

Efficacy of Embodied Learning in Enhancing Inclusive Education

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Abstract

Embodied Learning is an educational method that has been around for a while in school education. In this method, one does not only offer an intellectual way of teaching, but also involve the whole body. In this study the investigators tried to test the efficacy of Embodied Learning in enhancing Inclusive Education. For this purpose, the investigators prepared training modules on Communicative English Skills based on the principles of Embodied Learning and administered it to a group of 30 students in Ernakulam district, among them 6 were physically challenged students. Pre-tests and Post-tests were administered and scores were analyzed statistically. The findings of the study revealed that Embodied Learning is equally effective for normal students and physically challenged students

Key Terms: Embodied Learning, Inclusive Education

Introduction

Embodied Learning is an educational method that has been around for a while in education. The relationship among bodily movements, cognitive abilities, and academic achievement in children is receiving considerable attention in the research community. The embodied learning is based on the idea of an inseparable link between body and mind in learning, aiming for teaching methods that promote children's active engagement in the classroom. The theory of embodied learning claims that body interaction with the environment change how we think and constitute learning. Accordingly, active learning enriches learning

experiences which in turn lead to better learning .By making it physical, the teaching material will be more effective .It is learning through plays and a fun way of learning too .Learning through play combines constructivist and contextual learning theories that recognize the dynamic and interrelated interactions between the mind, body, and environment to promote active learning.

Need and significance of the study

Embodied Learning is a novel approach which challenges western ways of constructing knowledge of the body. As more students with disabilities successfully complete their early schooling, the need to move towards inclusive practices within higher education has increased.

India has asserted its commitment to inclusive education by agreeing to the Sustainable Development Goals (SDGs) and the UNESCO Salamanca Statement. Being a signatory to the Convention for the Rights of Persons with Disabilities, it also has a commitment to work towards inclusiveness in all spheres in the near future. Additionally, domestic legislations—Right to Education Act, 2009 (RTE), Rights of Persons with Disabilities Act, 2016 (RPWD), and National Trust Act, 1999—mandate ‘reasonable accommodation’ of children with disabilities in mainstream schools.

The working area of inclusive education is to reach out to all such children and lead them to normal living by providing joyful learning. Inclusive education includes –

1. Physically Challenged Child
2. Mentally Retarded Child
3. Socially Disrupted Child
4. Educationally Challenged Child

Inclusive education provides an opportunity for the disabled children to progress mentally along with normal children.

1. Both normal and handicapped children take education together normally, due to which a natural environment is created between them, which develops a sense of unity, brotherhood and equality among the children.
2. Where normal children and special children take education together, there is less expenditure in education as it optimizes the resources and maximizes its productivity and utilization.
3. It is the education where small society is formed where all types of children get education together, as a result of which qualities like morality, love, sympathy, mutual cooperation can be easily increased in them.
4. Emotions like learning and social competition are also developed in children through it.

In this era, it gains significance because only inclusive education can bring change in today’s society, so it should be encouraged more and more. Embodied learning is an innovative approach for satisfying the above said goals of education A study of this type will be a great contribution in the field of education which meets the needs of all categories of learners

Statement of the problem

The study is entitled as “Efficacy of Embodied Learning in Enhancing Inclusive Education”

Definition of key terms

Embodied Learning

Embodied learning constitutes a contemporary pedagogical theory of knowing and learning that emphasizes the use of the body in educational practice (Oxford Research Encyclopaedias, 2020).

Embodied Learning is the involvement of the whole body in the learning process (mind, body, physical action, cognition, emotions)

Inclusive Education

Inclusive education is defined as a system of learning which includes everyone, and one that can cater to the learning needs of Children with Disabilities (CwD).

Objectives of the study

- (1) To prepare training module on Communicative English based on the principles of Embodied Learning
- (2) To test the effectiveness of Embodied Learning for enhancing Communicative English Skills of Physically Challenged Students
- (3) To test the effectiveness of Embodied Learning for enhancing Communicative English Skills of Normal Students at Secondary Level
- (4) To compare the effect of Embodied Learning on Physically Challenged Students and Normal Students at Higher Secondary Level on achievement in Communicative English

Hypotheses of the study

H₍₁₎ There will be significant difference between Pre and Post test scores of Physically Challenged Students when exposed to Embodied Learning

H₍₂₎ There will be significant difference between Pre and Post test scores of Normal Higher Secondary Students when exposed to Embodied Learning

H₍₃₎ There will be significant difference between Post test scores of Physically Challenged students and Normal Students at Higher secondary Level when exposed to Embodied Learning

Sample selected for the study

The sample selected for the Present study are 30 higher secondary students, Out of which 6 students were Physically Challenged students and the rest were normal students. Sample is selected from a higher secondary school at Ernakulam district.

