CHAPTER

INTRODUCTION

"I CAN DO THINGS YOU CANNOT, YOU CAN DO THINGS I CANNOT; TOGETHER WE CAN DO GREAT THINGS."

Mother Teresa
CHAPTER I

INTRODUCTION

1.1. Introduction:

There was once a time when it was taken for granted that a quiet class was a learning class, when principals walked down the hall expecting to be able to hear a pin drop. (Al-Dawoud, 2001). However these classrooms do not encourage active learning by students.

The teacher’s effort is aimed at developing students’ competencies and talents; education is a personal transaction among students and between teacher and students as they work together. The distinction between the classical and emerging teaching learning paradigm is as illustrated in Table 1.1 which is given below.

TABLE 1.1

Comparison of Old and New Paradigms of Teaching.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Old Paradigms of Teaching</th>
<th>New Paradigms of Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Transferred from faculty to students</td>
<td>Jointly constructed by students and faculty</td>
</tr>
<tr>
<td>Student</td>
<td>Passive vessel to be filled by faculty’s knowledge</td>
<td>Active constructor, discoverer, transformer of own knowledge</td>
</tr>
<tr>
<td>Faculty Purpose</td>
<td>Classify and sort students into categories</td>
<td>Develop students competencies and talents</td>
</tr>
<tr>
<td>Factors</td>
<td>Old Paradigms of Teaching</td>
<td>New Paradigms of Teaching</td>
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<tr>
<td>-----------</td>
<td>----------------------------------------------------------------</td>
<td>----------------------------------------------------------------</td>
</tr>
<tr>
<td>Relationships</td>
<td>Impersonal relationships among students and between faculty and students</td>
<td>Personal transaction among students and between faculty and students</td>
</tr>
<tr>
<td>Content</td>
<td>Competitive/ Individualistic</td>
<td>Cooperative learning in classroom and cooperative teams among faculty</td>
</tr>
<tr>
<td>Assumption</td>
<td>Any expert can be a teacher without training</td>
<td>Teaching is complex and requires considerable teacher training and continuous refinement of skills and procedures</td>
</tr>
</tbody>
</table>

Source: Johnson, Johnson & Holubec, 1998

In the traditional paradigm of teaching, teacher’s knowledge is transferred to passive learners. An absolute, necessary and sufficient requirement for teachers in this context is complete mastery of the content. A classic classroom is the teacher teaching and the students listening: students silently listening and in competition with each other as regards their performance and achievements.

The task of education is not to pour information into students’ heads, but to engage students’ minds with powerful and useful concepts. To facilitate this process, students should be taught in ways that make information meaningful and relevant to students by giving students opportunities to discover or apply ideas themselves. The quality of education, at all levels, is strengthened by practicing student centered, activity
based, competency dependent cooperative approach for teaching which will make learning an enjoyable experience for pupils. (Sharma & Sharma, 2008)

1.1.1. Historical Overview of Cooperative Learning:

Norman Triplett (1898) was one of the first researchers interested in the effects of the group on an individual’s performance. Triplett noticed that cyclists rode faster when in competition against other cyclists than when they were paced by motor driven cycles or when they were timed riding the course alone (Forsyth, 1999). Triplett explained that creatures of the same species in each other’s presence can perform certain species-specific activities more effectively. It should be noted that Triplett’s results were due to the effects of competition rather than only the effects of the mere presence of others. Nevertheless, his work marked the beginning of the study of competition and the effects of performance in the presence of others.

A few years following Triplett’s experimental work, educationalists in Germany were concerned over the education of children raising issues about whether children should study in class groups or alone, at school or at home. However these experiments were poorly designed and hence no confirmed conclusions could be drawn. These studies however raised important methodological and conceptual issues in the field (Guerin, 1993).

In 1920, Allport made a distinction between the quantity and quality of performance. It was Allport who coined the currently widely used term ‘social facilitation’ to refer to direct social interaction effect. He concluded that group situations facilitated better performance on tasks requiring overt responses (e.g., number
of associated words offered by an individual – the quantity of performance). However, in contrast, social facilitation hampered tasks requiring intellectual responses (e.g., arguments to support the association made between words – the quality of performance). (Webb & Palincsar, 1996)

In 1924, Gates compared the performance of an individual working alone with the same individual working in front of either a small (size of four to six) or large (more than six) audience. Gate’s results showed that individuals with poor ability initially improved more without an audience; and those who were of high ability performed better with an audience. Travis (1925) and Dashiell (1930) further tested the effects of an audience on performance. Both researchers concluded that individuals performing alone had the poorest performance. The audience condition was sufficient for individuals to perform better (Pepitone, 1980).

