



## A Theoretical Understanding of Cooperative Learning Techniques in Education

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**Abstract:** Education is one of the main pillars on which the development of a nation depends. This fact necessitates research in the education sector of a state to make it capable of coping with the challenges of the modern age. Traditional methods of learning have been incapable in this regard. Cooperative Learning Techniques is an innovative teaching methodology for promoting the academic achievements of the students. Cooperative Promoting students' participation in class through a Cooperative Learning environment needs a variety of research studies in the effectiveness of Cooperative Learning Techniques. Educational institutions in the developed states make effective use of Cooperative Learning Techniques to enhance students' participation and their academic achievements. The major objective of this research study is to give a theoretical understanding of the various aspects of Cooperative Learning Techniques. The paper shows that effective Cooperative Learning can be realized only if its basic elements are carefully implemented. The paper also gives some policy recommendations.

**Key Words:** Traditional Learning, Cooperative Learning, Collaborative Learning, Academic Achievements, Positive Interdependence, Individual Responsibility and Group Processing

### Introduction

Cooperative Learning (CL) is a technique of learning process where learners learn in small structured groups while helping one another and where value is given to cooperation rather than the present traditional teaching methodology based on competition. CL is an instructor-facilitated and learner-centred strategy of instruction in which small structured groups of students are responsible for their own learning and the learning of all group mates. The crucial characteristic of CL is that the gain of one student is the gain of others. Thomas [Friedman \(2006: 302\)](#), while making a remarkable statement, said, "In the future, how we educate our children may prove to be more important than how much we educate them".

According to [Slavin \(1982\)](#), cooperation is one of the crucial human activities. Elephants survive as a species due to their size, cheetahs as a result of their speed, and humans because of their

cooperation for the group's interests. In modern times, people who coordinate as a team for accomplishing common goals are more successful in every field. These cooperative groups usually have an "all-for-one, one-for-all" approach in which group members facilitate and promote each other and appreciate each other's achievements. [Atkinson \(1964\)](#) says, "Achievement is a 'we thing', not 'a me thing', always the product of many heads and hands". Human beings are successful species because they apply their intellect to cooperate with others to achieve group tasks. We cannot think of adult activities where cooperation is missing. As educational institutions socialize students to take adult roles and as mutual collaboration is vital for adult life, it is of prime importance to encourage cooperative activities in schools ([Singh & Agrawal, 2011](#)). In a competitive environment, students with high marks may not work hard because they know that, in any case,

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they will be position holders. It will also discourage the low graders because they will think that they cannot achieve a high grade. As [Tripathy \(2004\)](#) demonstrates, “Cooperative group situation could create a non-threatening environment in which students can take academic risks easily”. While with his group members, a student will not be disturbed or embarrassed of mistakes. The rectification and feedback from the members of his group will encourage him. Students motivate and encourage one another. CL inculcates in the student's cooperative attitude, leadership responsibilities, active involvement in group process, constructive collaboration, better learning and enhanced self-esteem ([McManus & Gettinger, 1996](#)). [Ebrahim \(2010: 294\)](#) notes that “Cooperative learning approaches create excellent opportunities for students to engage in problem-solving with the help of other group members”.

CL has been variously defined by scholars. For example, [Johnson, Johnson, and Smit \(1991\)](#) say that “Cooperative learning is an educational tool where small groups of students work together to increase individual as well as group learning”. [Johnson and Johnson \(1989: 14\)](#) say that CL is “The instructional use of small groups so that students work together to maximize their own and each other's learning....In cooperative learning, students work with their peers to accomplish a shared or common goal. The goal is reached through interdependence among all group members rather than working alone. Each member is responsible for the outcome of the shared goal... Cooperative learning does not take place in a vacuum...Not all groups are cooperative groups. Putting groups together in a room does not mean cooperative learning is taking place”. In cooperative learning, learners work collectively to realize collective goals ([Johnson & Johnson, 1992; Johnson, Johnson, & Holubec, 1993](#))

According to [Cohen \(1994: 3\)](#), CL is “Students working together in a group small enough that everyone can participate on a collective task that has been clearly assigned. Moreover, students are expected to carry out their task without direct and immediate supervision of the teacher”. This means that “The size of the group is small enough to help all students who participate in group-task, that the task should be structured very cautiously, and that each group should work independently of the teacher”.

