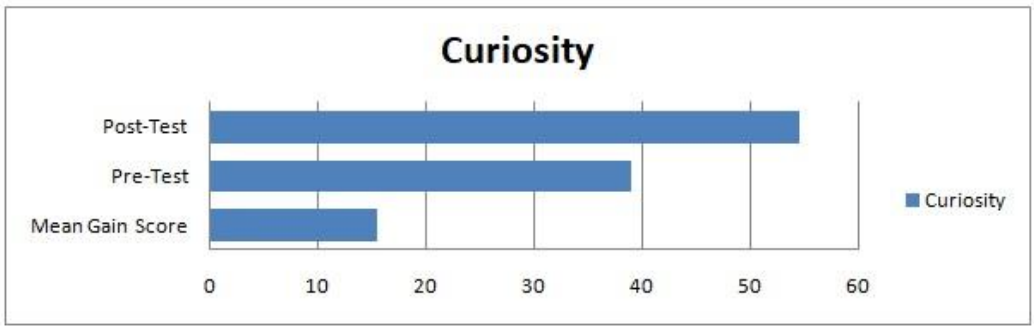
Results and Interpretation

The data collected from the study was analyzed and interpreted for the meaningful results.

Table 1 showing Mean Gain Scores and Mean Scores (Pre-Test and Post-Test) for Curiosity (Experimental group)

Variable		Mean Scores	
	Mean Gain Scores	Pre-test	Post-test
Curiosity(n=32)	15.53	39.03	54.56

Figure 2 Graph showing Mean Gain Scores and Mean Scores (Pre-Test and Post-Test) for Curiosity (Experimental group)



The Table 1 and the graph shown above depict that there is a considerable gain in scores on the variable of curiosity, among the experimental group, taught through computer based intervention.

Table 2 showing Mean Gain Scores and Mean Scores (Pre-Test and Post-Test) for Curiosity(Control group)

Variable		Mean Scores	
	Mean difference	Pre-test	Post-test
Curiosity	0.06	34.34	34.28

The table 2 above depict the difference in mean scores of the pre test and the post test of the control group and it was observed that there is no significant difference in the level of curiosity of the two tests.

Table 3 showing t-values for significance of difference between mean gain scores of experimental group

Variables	Groups	Mean scores	df	Standard Deviation	t-value
Curiosity	Pre test	39.03	62	10.23	4.69**
	Post test	54.56		15.72	

*Significant at 0.05 level
**Significant at 0.01 level

Interpretation and discussion based on Table 3

Table 3 shows that t-value of 4.69 for the variable of Curiosity, which has been found to be significant at 0.01 level. Hence, the null hypothesis **Ho** "There will be no significant effect of Computer supported interventions on Curiosity among students with Learning Disability" was rejected.

Conclusion:

The results of the present study depict that there is a significant effect of the intervention, among the students with learning disability. On the basis of the results the null hypothesis was rejected. This shows that if in the normal class room situation the edge of computer based intervention is provided to the students with learning disability, who are studying along with the other students under the umbrella of inclusive education, can produce better results.

Educational implications

- The results of the present study hold highly useful implications for teachers, who can provide extra support to the students with learning disability.
- The study holds implications for the school administration and the curriculum framers, according to which the can design the curriculum which caters the need of all the students and specifically the students with learning disability, so that they do not lag behind and develop a curious attitude towards studies.

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Time in its aging course teaches all things.
~ Aeschylus