There was a shift from competition to cooperative research stemming from the influence of John Dewey. Dewey’s focus was on the process of learning rather than the product or content, and he emphasized the social aspects of learning and the role of schooling in preparing students to value democracy and live democratically (Noddings, 1989; Schmuck & Schmuck, 1988). His work is reflected in educational movements taking up his proposals that classroom instruction should be centered on equipping children with skills on how to make choices, respecting the rights of others, relating to and emphasizing with others and carrying out projects cooperatively (Schmuck & Schmuck, 1988).
During the 1930s in response against laissez - faire individualism in Depression America, cooperation became a less favoured alternative than competitive individualism. This was not so much caused by educational concerns about cooperative methods of learning, but rather was a reflection of the political and economic climate that reflected back into educational goals. Industry backed public awareness campaigns associated ‘freedom’ with ‘individualism’. This aspect of the USA’s social climate of the 1930s revolved around the issues of freedom to compete. Such political position was reflected in suspicion of schools using methods that demanded cooperation and suppressed competition.

In the 1940s Morton Deutsch through his research recognized that competitive and cooperative conditions did not exist in any pure sense, but in many situations (or in the perceptions of people in a given situation) cooperation and competition are combined. The number of studies in the field of small group experiments reached a record high in the 1950s. These studies (Gottheil, 1995; Grossack, 1954; Phillips & D’Amico, 1956) indicated that in competitive conditions there was less friendly behavior and cohesiveness amongst the group. In contrast, subjects were friendlier and there was more cohesiveness in cooperative groups that could aim for shared rewards. In the 1960s, the tightening of the USA economy led to the reduction in research grants.

In the 1970s, there appeared to be a confluence among different academic disciplines: education, anthropology, social psychology and developmental psychology; uniting in an attempt to understand the child. There was also recognition that legislation pertaining to social integration in schools (where previously they were segregated) was
insufficient on its own to improve interpersonal relationships among diverse ethnic groups. Therefore, several pilot programmes adopting cooperative learning structures in classrooms were developed in response to the perceived needs of ethnic integration in newly disintegrated schools.

Research carried out in the 1980’s to the present day has resulted in a body of educational materials advising teachers about cooperative teaching methods and how to train children to cooperate in classroom settings. Johnson and Johnson who developed the ‘Learning Together’ model (1975, 1994, 1999) and their colleagues are the most well-known proponents of cooperative learning (Good & Brophy, 1991; Natasi & Clements, 1991; Stipek, 2002). Thus the history of cooperative learning indicates the strong influence of social psychology on the newer field of cooperative learning. (Hoon, 2004)

1.1.2. Cooperative Learning and the Present Education System:

There is a saying that ‘two heads are better than one’ in the learning process. But if we have to look back at our present education system it is noticed that a student sits at his/her desk alone and works on and on and tries to memorize the facts, in some situation two other students do their work and the goal is to be the first to shout out the correct answer and very occasionally four or five students work together or collaboratively in structured groups towards shared or common goals. The above scenarios refer to three different types of learning used in our school today. We are most familiar with the first type of learning i.e., the traditional individualistic learning approach, the second type is competitive learning approach and students compete to see
who is best, but the third scenario describes the cooperative learning and indicates that a
group of students working together towards a common goal. (Panda, 2008).

Knowing how and when to structure students’ goals cooperatively, competitively or individualistically is an essential instructional skill all teachers need. Each way of structuring interdependence among student’s learning goals has its place. An effective teacher will use all three appropriately.