[Slavin \(1996a\)](#) argues that though there were a few studies on this topic since the start of the 20<sup>th</sup> century, the quality and quantity of research in CL has increased to a great extent in the early 1970s and continues till date with greater vigour. Thousands of studies have been conducted to compare CL to a variety of control methods. More than forty years of thorough research having hundreds of research studies and reviews on CL since the late 19th century, where both social dynamics and learning outcomes of CL have been thoroughly investigated under a variety of settings. [Slavin \(1990\)](#) regards it as “One of the most thoroughly researched of all instructional methods and one of the greatest educational innovations of recent times”.

[Johnson, Johnson & Smit \(1991: 1-14\)](#) found that there are three ways through which students' interaction in the classroom is structured: competitive, individual and cooperative. In a competitive setting, one student's gain is another student's loss. Students compete against one another because the whole group is not capable to effectively achieve the goals, and only one of the students can achieve them. The structure of the class encourages a sort of negative interdependence amongst the learners. In an individualistic setting, learners gain the independence of other learners and targets are achieved without the help of other classmates. Learners concentrate on their goals individually. Additionally, the achievement is not related to how others do; accomplishment matters individually. On the other hand, in a cooperative setting, students work collectively to achieve their group ends. The main difference between cooperative versus individualistic and competitive settings is that CL advances the success of all teammates, not just one. [Johnson & Johnson \(1992: 174\)](#) give a foundational thought to CL by saying that “Our goal is based on the premise that if students' learning goals are structured cooperatively, then students will help, assist, encourage, and support each other to achieve”. As against individual or competitive work, cooperation brings about “Higher group and individual achievement, higher-quality reasoning strategies, more frequent transfer of these from the group to individual members...and more new ideas and solutions to problems” ([Maher, 2010: 3](#)). [Hooker \(2011: 223\)](#) says, “Students working in the small peer-led collaborative learning groups had

improved completion rates”. Deutsh (1949) also pinpoints that learners can see their peers through three lenses: competitive, individual and cooperative. They can compete to achieve the target, they can work individually to achieve their goals without other students’ help, or they may work collectively in cooperation to promote their and others learning.

The effectiveness of CL as a teaching methodology that enhances both learning and socialization is highly supported by studies conducted by [Johnson et al. \(1981\)](#), [Slavin \(1989\)](#), [Johnson and Johnson \(2002\)](#), and [Roseth, Johnson & Johnson \(2008\)](#). All these studies attest to the benefits learners derive by cooperating with others. Working jointly to realize common goals brings about greater productivity and higher achievement than working alone. The scholars emphasize structuring the groups. The basic elements for successfully implementing CL must be taken into accounts which increase motivation among the students to work collectively for achieving both groups and their own objectives; accept accountability; respect other students’ contributions, democratically resolve disagreements; and maintain effective working relationships by working constructively. Adhering to these basic elements facilitate effective cooperation among the students. Research shows that learners hardly ever hold in high-level discourse or offer quality explanations unless they are so taught. When a teacher teaches, students learn the way to talk, ask questions, explain their thinking, analyze and solve questions, reason, argue and justify. Section 2 deals with the differences between Cooperative Learning and Traditional Learning. Section 3 differentiates between Cooperative Learning, Collaborating Learning and Group Learning. Section 4 gives a comprehensive understanding of the various elements of Cooperative Learning. Section 5 gives the rationale for the application of Cooperative Learning Techniques in education, while section 6 concludes the paper with some policy recommendations.

