

## **CHAPTER - V**

### **SUMMARY AND CONCLUSION**

#### **5.0 Introduction**

The present study entitled “Effect of Collaborative Learning on Learning Outcomes of Students with Special Needs in Inclusive School” investigates the effect of Collaboration in the learning of special needs students enrolled in inclusive education system. In the present chapter, the major findings emerged out of the study along with discussion, recommendations, suggestions and conclusion have been presented.

#### **5.1 Major 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.

## **5.2 Discussion**

The overall analysis revealed that Collaborative Learning enhanced the learning of Students with Special Needs.

### **i) Collaborative Learning on capability of students**

This present finding is supported by Webb et al (1998) that in the study effect of collaboration appears to be strongest for low-ability students particularly when they are matched with high ability classmates.

Saner et al (1994) are in line with study stating that the effects of collaboration varied according to student ability, with low-ability students benefiting more from collaboration than high-ability students. The findings by Tudge (1992) found the group of less-competent students, those using inferior decision rules was the only group improved significant on posttest. However, the more competent students were the group that declined significant posttest when collaboration is provided.

### **ii) Academic performance of all Students and Students with Special Needs**

The findings by Johnson, Johnson, Scott & Ramolae (1985) studied that 26 learning disabled and 128 regular education students who were assigned to one of three conditions: (a) mixed-sex cooperative, (b) single-sex cooperative, and (c) individualistic for measure of achievement on a science unit on electricity and electrical energy. The results found that

cooperative learning promoted higher achievement than did individual learning for the students with handicaps only.

Another interesting study by Supovitz and Christman (2003) and Supovitz (2002) supports the present study that measurable improvements in student achievement only occurred when collaborators focused on altering their instructional practices.

The present study involved Intellectual Impairment. The findings was in line with Johnson et al (1989) showed that the Collaborative group interacted more with their peers with an intellectual disability by looking at them, talking with them, and working cooperatively together.

### **iii) Retention**

While considering the results on the level of retention, the present study reveals that Collaborative learning retains the level of retention. This result is corresponding to the study conducted by Totten, Sills, Digby & Russ (1991) stating that when Collaborative learning is provided, students gain higher rates of achievement and retention than learners who work alone. Also the study stating that collaborative learning gives students opportunities to internalize their learning.

### **iv) Grade**

The present findings coincide with this findings by Saner et al. (1994). The results of the study that administered hands-on science tasks to students in Grades 5 and 8. Collaboration tends to benefit lower-ability students, whereas there appears to be no carry-over effect for higher-ability students.

### **v) Gender**

The Present research findings revealed that there was no significant difference in the academic performance of boys and girls. But this study is not in line with the finding by Chen (1999) who studied cooperative learning

in elementary science. His study showed a significant difference in gender in favor of the male students in a test that measured student achievement in terms of science concepts, nature of science and processes of science.

Another finding by Webb (1991) found that in equally-balanced groups, there were no differences in the interaction patterns of boys and girls.

#### **vi) Social Skill Development**

This research finding corresponds to Romonov and Nevgi (2006) asserted that collaboration enhances deeper processes of learning and students achieve better results through social interactions.

This finding supports the statement of Schmidt (2000) that the use of cooperative learning in small groups allows for more student participation while developing greater social skills

### **5.3 Recommendations**

1. EFA Global monitoring report (2010) that states reaching the children with disabilities remains excluded from quality education. The gap can be reduced through the implementation of Collaborative Learning in inclusive schools.
2. The study results prove that Collaborative Learning is efficacious for learning enhancement of Special Need children. Hence the study recommends this Collaborative Learning pedagogy may be introduced in Inclusive Education setup.
3. This Collaborative Learning technique with instructional guide may be recommended to Teachers, Teacher Educators and Textbook writers in order to improve the student achievement.

#### **5.4 Suggestion for Further Research**

1. The further study having Control group along with Experimental group can be conducted to measure the difference in the learning outcomes and to find the generalizability of the findings.
2. The future research may focus on implementation of Collaborative learning for different Subjects and Grade in inclusive classrooms
3. A study may be conducted on the effect of co-teaching for students with Special Needs in Inclusive setup.

#### **5.5 Educational Implications**

The findings of the present study have implications for Teachers, Teacher Educators, Students, and Textbook Writers. Each one of them has been spelt out separately in the following captions.

##### **Teachers**

Educating children with disability in inclusive classroom has a problem that many teachers face today. Collaborative learning has received increased attention in recent years due to the movement to educate students with disabilities in the least restrictive environment. The use of classroom collaborative learning is a promising alternative to better serve students with disabilities in a least restrictive environment. This thesis is intended to provide a comprehensive procedure for implementation of Collaborative Learning enabling them to know individual student with disability who can be educated in Inclusions. The present study will help them to know the potential use of Collaborative Learning methods and at the same time explain the fact that all students with special needs are benefitted with this technique. In fact, this will improve their understanding of students with special needs and realize the individuality of each student, fostering skill, knowledge and professional judgment in selecting appropriate learning method for students with special needs to reach their maximum learning styles.

### **Teacher Educators**

The quality of teachers will depend to a greater extent on the curriculum and Teacher Educator's competencies. The curriculum should be updated periodically. Similarly the Teacher Educators must be reoriented to enrich their knowledge in the latest development in the field.

The Collaborative Learning designed and the effectiveness indicated in the study will enrich their knowledge for best practices of inclusive education programme. This thesis may be a guideline for Teacher Educators in introducing components pertaining to Collaborative learning Strategies for students with special needs in the curriculum.

### **Students**

Although teachers share responsibility of imparting the learning of students with special needs, the students must contribute to the accountability of self esteem and its benefit has to be taken by the students consciously and intentionally. The students can use the training strategies in the implementation of Collaborative Learning in the study for improving their Academic Performance.

### **Textbook Writers**

Collaborative Learning method is a recent phenomenon in Special Education. Books by Indian authors in the field of Special Education are slowly emerging. The Collaborative Learning strategies designed and the effect of Collaborative Learning in Implementation evidenced in the study has implication for the writers. The writers can incorporate Collaborative Learning strategies in their textbook.

## **5.6 Conclusion**

Collaborative learning, as an instructional strategy ensures to develop cognitive and social skills for students that are needed in today's school education system. This study provided the base to improve and enhance the learning input of students with special needs and thus leading towards successful inclusion in all dimensions. This method benefits at the Individual level has provided a sense of positive interdependence between students, improves interpersonal and social skills and for accountability. The study results represent that Collaborative strategy is a learning paradigm and it assures that every member in the group has learnt something. There is indeed a wider scope that collaborative learning can substantially contribute towards achieving the national goal of inclusive growth and development.