This may not be easy, as teacher training, has by and large neglected preparation in the appropriate utilization of student-student interaction. In our country, of the three interaction patterns (individualistic, competitive and cooperative), competitive is presently the most dominant. Research indicates that a vast majority of students view education as a competitive enterprise where one tries to do better than other students. Cooperation among students who celebrate each other’s success, encourage each other to do homework and learn to work together regardless of ethnic backgrounds or whether they are male or female, bright or struggling, disabled or not is still rare. Using a traditional ‘teacher telling’ and ‘student listening’ approach helps in mass production of stereotyped learners who are theoretically sound but practically lag way behind their counterparts taught using different strategies which actively involve students. If teachers are not taught to cooperate in their teacher education programmes, it is difficult to learn. If teachers are not afforded opportunities to cooperate, it is difficult to practice. Working in isolation becomes a habit. The way the majority of teacher education programmes are structured in India today, few, if any, allow opportunities for pre service teacher trainees to cooperate with one another. From this training, educators are taught, they do not need to cooperate with one another. The
unspoken message is that they do not need to know what the other is doing. This is a dangerous message that is then carried out into the public school classrooms by in-service teachers as the same culture is present once the teacher trainees reach the classroom. Such training fosters working competitively and individualistically over cooperatively. Teachers trained through only competitive and individualistic learning structures imbibe the values of competition and individualization within themselves and pass it on as it is to their students. This process has been going on since a long time and everyone has been overlooking the third dimension of structuring a learning situation i.e. cooperative learning structure. (Agarwal & Nagar, n.d.)

K-12 (a term for the sum of primary and secondary education) teachers learn to teach relying on their experience as students and knowledge acquired via post-secondary education (Goodlad, 1994). Many K-12 teachers learned most recently through lectures so it follows that, subconsciously these neophyte or novice teachers are most familiar with, and believe that, giving lectures must be the way to teach. This mentality must change if teacher education students are going to incorporate cooperative strategies in their teaching, they must learn via cooperative strategies. Professors who teach about and incorporate cooperative strategies into the everyday life of their teacher education students rather than teach cooperative learning only as an instructional theory in a course provide their students with an internalized learning structure. In turn, as teachers, they can use these techniques with their future children. Cooperative learning has proven itself useful in defusing tension in a classroom through the focus on interpersonal communication and the development of social skills
It seems natural that teacher education students should have this technique in their personal array of teaching tools.

Teacher education students need to learn the theory and techniques associated with cooperative learning. Undergraduate programme and alternative certification programmes might focus on hands-on techniques and small group work, but true cooperative learning appears seldom used. As the Chinese proverb:

“When I hear I forget, When I see I remember, When I do I learn.”

Adults and children learn by ‘doing’ and it makes sense that college instructors need to offer opportunities for teacher candidates to participate in cooperative learning tasks. (Ransdell & Moberly, 2003)

Cooperative learning principles: Many principles have been proposed for cooperative learning. Below is a list of eight such principles.

1. Heterogeneous Grouping: This principle means that the groups in which students do cooperative learning tasks are mixed on one or more of a number of variables including sex, ethnicity, social class, religion, personality, age, language proficiency and diligence.

2. Collaborative Skills: Collaborative skills, such as giving reasons, are those needed to work with others. Students may lack these skills, the language involved in using the skills, or the inclination to apply the skills. Most books and websites on cooperative learning urge that collaborative skills be explicitly taught one at a time.
3. **Group Autonomy:** This principle encourages students to look to themselves for resources rather than relying solely on the teacher. When student groups are having difficulty, it is very tempting for teachers to intervene either in a particular group or with the entire class. We may sometimes want to resist this temptation, because as Roger Johnson writes,

> ‘Teachers must trust the peer interaction to do many of the things they have felt responsible for themselves.’


4. **Simultaneous Interaction (Kagan, 1994):** In classrooms in which group activities are not used, the normal interaction pattern is that of sequential interaction, in which one person at a time – usually the teacher – speaks. In contrast, when group activities are used, one student per group is speaking. In a class of 40 students divided into groups of four, ten students are speaking simultaneously, i.e. 40 students divided into 4 students per group = 10 students (1 per group) speaking at the same time.

5. **Equal Participation (Kagan, 1994):** A frequent problem in groups is that one or two group members dominate the group and, for whatever reason, impede the participation of others. Cooperative learning offers many ways of promoting more equal participation among group members.
6. Individual Accountability: When we try to encourage individual accountability in groups, we hope that everyone will try to learn and to share their knowledge and ideas with others.

7. Positive Interdependence: This principle lies at the heart of cooperative learning. When positive interdependence exists among members of a group, they feel that what helps one member of the group helps the other members and that what hurts one member of the group hurts the other members. It is this ‘All for one, one for all’ feeling that leads group members to want to help each other, to see that they share a common goal.