### **Cooperative Learning vs Traditional Learning**

The modern teaching methodology is teacher-directed and teacher-centred, where students rarely interact with teachers. The teacher normally spends maximum time explaining curriculum and

contents in class, and students passively listen to the lecture ([Wang, 2017](#)). CL is just opposed to the traditional classroom, where the competition for grades and rewards of one student may reduce the chances of other students. Competition is “A social process that occurs when rewards are given to people on the basis of how their performances compare with the performances of others doing the same task or participating in the same event” ([Coakley, 1994](#): 78) while cooperation is “A social process through which performance is evaluated and rewarded in terms of the collective achievements of a group of people working together to reach a particular goal” ([Coakley, 1994](#): 79). Both cooperation and competition greatly influence students’ performance. For example, [Triplett \(1898\)](#) observed that cyclist does well when racing with or against others than when he races alone. [Lam, Yim, Law, & Cheung \(2004\)](#) also observed that competition positively affect learning motivation and performance goals in the classroom. On the other hand, [Deutsch \(1949\)](#) found that competition shows negative interdependence while cooperation promotes positive interdependence and found that a cooperative environment provides more opportunities to students for solving more problems than a competitive environment. Cooperation, and not competition (based on Darwinism), is the principal feature of human learning. In human societies, those individuals survive best who cooperate with each other ([Montagu, 1965](#)). CL methodology is used for better learning of the students. This method rewards the students and enhances their interdependence and cooperation in every task ([Artz and Newman, 1990](#)). In CL, the relation between teachers and students is different from the traditional educational system. In CL, students actively participate by using social skills to build knowledge and solve the problem ([Matthews et al. 1995](#)). Teacher in CL becomes facilitator with a shift in authority in the classroom requiring careful planning, flexibility and self-confidence ([Hanson 1995](#)). According to [Slavin \(1987\)](#), students learn the lesson more successfully when working in cooperative groups and not as individuals. “The structure of the traditional classroom is highly inconsistent with adolescent development and peer norms. Traditional classrooms expect students to work independently and to compete for good grades, teachers’ approval, and recognition” ([Slavin, 1996b](#): 1).

Furthermore, CL can stimulate critical thinking in learners by initiating discussion of higher-level in the groups (Panitz & Panitz, 1998). According to Panitz (1999: 1), “In a typical college classroom emphasizing lecturing, there is little time for reflection and discussion of students’ errors or misconceptions. With the cooperative learning paradigm, students are continuously discussing, debating and clarifying their understanding of the concepts”. According to a study, more than 85% of the time is spent in delivering a lecture in the classroom where learners work individually without having any interaction with one another in their learning experience and instead of cooperation may even work against one another (Johnson et al., 1984). Students compete with their classmates. Competition robs creativity because it favours convergent thinking instead of developing divergent ideas in students (Singh & Agrawal, 2011).

Johnson & Johnson (1994;2002), in a meta-analysis of 117 research studies, analyzed the impacts of CL, individualistic and competitive settings on a number of personal, social and academic dependent variables (achievement, interpersonal attraction, self-esteem, social support, controversy etc.) and noticed strong

effect sizes, ranging from 0.58 to 0.70 for CL as compare to individualistic and competitive learning. These findings, along with others (Johnson et al. 1981; Slavin, 1989), showed that as compared to individualistic and competitive settings, CL has significant effects on a number of dependent variables such as gaining social skills, self-development, achievement and motivation. Besides, these studies showed the social and academic advantages learners gain from working cooperatively. Similarly, in a meta-analysis of 148 research studies comparing the effects of individualistic, competitive, and cooperative structures in enhancing peer relationships and early adolescents’ achievement, Roseth, Johnson & Johnson (2008) found out that more positive peer relationships and higher achievement were cooperative rather than individualistic or competitive. Additionally, cooperative goal structures were highly associated with positive peer relationships and early adolescents’ achievement. In short, “The more early adolescent teachers structure students’ academic goals cooperatively, (a) the more students will tend to achieve, (b) the more positive students’ relationships will tend to be, and (c) the higher levels of achievement will be associated with more positive peer relationships” (Roseth, Johnson & Johnson, 2008: 238).

