

SPECIMEN FORMAT FOR THESES OF MONTH

Faculty : Education

Department : Special Education

Branch/ Area: : Special Education

Sub Subject Heading: : -

Candidate's Name : D.Revathi

Candidate's Address with email :
D/o. A.E.Duraisamy, 2/2 High School Road,
Alangombu(po), Sirumugai(via) – 641302
reva.duraisamy@gmail.com

Title of the thesis : Effect of Collaborative Learning on Learning Outcomes of Students with Special Needs in Inclusive School

(i) In Roman Script -

(ii) In roman Script -

Nomenclature of Degree: : Ph.D

Month & Year of Enrolment: : August & 2011

Month & Year of Registration: : September & 2011

Month & Year of Submission: : December & 2015

Month & Year of Award : December & 2016

Name of Supervisor : Dr.G.Victoria Naomi

Designation of Supervisor : Professor in Special Education

Centre/department/school in which research was conducted : Inclusive Education schools in Coimbatore District

University's Name & Address : Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore-43

Abstract within 300 words:

The present study investigates the implementation of collaboration in the learning of special needs students enrolled in inclusive education system. Collaborative Learning is one of the successful approaches to cater the needs of children from diverse background. The area selected for the study is Inclusive Education Programme at Coimbatore District. A sample consists of 256 students in each two Grades VI & VIII including 60 special need students. Further it is classified into three categories of students viz., Students with Special Needs (Visually impaired, Hearing Impaired and Movement Impaired), Students with Cognitive Impaired and Non Disabled Peers. Quasi Experimental design was adopted without having a control group. Academic Performance, Academic Gain, Level of Retention and Social Skill development were the dependent variables of the study. The Tools selected for the study includes a personal datasheet, curriculum based assessment using probes/questions for pretesting, posttesting . The collaborative learning was implemented in science lesson for each Grade VI & VIII for a period. The intervention steps was to introduce the topic, assigning roles & responsibility among themselves and experiment accordingly, Sharing opinions and recapping. Thus learning was taken place for the whole classroom including students with special needs. The study has the major findings of Collaborative Learning strategy enhanced the academic performance of students in different categories viz., Non disabled peers, Students with Special Needs & Students with Cognitive Impaired. The use of classroom collaborative learning is a promising alternative to better serve students with disabilities in a least restrictive environment. There is indeed a wider scope that collaborative learning can substantially contribute towards achieving the national goal of inclusive growth and development.

i) Major objectives :

1. Study the effect of collaborative learning on Academic Performance of students viz., Non Disabled Peers, Students with Special Needs and Students with Cognitive Impaired separately.
2. Examine Academic gain of students viz., Non Disabled Peers, Students with Special Needs and Students with Cognitive Impaired before and after introduction of Collaborative Learning.
3. Study the effect of Collaborative Learning on the level of Retention of students viz., Non Disabled Peers, Students with Special Needs and Students with Cognitive Impaired separately.

ii) Hypothesis:

- There is no significant difference in the Academic Performance of students before and after introduction of Collaborative Learning.
- There is no significant difference in the Academic Gain and Level of Retention of students before and after introduction of Collaborative Learning with respect to Non Disabled Peers, Students with Special Needs and Students with Cognitive Impaired.

iii) Methodology :

Site Description

The study was conducted in five schools under SSA programme in Coimbatore Educational district, TamilNadu, India.

Sample

The sample consisted of children in Grade VI and VIII. A total of 256 children were involved in the study and among them 60 were Students with Special Needs. Purposive sampling technique was used to select the inclusive schools wherein children with special needs were enrolled. A survey was made to find out students with Special Needs in the schools. Among the 22 Blocks in Coimbatore Educational district, 5 schools have been selected using Purposive sampling technique. The categories of Students with Special Needs include Visually Impaired, Hearing Impaired, Movement Impaired and Cognitive Impaired.

The Inclusive schools have been selected on the basis of enrollment of atleast 5 Special needs students in the school. The Special Needs Students in VI and VIII Grades were selected considering

their nature of disability viz., Visually Impaired, Hearing Impaired, Movement Impaired and Cognitive Impaired using the medical record available in the school. This phase was stretched up to one full month. The student with Cognitive Impairment was considered as a separate group because of their difficulties in cognition and in learning. All other, Special Need Students were grouped as one variable.

Distribution of Sample

S. No	Categories	Grade		
		VI	VIII	Total
1.	Students with Special Needs a. Visually Impaired	9	7	16
	b. Hearing Impaired	8	8	16
	c. Movement Impaired	5	7	12
	Total	22	22	44
2.	Students with Cognitive Impairment	8	8	16
	Total	30	30	60
3	Non Disabled Peers	88	108	256

Design of the study

Quasi-experimental design was adopted in the Research study. The design is as follows:

$$Q_1 \times Q_2$$

Here, the **Q1** and **Q2** denote pretest and posttest respectively and **x** means treatment (Collaborative Learning).

Variables Selected for the Study

Variables	Levels
Categories of Children	Students with Special Needs : i) Visually Impaired (VI) ii) Hearing Impaired (HI), iii) Movement Impaired (MI)
	Cognitive Impaired (CI)

	Non Disabled Peers (NDP)
Gender	i) Boys ii) Girls
Grade	i) VI ii) VIII
Dependent variable	i) Academic Performance ii) Academic Gain iii) Level of Retention iv) Social Skill Development

Tools Selected for the Study

The investigator developed tools to assess the academic outcomes and social skill of students involved in the study. The below mentioned are the details of the tools:

1) Personal Data Sheet includes the demographic details

2) Curriculum Based Assessment:

a) The study analysed Science Curriculum in two Grade VI & VIII and selected a lesson in each which were just completed using Traditional Classroom method. 15 Probes/Questions were framed for assessment of their Learning Outcomes. This was considered as pretest score.

b) Similarly two new lesson were selected for collaborative learning and 15 Probes/Questions were framed for posttesting and to assess the level of Retention

3) Social Skill Development: Social Skill Rating was based on the work of Coie and colleagues (1982). The scale indicates the person whom they like the most and whom they like the least.