8. Cooperation as a value: This principle means that rather than cooperation being only a way to learn, i.e., the how of learning, cooperative learning also becomes a part of the content to be learned, i.e. the what of learning. This flows naturally from the most crucial cooperative learning principle, positive interdependence. Cooperation as a value involves taking the feeling of ‘All for one, one for all’ and expanding it beyond the small classroom group to encompass the whole class, the whole school, on and on, bringing in increasingly greater number of people and other beings into students’ circle on ones with whom to cooperate. (Jacobs, 2003)

Johnson, Johnson and Smith (1991) defined cooperative learning as “the instructional use of small groups so that students work together to maximize their own and each other’s learning.” Based on their research, they have proposed five essential elements that are necessary to construct effective cooperative learning experiences:
positive interdependence, promotive face to face interaction, individual accountability, social skills and group processing. A visual representation of this concept is presented in figure 1.1 given below. (Jones & Jones, 2008)

![Five Elements of Cooperative Learning](image)

**FIGURE 1.1 Elements of Cooperative Learning** (Foundation Coalition, 2008)

R.I.C.H.E.S. is a useful acronym to serve as a guideline for the requisite elements of effective cooperative learning. It reflects the research and the large amount of practical material developed through the years in the area of cooperative learning.

Starting with Johnson, Johnson and Holubec’s five elements- positive interdependence, individual and group accountability, face to face interaction, interpersonal and small group skills, and group processing- R.I.C.H.E.S. blends two other elements – higher order thinking and emotional realm – to present six cooperative learning elements. (Williams, 2002)
1. **Reflection** – reflection provides a chance for the brain to create meaning out of what has been encountered within the group learning situation.

2. **Individual Achievement** – individuals must be accountable for their own participation and for the group’s learning of assigned material. Assessments should be individual to reflect the differing skills and knowledge levels of all.

3. **Collaboration** – class must be guided to connect and grow as a cohesive unit in order to derive the greatest benefit from the learning experience.

4. **Higher-order Thinking** – working collaboratively develops critical thinking and metacognitive skills through negotiation of meaning, constructive criticism and collective problem-solving.

5. **Emotional Realm** – emotions are the source of motivation for learning: self-control; zeal; persistence and the ability to motivate oneself = emotional intelligence, which is developed as students share their individual ideas and feelings within a group.

6. **Social Skills** – group members learn how to provide effective leadership; decision-making; trust-building; conflict management and communication (listening, taking turns, encouraging others)

Bringing **RICHES** into the classroom means bringing reflection, individual achievement, collaboration, higher-order thinking, emotional realm and social skills into the teaching process. When well-integrated into lessons, these elements provide the
fundamental structures for co-operative learning to flourish. They also foster skills for life-long learning. (Truter, 2009)

1.1.3. National Curriculum Framework and Cooperative Learning:

Education in India has undergone various phases and stages of development starting from Vedic age to the post-independence period. At all stages of development there were concerns of bringing in quality education reflecting on the practical aspects in education. The great Indian thinkers also emphasized on developing inner potentials of the individual by reflecting on the unique potential of the individual. School education till 1976 was under the State control and the center would advise the state for policy issues. Later the constitution was amended to include education in the concurrent list. The NPE 1986 recommended for a common core component in school curriculum throughout the country and NCERT was given the responsibility for developing a National Curriculum Framework and review the framework at regular intervals. In spite of the various recommendations as per NPE 1986 the school education remained to be exam oriented, bookish and information loaded devoid of practical aspects. (Khirwadkar, 2007)

The National Curriculum Framework of 2000 talks about ‘The child as a constructor of knowledge’: The acquisition of knowledge through active involvement with content, and not imitation or memorization of the material, is at the root of construction of knowledge. The constructivist movement has re emphasized the active role children play in acquiring knowledge. The social construction of knowledge has
been an important principle. In the constructivist setting, the learners have the autonomy for their own learning, opportunities for peer collaboration and cooperation, time for self observation and evaluation and outlets for reflection. Thus the National Curriculum Framework of 2000 gives importance to cooperative learning. (National Curriculum Framework. 2000).

The National Curriculum Framework (NCF) of 2005 highlights the value of interaction with environment, peers and older people to enhance knowledge, under the ‘Learning and Knowledge’ section of the document. The NCF states that, in this context collaborative and cooperative learning provides room for negotiation of meaning, sharing of multiple views and changing the internal representations of external realities. Much of our school learning is individual based. But interaction with teachers, with peers as well as those who are older and younger can open up many more rich learning possibilities. Projects and activities that can be carried out by groups need to become a feature of learning in middle and high school also. Group learning tasks, taking responsibility and contributing to a task at hand are all important facets of not only acquiring knowledge but also in the learning of arts and crafts (NCF, 2005. p 20).