**Table 1.** Differences between Traditional and Cooperative Learning

Factor	Traditional Teaching Method	New Teaching Method
Knowledge	Transmitted from teacher to students Passive pots that are filled by teacher’s knowledge. No contact between students Not responsible to others	Mutually constructed by teacher and students. Active discoverer, constructor and transformer of his own Knowledge Active contact with others Responsible to others
Students	Accountable only to self One student act as a leader “Keep your eyes on your paper.” “Sit quietly.” “Talking is cheating.”	Accountable to the group Positive interdependency “Help your partner solve it.” “Get up and look what others did.” “Verbalize to learn.”
Teacher’s Purpose	Classify and arrange students	Build up students’ talent and competencies
Relationships	Impersonal relationships between teacher and students and among students Individualistic/competitive.	Personal contacts among students and between teacher and students CL in the classroom and cooperative group among teachers
Context	Homogeneous grouping	Heterogeneous grouping

Factor	Traditional Teaching Method	New Teaching Method
Assumption	Any teacher can teach Social skills ignored or assumed “A good class is a quiet class.”	Requires extensive training and is complex Social skills are taught directly “Learning involves healthy noise.”

Sources from [Johnson and Johnson \(2005\)](#); [Mcdonell \(1992\)](#); [Kagan & Kagan, 2009](#): Chap. 1).

The reward structure of the CL technique is also different from the traditional class. Competition in class is emphasized in a negative reward interdependence system where one student’s gain is another student’s loss. On the contrary, cooperation within the group is emphasized in a positive reward interdependence system where one learner’s gain allows the success of all group mates. For Traditional vs CL mode of teaching, see Table 1.1.

### Differences among Cooperative, Collaborative and Group Learning

CL is not exactly the same as Collaborative and Group Learning. CL is more structured than Collaborative Learning ([Panitz, 1997](#)). In CL, the teacher imposes the structure and is planned to realize targeted outcomes ([Panitz, 1997](#)). A different method of interaction is followed in Collaborative Learning, where students comparatively have more control over their learning ([Abrami et al. 1995](#)). Some scholars say that CL and Collaborative Learning differ only in the degree of structure applied ([Panitz 1997](#); [Abrami et al. 1995](#)), while others say that they differ greatly on a variety of other issues ([Bruffee 1995](#)). [Bruffee \(1995\)](#) suggests that CL is more suitable for elementary schools because the elementary school students lack the social skills needed for working together effectively ([Matthews et al. 1995](#)), while Collaborative Learning is more suitable for students of higher studies where they have gained the needed social skills to realize their learning outcomes ([Matthews et al. 1995](#)) and students are responsible for the evaluation and governance of their group. Finally, CL is more appropriate for learning formulae and facts (foundational knowledge), while collaborative learning is better for learning higher-order knowledge (non-foundational) ([Bruffee 1995](#)).

Similarly, only studying in groups is not the CL method. In simple group work, the students may continue to work individually or competitively, despite being physically working in a group. They may sit in a group while studying together without

any communication with each other, and students in study groups will not affect each other positively, and their learning is individual learning. In CL, students work collectively on a non-competitive basis to accomplish a set task. Here students’ efforts are appreciated and rewarded as a group. For example, if a group is to submit an assignment and that is completed by only one without the support of the others, this cannot be called the CL method. In CL groups, the assignment is completed by all the teammates. The teacher manages the structure and organization of the group ([Johnson & Johnson, 2003](#)). Here the students know that they have to increase both their own and their friends’ learning because the objectives of CL groups are achieved only when each member strives for the goals of all teammates. [Slavin \(1980\)](#) says that there are five areas where CL differs from simple group learning: (a) reward interdependence which means that groups get rewards based on the performance of all the members of the group; (b) task interdependence which means that groups task depends on the skill of the whole group; (c) individual responsibility; (d) structure imposed by teacher, i.e. the teacher manages tasks, schedules and rewards; and (e) the use of group competitions by giving rewards to the group having highest scoring in the class.