Tools of the study

- (1) Learning module on Communicative English
- (2) Test on communicative English (same test was used as Pre test and Post test)
- (3) Kerala University group test of Intelligence-Verbal(Prepared by Nair.Pillai and Anandaavalliyamma)

(Tools 1 & 2 were Prepared and refined by the investigators)

Method Adopted

The investigators adopted Experimental method for this study

Procedure

Investigators Prepared training module on communicative English based on the principles of Embodied Learning . Out of the 30 students selected from higher secondary for the study 6 students were physically handicapped and another 24 students were normal students. Both the groups were equated using Kerala University group test of intelligence (Prepared by Nair ,Pillai and Anandhavalliyamma).Pre test on communicative English was administered to both the groups .Both the groups treated with Embodied Learning and Post test was administered . t' value calculated for the Pre and Post means of each group . Comparison made between the means of Post test scores of both the groups .The results of analysis is given below:

Statistical techniques used

Test of significance of difference between means

Analysis and Discussions

The details regarding the data and result of comparison between Pretest and Post test scores of Physically Challenged students group is given in Table 1

Table 1: Comparison of Pre and Post test scores of Physically Challenged Group

	Mean	N	S.D	t	Level of significance
Pre Test	8.5	6	1.87	8.86	p<0.01
Post Test	17.5	6	1.64		

N = Number , CR-critical ratio, SD-Standard Deviation

It is evident from Table 1 that the obtained Critical Ratio (CR = 8.86 , $p < 0.01$) is significant at .01level. Hence it can be concluded from the analysis that Pre and Post test scores of Physically Challenged students differ significantly. The difference is in favour of Posttest scores and it can be attributed to the use of Embodied Learning.Hence the Hypothesis H_1 is accepted.

The details regarding the data and result of comparison between Pre-test and Post-test scores of Normal Higher Secondary students group is given in table 2

Table 2: Comparison of Pre and Post test scores of Normal Higher Secondary Students group

	Mean	N	Standard Deviation	t	Level of significance
Pre-test	10.54	24	1.58	12.33	p<0.01
Post test	18.83	24	2.89		

N = Number , CR-critical ratio

It is evident from Table 2 that the obtained Critical Ratio ($CR = 12.33$, $p < 0.01$) is significant at .01 level. Hence it can be concluded from the analysis that Pre and Post test scores of Normal Higher Secondary students differ significantly. The difference is in favour of Post test scores and it can be attributed to the use of Embodied Learning. Hence the Hypothesis $H_{(2)}$ is accepted

The details regarding the data and result of comparison between Post test scores of Physically Challenged Students group and Normal Higher Secondary students group is given in table 3

Table 3: Comparison of Post test scores of Physically challenged students group and Normal Higher Secondary Students Group

Post Test	Mean	N	Standard Deviation	t	Level of significance
Physically Challenged students Group	17.5	6	1.64	1.49	Not Significant
Normal Higher Secondary Students Group	18.83	20	2.89		

N = Number, CR-critical ratio

It is evident from Table 3 that the obtained Critical Ratio ($CR = 1.49$) is not significant. Hence it can be concluded from the analysis that there is no significant difference between these two groups. Both the groups performed in the same way and Embodied Learning is effective for normal stream students and physically challenged students

Hence the Hypothesis formulated in this context $H_{(3)}$ is rejected or failed to be accepted

Findings of the study

- (1) Embodied learning is an effective strategy for enhancing communicative skills in English of Physically Challenged Students
- (2) Embodied learning is an effective strategy for enhancing communicative skills in English of Normal Higher secondary Students
- (3) Embodied learning is enhancing communicative skills in English of Physically Challenged students and normal stream higher secondary school students with the same effectiveness

Conclusions

Embodied learning is an effective strategy for all types of learners for enhancing learning and skill development. Embodied learning can attain the goals of inclusive education and more than that it can cater the learning needs of normal stream students and physically challenged students. Findings of this study is a solution for facing challenges in the inclusive sector. The vocational training centres for inclusive people can adopt this method for their training purpose, especially in the training of different languages. Embodied learning involves bodily movement and it will be beneficial for physically challenged people for the betterment

of their movements .Embodied learning is not only helpful in inclusive education but also help in all skill training programmes

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