1.2. Need of the Study:

1.2.1. Cooperative Learning and Teacher Education:

Cooperation among students will be easier to establish and maintain if there is cooperation among school personnel. Many schools are scared by competition among teachers. In these schools, teachers feel insecure, isolated, cold, reserved, defensive and competitive in their relationships with fellow teachers and administrators. Feelings of hostility, guardedness and alienation towards the rest of the school staff create anxiety
in teachers, which in turn decreases their effectiveness in the classroom. The teachers act as though they never need help from their colleagues. A friction is maintained that a ‘professionally and highly trained teacher’ has already sufficient competence and skill to handle all classroom situations alone. The actual result, however, is that innovative and creative teaching is stifled by insecurity, anxiety and competitiveness; and the environment is depressing and discouraging.

One of the most constructive contributions one can make in the school environment is to encourage cooperation among teachers and the use of cooperative goal structures in the classroom. The process for implementing cooperation between teachers is same as for implementing cooperation between students. Such cooperative goals should be established that all involved teachers wish to accomplish and that require interdependence and interaction among the teachers. Sufficient trust and openness must be present for teachers to feel free to visit one another’s classrooms and ask one another for help or suggestions. Providing feedback about each other’s teaching and providing help to increase teaching skills are equally important. Teachers must have the basic communication, trust building and controversy resolving skills i.e. conflict resolution skills. Team teaching, coordinating all social studies curricular, establishing support groups in which teachers provide help and assistance to each other, coordinating the teaching of difficult students - all are examples of cooperative interaction among teachers. Implementing department and school wide cooperation among teachers will immensely increase enjoyment of teaching and of working in the school and it will also encourage cooperation among students within the classroom. (Agarwal & Nagar, n.d)
The NCF also talks about the concerns in teacher education emphasizing that a lot of importance is given to just transmission of information and do not accommodate emerging ideas nor address the issues of linkages between school and society. There should be a major shift in teacher education programme where learning should be appreciated as a participatory process that takes place in shared social context of learner’s immediate peers as well as the wider social community or the nation as a whole. (National Curriculum Framework, 2005. p 108)

To many pre service teachers, professional knowledge consists of both theoretical foundations of practice in future classroom teaching and the conceptual arguments from which the explanation of observed phenomenon has been found. The theory of teaching and learning related issues is commonly learned through discussions in lecture courses designed by instructors of training programs. Such learning experiences are teacher centered and the students are passive receivers of information. It does not require the ability of actively contextualizing professional knowledge with challenges faced in personal situations. Pre service teachers walk away from this course only with partial memory of the content read and discussed in the classroom. Unfortunately this is generally what they gain through the course. The use of cooperative learning can help in overcoming this limitation of teaching in pre service courses. (Liaw, 2008).

The theory behind cooperative learning is based on Lev. Vygotsky’s Social Development Theory. Vygotsky’s Social Development Theory has also been termed Social Constructivism. The primary assumption of the social developmental perspective is that interaction among students increases their mastery of the concepts in
the tasks. Theorists such as Vygotsky (1978) hold the view that learning first takes place in interaction among students before it becomes mental processes for the individual. Vygotsky (1978) states: "Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (inter psychological) and then inside the child (intra psychological)." (p57). (García, Mircea & Duque, 2010).

David and Roger Johnson (1985) claimed that despite the documented effectiveness of cooperative learning, this teaching strategy received little attention in teacher education. Lawrence Lyman and Harvey Foyle (1990) declared that it was “…lamentable that there are still colleges of education that graduate teachers and principals who are not equipped with the skills for effective collaboration and cooperation” (p. 12). If future teachers are to make positive use of cooperative learning, they need to know what it is, recognise the value of the strategy for their students and have knowledge and skill to plan cooperative activities. Therefore, teacher educators face the challenge of how best to ensure that pre service teachers acquire the knowledge and skill to enable them to implement cooperative learning and at the same time influence them to want to learn to use this model (Bouas, 1996).