### Elements of Cooperative Learning

A number of important elements are required for a successful implementation of the CL framework. These elements are as below:

#### Positive Interdependence (PI)

[Singh & Agrawal \(2011\)](#) say that PI is the belief of the group members that they "sink or swim together." In a CL setting, a student has to perform two things a) to understand and learn the assigned task and b) to ensure that other teams have also learnt the assigned topic. This dual responsibility is called positive interdependence, where students believe that all the group members are so related that they can achieve and win only when their other group members do. This means that the

efforts of all the group members must be coordinated to complete the assignment. When one student gets his goal, all other members of the group also get their goals. Consequently, groupmates have a collective destiny where all may win or lose based on their overall performance. Tasks that help in realizing the objectives benefit all the group mates and, in turn, add to the collective good. PI creates a situation where learners perceive that their labour supports their group mates and their group mates' work help them. The group has clear common goals around which all the teammates are united. They work collectively in small groups for increasing the learning of all group members by sharing their resources (Sonthara & Vanna, 2009: 6). In PI, each group mate's work is vitally required for group achievement means that there should be no "free-riders", and every group mate makes a distinct contribution to the collective effort. In PI, there are:

- a. *Positive Reward* which means that each teammate gets the same reward when the team realizes its goals;
- b. *Positive Resource Interdependence* that is, each teammate has only a part of the information, resources, or materials which are pooled together for the achievement of the team's goals;
- c. *Positive Role Interdependence* where each group member is assigned interconnected/complementary roles specifying responsibilities needed for completing the joint task. The teacher assigns roles to students such as recorder, reader, checker, elaborator of knowledge and encourager, facilitator, scribe (taking notes), timekeeper, reporter and illustrator. These sorts of roles are essential for high-quality learning. Though the learning of every student cannot be constantly checked by a teacher, he can manage it by assigning the role of checker to one member;
- d. *Positive Task Interdependence* where a division of labour is formed in such a way that the action of one groupmate is completed if the other member completes his/her task;
- e. *Positive Identity Interdependence* where group identity is formed through a slogan or name; and

- f. *Outside Threat Interdependence* where groups stand in competition with one another. Various studies have investigated the scope and the relative power of various kinds of positive interdependence (Johnson et al., 1990; Johnson et al., 1991; Lew et al., 1986; Mesch, Johnson & Johnson, 1988).

### Individual Accountability (IR)

Lev Vygotsky (1978) says, "What children can do together today, they can do alone tomorrow". Singh & Agrawal (2011) say that there was a saying among the early people of Massachusetts "If you do not work, you do not eat." This means that everyone has to do his/her assigned job. IR exists when the work of each student is assessed, and each mate is responsible to the group members for his/her assigned duties for achieving the group's objectives. Each of the group mates must know that they do not "hitchhike". There should be no free-rider or social loafing (Kerr and Bruun, 1981; Williams, 1981; Williams, Harkins & Latane, 1981). IR enables a student to call for help, does his work in a better way, shares his ideas, learns what is possible, takes his task seriously, helps the group function well, and takes care of other mates (Johnson, 2003). IR ensures that all group mates gain by learning cooperatively. The teacher should assess the efforts each group member contributes to the group's work, provides feedback to each individual student of the group, and ensures that each member is accountable for the final result. IR can be ensured by (a) having a small size group (smaller the size greater the IR); (b) giving the individual test to each learner; (c) orally examining students randomly by calling on any student to present his/her group's assignment to the teacher or to the whole class; (d) observing each team and each member's frequency with which he contributes to the team's work; (e) appointing one student as a checker in each group; (f) each mate has a role to perform which may rotate (Sonthara & Vanna, 2009: 7). PI creates "responsibility forces", which enhances group members' IR for achieving collective tasks and help other mates' work (Johnson & Johnson, 2005). In the absence of IR, one or two group mates may perform the entire task while others do nothing (Slavin, 1996a). The "responsibility forces" increase when group responsibility and IR exist in a group (Johnson & Johnson, 2008).

