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DEVELOPING A MODEL BASED ON COOPERATIVE LEARNING PRINCIPLES TO ENHANCE SOCIAL INTELLIGENCE

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Abstract: This study is an attempt to develop an instructional model based on cooperative learning principles to enhance social intelligence. The Model was developed on the basis of five fundamental principles of co-operative learning. The major focus of the model was to develop social intelligence among upper primary school students. The model was validated using an evaluation performa collected from teachers, teacher educators and other experts.

Keywords: - Co-operative Learning, Social Intelligence, Instructional Model

1. INTRODUCTION

Teaching well is helping students to learn well. Powerful learners have expanded repertoires of strategies for acquiring education. Models of teaching are designed to impart these strategies while helping students to develop as persons, increase their capacity to think clearly and wisely and to build social skills and commitment. Children need ample social opportunities to develop their social as well as academic skills. Though there are several social opportunities at school, most of the time social interaction is unstructured. Children with good social skills therefore tend to get many opportunities to reinforce their skills while more shy or aggressive children often have fewer chances to learn, thus creating a growing gap between socially skilled and unskilled children. Therefore, well interactions such as cooperating learning techniques become need of the day. Social intelligence is the ability to understand one's own and others feelings and emotions and then to use this understanding to make decisions and actions. Healthy classroom environment depends on the creation of a classroom culture that allows children to develop social intelligence. Research suggests that social intelligence can be enhanced through practice

Cooperative Learning

Cooperation is the process of working together to achieve a certain goal. Cooperative learning is the instructional use of the formation of small teams where students work together to maximize their own and each other's learning. It is a teaching strategy, which allows students to work together in groups with individuals of various talents, abilities and background to accomplish a common goal. It is based on the philosophy of education that assumes the aim of education is to provide conditions in which the natural curiosity, intelligence and expressiveness of students will emerge and develop (Kagan, 1992).

In cooperative learning situations, learning is considered as a unified, personal and social experience that happens best in a web of relationships. The idea behind cooperative learning is simple. The students divide

themselves into small heterogeneous groups after receiving instruction from the teacher. Then they work together through the assignments until all group members successfully understand and complete it. All group members benefit from each other's efforts, recognizing that all group members sharing the responsibility of outcome, knowing that one's performance is mutually caused by oneself and others and feeling proud and jointly celebrating the group's achievement.

Cooperative learning explicitly builds cooperation skills by assigning roles to team members and establishing norms for conflict resolution.

Cooperative Learning Models

In recent years there has been a great deal of development on cooperative learning, and great progress has been made in developing strategies that help students to work together effectively. Cooperative learning procedures facilitate learning in classroom irrespective of curriculum areas and ages, self-esteem, social skills, communication, solidarity and academic learning goals ranging from the acquisition of information and skills through the modes of inquiry of the academic discipline.

Cooperative learning models are based on two principles; competition and cooperation. Some developers organize teams to compete against one another while others emphasize cooperative learning goals and minimize team competition. Johnson and Johnson have analyzed the research and argue that the evidence favours cooperative goal structure, but Slavin argues that competition between groups benefit learning.

Since schools socialize children to assume adult roles, and because cooperation is so much a part of adult life, one might expect that cooperative activity would be emphasized. However, this is far from true. Among the prominent institutions of our society, the schools are least characterized by cooperative activity. Students have experienced cooperative activity in laboratory groups and project groups, but these activities occupy only a small portion of a student's schooling. Most of the time students work independently, and they are continually in competition with one another for grades, praise and recognition (Slavin, 1985).

Cooperative Learning and Social Intelligence

In 1930s, in a Harper's magazine article, Edward Thorndike defined Social Intelligence as the ability to understand and manage men and women and boys and girls, to act wisely in human relations. Social intelligence is the ability to get along well with others while winning their cooperation. It is a combination of sensitivity to the needs and interests of others, an attitude of generosity and consideration and a set of practical skills for interacting successfully with people in any setting (Albrecht, 2006). Social intelligence is equivalent to interpersonal intelligence; one of the types of intelligence identified by Howard Gardner in Theory of Multiple Intelligence. The capacity to know oneself and to know others is an inalienable part of the human conditions as it is the capacity to know objects or sounds and it deserves to be investigated no less than these other less charged forms (Gardner, 1983).

There are various types of intelligence. As society became more complex, intellectual competencies also became more sophisticated. This competence is social intelligence and can be defined as the intelligence that lies behind group interactions and behaviour. Research shows that children who are popular, likeable and able to resolve conflicts with others are also more likely to succeed at school and are generally more resilient than children with less developed social skills.

Social skills are complex and multi-faceted. They are also closely linked with development. It is often assumed that social skills can be picked up by assimilation. However, while many social skills may be learned implicitly, all children can benefit from being taught social skills explicitly. Especially the children who are developmentally lagging behind the peers. Social skills are not always learned easily. Some children require repeated instruction and reinforcement for learning. While considering social intelligence of students in a classroom, it makes clear that there is a quality in human beings which makes them capable of building awareness and understanding in the broadest possible terms.

Cooperative learning strategies consider almost all the domains of social skills. The social environment provided by cooperative learning enables learner to appreciate the presence of students hailing from different social, ethnic, religious, linguistic, caste and class grounds.

In cooperative learning, the students encourage, help and care more about each other. They became more committed to each other's success and well-being, when they work together to get a job done, than when they complete to see who is best or work independently from each other. In other words, these cooperative small

groups activities play a great role in improving relationships across important inter personal barriers (Johnson & Johnson, 1974, and Slavin, 1977). Therefore, the investigator developed a model using principles of cooperative learning to enhance social intelligence and academic achievement among upper primary students.