Cooperative learning is the instructional use of small groups so that students work together to maximize their own and each other’s learning. Each member of a team is responsible not only for learning what is taught but also for helping teammates learn, thus creating an atmosphere of achievement. Students work through the assignment until all group members successfully understand and complete it. Research has shown that cooperative learning techniques:
1. promote student learning and academic achievement
2. increase student retention
3. enhance student satisfaction with their learning experience
4. help students to develop skills in oral communication
5. promote student self esteem
6. help to promote positive relations. (Kagan, 1994)

To have a chance of future implementation, cooperative learning must be modeled for pre service teachers and experience by them as learners. (Cohen, Brody & Shevin, 2004).

John I. Goodlad’s (1990) 10th postulate among the 19 he considers important for creating quality teacher education programme is a call for teacher educators to model best practices in their classrooms. Cooperative learning is a practice (teaching strategy) that has been found to enhance student achievement, encourage positive self-esteem and facilitate growth in social interaction skills (Johnson & Johnson, 1991; Kegan 1989/90; Salvin 1991). In light of the volume of research based finding regarding the benefits realised as a result of cooperative learning (Johnson & Johnson 1989, 1991; Kegan 1989/91; Sharan & Sharan 1989/90; Salvin 1989/90, 1991), it seems logical to expect cooperative learning to be both exemplified and taught in teacher education programmes. (Bouas, 1996) However cooperative learning is not given attention in teacher education programmes.

The same can be said about the existing teacher education programmes. There is little scope available in the B.Ed. syllabus for Pre Service Teachers to experience
cooperative learning teaching strategies as students as lecture method is used as the method of instructions most of the times. Moreover the various types of lessons prescribed in the syllabus mainly follow the traditional Harbartian pattern of conducting lessons. No specific endeavours have been made to give systematic training in using cooperative learning teaching strategies.

The researcher selected a study based on cooperative learning because, not only has it been emphasized by the NCF as stated above, but it is included in the second section of the B.Ed. theory Paper II i.e. Psychology of Development and Learning. Thus the study would help the pre service teachers learn the teaching strategy based on cooperative learning as students as they would get hands on experience of the techniques as learners. Furthermore they would also learn how to use these teaching strategies as teachers, while conducting their practice school lessons.

This raised the following questions in the mind of the researcher:

- Whether teaching strategy based on cooperative learning is used in teaching Educational Psychology at Pre Service Teacher Education level?
- Whether social learning using teaching strategy based on cooperative learning will help the pre service teachers understand and learn Educational Psychology?
- If the pre service teachers will understand the concept of cooperative learning if taught using cooperative learning teaching strategy?
- Whether pre service teachers will use teaching strategies based on cooperative learning while planning and conducting their school lessons?
Hence the researcher decided to take up the present study in order to answer the above questions.

1.3. Statement of the Problem:

To find out the effectiveness of the programme based on the teaching strategy using cooperative learning on the academic achievement of pre service teachers in the subject ‘Psychology of Development and Learning’.

1.4. Definition of Key Terms and Phrases:

1.4.1. Conceptual Definitions:

1.4.1.1. programme: A plan of activities for an event or a series of events (Cambridge dictionaries, 2016)

1.4.1.2. strategy: A strategy is a particular way of approaching a problem or task, a mode of operation for achieving a particular end. (Brown, as cited by Karami, 2008)

1.4.1.3. teaching strategy: is a generalized plan for a lesson which includes structure, desired learner behavior in terms of goals, instruction and outline of planned tactics necessary to implement the strategy. (Stones & Moris as cited by Sharma & Chandra, 2003)

1.4.1.4. cooperative learning: Cooperative learning is a system of teaching strategy which promotes the students to cooperate in heterogeneous teams toward a common goal and are rewarded according to the success of the team. (Tan, 2001 as cited by Zou, 2011)
1.4.2. Operational Definitions:

1.4.2.1. **effectiveness:** in the present study it refers to the significant difference in the scores on the post-test (achievement test) obtained by the experimental group and control group.

1.4.2.2. **programme based on the teaching strategy based on cooperative learning:** programme based on the teaching strategy using cooperative learning refers to the activities planned by the researcher based on cooperative learning teaching techniques, namely timed-pair-share, think-pair-share, three step interview, circle the sage, formulate-listen-share and create, numbered heads, round table technique, paired heads together, pair compare and three minute review.

1.4.2.3. **academic achievement:** Scores obtained by the preservice teachers on the post-test (achievement test).

1.4.2.4. **Pre service teachers:** Students perusing the Bachelors Degree in Education from colleges affiliated to the Savitribai Phule Pune University formerly known as University of Pune.