### **Interpersonal and Small-Group Skills**

For organizing efforts for realizing common goals, learners should (a) trust each other, (b) communicate correctly, (c) accept and help/encourage/promote each other, (d) constructively resolve disagreements ([Johnson, 1990, 1991; Johnson and Johnson, 1991](#)), (e) listening attentively, (f) questioning cooperatively, (g) negotiating respectfully, and (h) cooperating effectively. Students must involve in interactive abilities as trust-building, leadership, constructive criticism, conflict-management, encouragement, negotiation, compromise, and clarifying. Without these skills, CL activities are not often successful ([Slavin, 1996a](#)). Unskilled students in a group cannot do effectively. Interpersonal and small-group skills are not inborn, and students must be trained in them and be encouraged to use them for good results. These skills are vital to group performance ([Johnson and Johnson, 1991](#)). The more the skills, the more the achievement.

### **Face-to-Face Promotive Interaction**

[Singh & Agrawal \(2011\)](#) say that promotive interaction is the product of PI where students encourage and facilitate each other's work to achieve goals. Promotive interaction occurs where students (a) provide each other with effective support ([Johnson & Johnson 1981; 1984](#)), (b) exchange needed resources like material, information more effectively ([Laughlin & McGlynn 1967](#)), (c) provide feedback to each other for improving their performance ([Ryan, 1982](#)), (d) challenge each other's reasoning and conclusions for promoting greater insight and decision making ([Johnson & Johnson 1979, 2007](#)), (e) work for achieving mutual goals ([Wicklund & Brehm 1976](#)), (f) act in trustworthy ways ([Deutsch 1958, 1960](#)), (g) are encouraged to struggle for collective benefit ([Johnson 2003; Johnson & Johnson 1989, 2005](#)). In CL, learners are arranged and situated in such a way as to face each other for face-to-face conversations and direct eye-to-eye contact.

### **Group Processing (GP)**

Successful group work is affected by how the group reflects on (process), i.e. how well it is functioning. Process means a particular sequence of actions taking place in due course. Process goals mean the sequence of actions/procedures required for realizing outcome goals ([Johnson &](#)

[Johnson, 1991](#)). In GP, students reflect on their working relationships and progress made. It means "Reflecting on a group session" to (a) express whose actions are supportive and whose are not; (b) take decisions on what actions/efforts to continue or change; (c) what we have attained? (d) what is still needed to be achieved?; and (e) how we could do this? Its purpose is to clarify, explain and promote the efficiency of the group members so as they could work together for attaining the group's goals. Such processing: (a) enables groups to maintain excellent working relationships among group members, (b) encourages students to learn cooperative skills, (c) enable students to receive feedback in the group, and (d) students have the means to celebrate the victory/accomplishments of the group ([Yamarik, 2007](#)).

### **Heterogeneous Grouping**

Groups should not be homogeneous and same for all tasks. Changing the composition of the group will increase social skills by putting learners in a dynamic setting where they make new friends. Groups can be composed randomly or using diligence levels, past achievement levels, class, age, sex, ethnicity, religion etc. ([Sonthara & Vanna, 2009: 7](#)). The size of CL groups should be reasonably small and as diverse as the situation allows. The recommended size is generally 4 to 5 students. Students can randomly be assigned to groups, or students may be allowed to choose their groups, but the best way is for the teacher to create academically heterogeneous groups where students are assigned definite roles (social, academic and group processing roles) within the group (see for example [Johnson & Johnson, 1994](#)).