Pilot Study

Pilot study was conducted in Grade VI and Grade VIII at Sri Avinashilingam Girls' Higher Secondary School, Coimbatore with 4 students with Special Needs in a classroom of 20 non disabled counterparts. Pretesting and Posttesting were conducted in a sequence. The tools were found to be reliable to administer to the whole group of samples. This provided a base for the intervention phase of Collaborative learning in all selected schools.

Validity of the Tool

Curriculum based Assessment was developed to validate content of each item in the test and was determined by the subject experts in the field of School Education. The Jury's opinion was obtained from the subject expert. Thereby the Validity of the achievement test was established by the

experts. The school subject teachers also analyzed the relatedness of the test items to accomplish the goals of instruction. Also Internal Validity of the Study was done.

Data Collection Procedure

Phase I Pretesting and Grouping

- The students were analysed of their academic performance with the lesson in Grade VI and Grade VIII. This test was considered as pretest.
- Heterogeneous grouping was done with 4 to 5 students in a group. A group consisted of high achiever, low achiever, a disruptive child, a special need child and an average child. This phase consumed a period of 3 months.

Phase II. Implementation of Collaborative Learning and Posttesting

The Collaborative Learning was implemented in Science Lesson in each grade a science lesson was selected for implementation of Collaborative Learning (Grade VI - 'Separation of Substances' & Grade VIII - 'Light and Sound'). The implementation of Collaborative Learning was stretched up to each three months for VI Grade & VIII Grade. Each intervention session was of 45 minutes.

The intervention steps are as follows:

- i) Explanation of specific academic task of learning (5mts)
- ii) Collaborative learning instruction and process by assigning the responsibility of the roles to the group members (5mts)
- iii) Students are motivated to do group lesson/experiments and then to discuss "why" regarding solutions to the problems (25mts)
- iv) Sharing opinions of each member of the group and recapping the particular topic of the lesson. (10mts)

After Collaborative learning method, posttest was administered using the questionnaire developed.

Phase III Retention

After Posttesting, the level of retention was checked by administering the same questionnaire used in posttest after an interval of 40 days.

Statistical techniques used:

Academic Performance : Academic Performance was calculated using pretest and posttest score.

Academic Gain: After intervention, with the score of pretest and posttest, gain score was calculated using the following formula

$$\text{Gain} = \text{Posttest score} - \text{Pretest score}$$

Level of Retention: After the interval of 40 days retention test of the experimental group students was calculated by finding the retention score using the following formula

$$\text{Retention} = \frac{\text{Retention score}}{\text{Post test score}}$$

iv) Findings:

The major findings emerged and in the study are listed below:

1. Collaborative Learning strategy enhanced the academic performance of students in different categories viz., Non disabled peers, Students with Special Needs & Students with Cognitive Impaired.
2. Collaborative learning was found to be effective in enhancing the academic performance of students with special needs (pre mean =58; post mean=63)
3. Pertaining to the analysis made to compare the academic performance of cognitive impaired, the results indicate that collaborative learning was found to be efficacious in improving their academic performance (Premean:41; Postmean 45.6)
4. Grade-wise analysis showed that students in both Grade (VI & VIII) showed improvement in their academic performance after Collaborative learning. All categories of children in both Grade showed improvement in academic performance
5. Both Boys and Girls showed improvement in the posttest score, and thus indicating impact of Collaborative learning.
6. Pertaining to analysis of scores of Boys and Girls in different categories of students separately, the results show that Boys and Girls in all categories secured higher score in posttest than pretest.
7. Considering the retention level of all students, the students in the category of non disabled, special needs and also among cognitive impaired showed higher retention. It means that the retention score was similar to posttest score. It indicates that Collaborative learning helped the students retain the subject concepts for longer duration.
8. When comparing the retention level of students in VI Grade and VIII Grade, students in VI Grade showed better retention (M. 3.97) than VIII Grade students (M:2.12).
9. With regard to Academic gain of Boys and Girls in different categories of students viz., Non disabled peers, students with Special Needs and Cognitive Impaired, the results show that Both Boys and Girls secured the same academic gain in all categories of students.
10. Analysis of variance revealed that the retention level of all categories of students are at the same level though the academic score (posttest) of each category is different as Non disabled secured higher score followed by Special Needs and then Cognitive impairment
11. MANCOVA results revealed that there was significant difference in Academic Gain and Retention level of Non disabled peers and Students with Special Needs with respect to Gender and Grade when keeping pretest as covariate.

12. MANCOVA results revealed that there was no significant difference in Academic Gain and Retention level of Student with Special Needs and students with cognitive impaired with respect to Gender and Grade when keeping pretest as covariate.
13. The correlation coefficient results showed that there was no correlation between Academic Performance and level of Retention of all Students. And Academic Performance has no correlation with the Social Skill development. Similarly Social Skill development has no correlation with the level of Retention.
14. However, Collaborative Learning helped Non disabled peers and their academic performance has correlated with Social skill development.

Examiners

Internal Examiner : Dr. K. Anandan

Professor & Head of Education
Department of School Education
Bharathidasan University
Trichy

External Examiner : Dr. N. Balasubramanian

Depty Vice Chancellor
DMI. St. Eugens University
Lusaka, Zambia