1.4.2.5. **Subject Psychology of Development and Learning:** refers to the units from Paper II, Section I - Psychology of Development and Learning from the B.Ed. syllabus. (Revised 2008) of Savitribai Phule Pune University formerly known as University of Pune.
1.5. Objectives of the Research:

1. To explore the views of teacher educators regarding cooperative learning teaching strategies and find out if they use these strategies while teaching the subject ‘Psychology of Development and Learning’ to pre service teachers.

2. To develop a programme based on the teaching strategy using cooperative learning for teaching Paper II Section I of the subject ‘Psychology of Development and Learning’ to pre service teachers.

3. To find out the effectiveness of the teaching strategy.

4. To gather and analyze the feedback from Neutral Observers and the pre service teachers of the Experimental Group regarding the intervention programme and link it with the researcher’s reflections.

1.6. Hypothesis:

Null hypothesis is stated for the study:

- \( H_0 \) There is no significant difference in the achievement level of the pre service teachers from the experimental and control group.

- \( H_1 \) “The intervention programme based on cooperative learning techniques to teach pre service teachers improves their academic achievement (of the units given in Paper II Section I ‘Psychology of Development and Learning’ of the B.Ed Revised Syllabus of 2008).”

1.7. Assumptions:

1.7.1. There is a requirement of shifting the learning paradigms from instruction to discovery and construction. (National Curriculum Framework, 2000)
1.7.2. Very few teacher education colleges pay attention to cooperative learning teaching strategy. (Johnson & Johnson, 1985 as cited in Bouas, 1996)

1.7.3. The lecture format is a widespread methodology used in both undergraduate and graduate courses. (Ransdell & Moberly, 2003)

1.7.4. Students of Higher Education level enjoy learning through cooperative learning as it reduces anxiety. (Pushpanjali & Satyaprakash, 2010)

1.8. Scope:

1.8.1. The present research focuses on the use of cooperative learning as an effective teaching strategy for pre service teachers.

1.8.2. The research is concerned with colleges affiliated to Savitribai Phule Pune University formerly the University of Pune, Pune City.

1.9. Delimitations

1.9.1. Survey:

- The study is limited to the teacher educators teaching Paper II: Psychology of Development and Learning in B.Ed. colleges within Pune city.
- The purposive representative sample consisted of B.Ed. colleges affiliated to Savitribai Phule Pune University formerly the University of Pune, Pune City.

1.9.2. Experiment:

- The research has used non probability sampling method i.e. purposive sampling.
  - The study was restricted to only the pre service teachers from English medium.
• Only the English medium division of two B.Ed. Colleges in Pune city was included in the experiment.

• The researcher only included the units from Paper II, Section I - Psychology of Development and Learning from the B.Ed. syllabus. (Revised 2008)

1.10. Limitations

1.10.1 Survey:

• The motivation levels, fatigue, mood, past experience of the teacher educators which may affect their responses are beyond the control of the researcher.

• The sampling method used was non probability purposive sampling.

1.10.2 Experiment:

• The motivation levels, fatigue, mood, past experience of the pre service teachers which may have affected their responses were beyond the control of the researcher.

• The pre service teachers who were present throughout the experiment were included in the sample.

1.11. Significance of the Study:

The study may help the pre service teachers not only understand cooperative learning teaching strategy theoretically, but also practically as they may use it while planning and conducting their practice school lessons. Further the study can also give an idea to the teacher educators on how to use the teaching strategy based on cooperative learning as emphasized by the National Curriculum Framework of 2005. This study will
also give the pre service teachers an opportunity to learn actively and not reduce them to mere passive listeners. Thus the study will ensure again how active learning may promote better achievement at higher education level.

1.12. Chapterization:

The present study has been presented in Five Chapters:

- Chapter I: Introduction
- Chapter II: Review of Related Literature
- Chapter III: Plan and Procedure of the Research
- Chapter IV: Analysis and Interpretation
- Chapter V: Summary and Conclusion

1.13. Conclusion:

The present chapter gives a clear idea about the statement of the problem undertaken for the research. It has also emphasized the need and significance of the study including defining the key terms and the scope of the research. This chapter lays the foundation on which the rest of the report is presented. The next chapter i.e. Chapter 2 ‘Review of Related Literature’ highlights the existing literature regarding cooperative learning teaching strategy and the gaps identified by the researcher.