### **All Mates in Cooperative Group "Buy into" the Targeted Goals**

After the teachers have selected outcome objectives, students must see these goals as their own. They must believe and accept that each person in the group has to understand the common tasks and skills and must try to achieve the targets ([Slavin, 1987; 1995](#)).

### **Complete and Clear Set of Task-Direction and Instructions**

Instructions or directions that clearly and precisely describe what learner should do, what

order should be followed and what materials be used ([Hamby & Grant, 1997](#)).

### Equal Prospect for Success

Every learner must think that he/she has an equal opportunity of learning the materials and winning group rewards for academic achievement. A student must not believe academically penalized by placing him in a specific group.

### Structuring Group Interactions

Structuring students' interactions carefully in CL groups by training can produce better performance ([Meloth & Deering, 1992](#)).

If these essential elements of CL are carefully applied in CL groups, students achieve more in a better way, exhibit higher academic skills (Johnson & Johnson, 2008), exercise more positive relations with group mates and teachers, and take more interest in the subject area ([Slavin, 2011](#)). [Kupczynski, Mundy, Goswami & Meling \(2012\)](#) say that when these elements are carefully structured in instructional format, improved student motivation, responsibility and participation, have been observed.

### The Rationale of Cooperative Learning

Research on CL has demonstrated "overwhelmingly positive" results (see, for example, [Satyaprakasha, 2015](#)). CL is one of the highly researched areas in education, with a large number of studies conducted over many subject areas, ability levels, age groups, and cultural backgrounds ([Slavin, 1985](#)). Here students "learn how to learn". In cooperative groups, the student learns that he is responsible for his own and his group mates' learning which help in promoting interpersonal and social relationships among all the students, even of varied ages and from diverse ethnic, class and cultural backgrounds. It improves multicultural relationships in multicultural surroundings and promotes cultural diversity in the classroom ([Manning & Lucking, 1993](#)). Three scholars who merit recognition for their academic contributions to CL are the two brothers David and Roger Johnson and Robert Slavin, who has been widely cited for their work on CL ([Sapon-Shevin & Schniedewind, 1992](#)). [Slavin \(1996a\)](#) views CL research outcomes as one of the most successful stories in human history, which has contributed much towards enhancing

the overall performance of the students ([Slavin, 1980](#); [Johnson, Johnson & Smith, 1998](#)). CL compared with individualistic and competitive learning results in:

- a. More efforts to show greater productivity, higher achievements, promoting learning and learning for all, creation of new ideas, using of higher reasoning, greater motivation, greater retention, the greater transmission of what has been learned thus promoting good oral communication and higher-level thinking skills ([Lie, 2000: 125](#); Johnson, 2006; [Sonthara & Vanna, 2009: 4](#)),
- b. Promoting high-quality relations among students, e.g. greater interpersonal liking, attraction, esprit de corps and valuing of heterogeneity (i.e. [Lie 2000: 125](#)), greater personal support, improving mixed-race interaction, creating more cross-race friendship by replacing racism with empathy and understanding ([Johnson & Johnson, 1990](#)), and positive race/ethnic relations with the acceptance of individual differences,
- c. Better psychological adjustment, e.g. better social skills and competencies, better psychological health, higher self-esteem, confidence, greater ability to deal with stress and a shared identity. Students "Social relationships improved because when students work together toward a common goal, they have a chance to get to know one another as individuals. Students have the feeling of having an opportunity to be successful, and they believe that they have valuable mutual goals" ([Carter, 2001: 37-38](#)),
- d. Covering more course content in a short time, with learners showing higher class attendance, individual's participation and positive learner to teacher and learner to learner interactions for achieving team goals ([Drakeford, 2012](#)),
- e. Creating an atmosphere of involved, active and exploratory learning, with a more pleasant learning experience where students are less disrupting by spending more time on work and are already prepared for the workplace and making teaching less stressful for the teachers ([Kagan, S. & Kagan, M., 2009: Chap. 2](#)),



- f. Most efficient, researched and strongly supported educational innovation addressing many crises/challenges we cope within our educational institutions and society, having a positive effect on classroom climate, empathy and internal locus of control ([Kagan, S. & Kagan, M., 2009](#): Chap. 3), and assisting students to become industry-ready by developing social and technical skills ([Lakshmi & Mangatayaru, 2014](#)),
- g. Helping in mitigating which [Freire \(1970\)](#) has called as "banking model of education" where the teacher pours knowledge in learners which are considered appropriate for them and society. Here learners are supposed to listen rather than participating actively,
- h. Negotiating and solving disputes in a more easy way ([Johnson, Johnson, Holubec & Roy 1984](#)) with maximum students learning where a sense of "we are all in the same boat together" is developed, which is the basic principle of CL ([Kupczynski, Mundy, Goswami & Meling, 2012](#)),
- i. Bringing positive changes in the traditional teaching-learning methods with a widening scope of knowledge because of sharing between heterogeneous groups,
- j. Increasing leadership qualities in the learners with a reducing superiority/inferiority complexes in the peers by focusing on "reaching the best outcome, not on winning",
- k. Optimal utilization of the available resources in the institution with increased students' satisfaction with the teaching-learning experience and more opportunities for feedback.

## **Conclusion**

Cooperative learning can be understood in many ways. Some teachers use informal ways of organizing groups to promote skills; others may use more formal structures by structuring students' roles and may take specific steps for achieving specific objectives. So we do not have anyone "right way" to use CL, and teachers may use a number of methods and models that suit their lesson contents, teaching styles and students. Many studies have been conducted to examine the various aspects of CL. While CL is a

useful method of teaching in the classroom, it may become hard to implement. The researchers usually experience difficulties in implementing the CL techniques in an environment where traditional method is the norm of the day. The three main challenges which researchers face are a) developing group structure, b) developing norms and discipline in the classroom and c) developing workable tasks for collective work. The researchers may face many situations where students may not be working very cooperatively, and some of them may not doing their individual works, which sometimes result in a noisy class, making classroom management difficult.

Again, there is usually a very heavy workload on the teacher as well as students as compare to the traditional class. Preparing the teaching material and designing class activities may take much time, energy and labour. Training for the students and the staff to make them acquaint with the CL is a big challenge. The methodology of CL is a new methodology for students, especially in Pakistan, and they may take it very strange. They are not accustomed to the group and, consequently, may not be aware of such methodology. Encouraging students to take part in group activities is not easy and takes much of the time, labour and energy. Effectively measuring the performance and achievements of the students is also a big challenge. The space and rooms for the control group and experimental group also poses difficulties.

Keeping in view the above facts in mind, the following policy recommendations are put forwards for the effective implementation of Cooperative Learning.

- a. Cooperative learning needs to be encouraged in the educational institutions and specifically at the school level as it positively affects the academic performance and achievements of students, as the present study showed. CL has very positive impacts on student's social and academic behaviours and increases their interest in learning with a positive impact on their opinion about the various aspects of CL.
- b. Teachers need to be encouraged to adopt the CL method in teaching the students. The teacher is one of the main pillars of the education system, and his encouragement

for adopting this new method is both necessary and challenging.

- c. Here we come across one of the most important aspects of this method: training for the teachers. Unless they are equipped with the proper knowledge and understanding of the method, all other efforts in that direction will go futile. The government needs to make proper, optimal, adequate and necessary

arrangements for providing proper and adequate training and other refresher courses to the teachers. Educational research shows that difficulties in the use of CL can generally stem from teachers' lack of adequate training in the methods and its techniques ([Fafard, 1992](#)). Though the government may not effort training for all the teachers at once, it should be in batches and stages.

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