1.2 NEED AND SIGNIFICANCE OF THE STUDY

Now a day's educational scene is changing. The task of education is not to pour information into students' head, but to engage students' minds with powerful and practical concepts. The quality of education at all levels should be strengthened by practising student-centred activities. Cooperative learning approach to teaching is one such activity which makes learning an enjoyable experience for students. There is a long history of research on cooperative, competitive and individualistic efforts.

Cooperative learning takes place when the teacher assures the use of small groups in instructional procedure to maximise their own and each other's learning. Class members are organised themselves into small groups after receiving instruction from the teacher. Then they work through the assignment until all group members successfully understand and complete it. This promotes participation of all learners in the process of learning. They not only contribute to the intellectual development of the learner but also equally contribute to social and psychological development of the learners unlike other methods of instruction. The cooperative learning strategies, compared with competitive and individualistic effort results in interpersonal relationships and achievement in classrooms.

The importance of applying cooperative learning in classrooms goes beyond just achievement, communication skills, positive relationships and psychological health. The ability of students to learn and to work cooperatively with others is the backbone of building and maintaining stable relationships in society.

Today many lack social intelligence, the ability to understand and manage people and to act wisely in human relations due to the spreading of nuclear family concept. When individuals are heterogeneous, cooperating on a task result in more realistic and positive views of each other. As relationships become positive, productivity feeling of personal commitment and responsibility to do the assigned work, willingness to take on and persist in completing difficult task morale and commitment to peers' success and growth also increases. Working together or work in groups will improve the social skills of students.

In contrast to most other proposed adaptations of traditional classroom teaching, cooperative learning approaches have proven to be both easy to implement and likely to yield significant advantages. Consequently, it is recommended that teachers make use of cooperative learning strategies as alternative to traditional independent seatwork to provide students with opportunities to practice and apply what they are leaning

Here the researcher tries to develop a model based on cooperative learning principles to enhancing social intelligence.

1.3 STATEMENT OF THE PROBLEM

The present study is focused on the development of an instructional model based on cooperative learning principles to enhance social intelligence. Hence the investigator entitled the study as DEVELOPING A MODEL BASED ON COOPERATIVE LEARNING TO ENHANCING SOCIAL INTELLIGENCE

1.4 OPERATIONAL DEFINITION OF KEY TERMS

Developing
Developing refers to grow or cause to grow and become advanced or elaborate. In this study the word developing means preparing and validating an instructional model based on cooperative learning principles to enhance social intelligence.

Cooperative Learning
Cooperative learning is a successful teaching strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. 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.

Model based on Cooperative Learning
It is an instructional design based on cooperative learning principles to guide instruction in the classroom.
Social Intelligence
It is the ability to understand and manage fellow beings and to act wisely in human relations. In this study, it is the ability of a student to get along with others and to keep relationships with others.

2. METHODOLOGY ADOPTED

The study followed experimental method to validate the developed model based on cooperative learning principles in enhancing social intelligence of students. The investigator prepared an evaluation prtforma and collected data from experts in the field of education.

2.1 MODEL BASED ON COOPERATIVE LEARNING PRINCIPLES

The investigator went through various articles, books and expert opinion before developing a model based on cooperative learning principles to enhance social intelligence. The primary school teachers, teacher educators and other experts were consulted. According to the expert opinion, different phases of the development of model was finalised. The different phases that led to the development of the model are:
 I. Planning phase
 II. Developmental phase
III. Implementation phase and
IV. Evaluation phase

1) PLANNING PHASE

The major objective of the study was to develop a model based on cooperative learning principles to enhance social intelligence. An instructional model is a plan or pattern that helps to design instructional materials and guide instruction in classroom settings. This model is designed to improve the instructional effectiveness in an interactive atmosphere and to improve or shape the curriculum. In this study the researcher makes an attempt to develop a model based on the principles of cooperative learning and to find out its effectiveness in enhancing social intelligence among students. For this purpose, the investigator searched for the elements and principles of cooperative learning that helps to enhance social intelligence. The investigator used the following principles of cooperative learning to prepare the model.

Positive interdependence
In positive interdependence, students perceive that they need each other in order to complete the group task. It exists when one perceives that one is linked with others in a way so that one cannot succeed unless they do and vice versa and that one must coordinate one's efforts with the efforts of others to complete a task (Johnson & Johnson 1989). In this model the researcher tries to structure positive interdependence by establishing mutual goals, joint rewards, shared resources and assigned roles.

Face to face Promotive Interaction
This can be defined as individuals encouraging and facilitating each other's efforts to complete the task and achieve in order to reach the group's goals. Students promote each other's learning by helping, sharing and encouraging efforts to learn. Students explain, discuss and teach, what they know, to classmates. In this model students discuss with each other to complete the given task.

Individual Accountability
Individual accountability involves being responsible for completing one's share of work and facilitating the work of other group members and minimally hindering their efforts. Personal responsibility is promoted by individual

accountability. Each student's performance is frequently assessed and the results are given to the groups and the individual. Here the researcher tries to structure individual accountability by randomly selecting one group member to give the answer.

Inter personal and Small Group Skills

Groups cannot function effectively if students do not have or do not use the needed social skills. Therefore, the researcher used these skills purposefully and precisely. The major group work skill that was focused on generate ideas, listening skills and acceptance of other's viewpoints. Collaborative skills include the components of social intelligence; social sensitivity, social insight and social communication.

Group Processing

In order to achieve in learning, the students in groups have to work together effectively. Effective group work is influenced by whether or not groups periodically reflect on how well they are functioning and plan how to improve their work processes. Groups need specific time to discuss how well they are achieving their goals and maintaining effective working relationships among members. Researcher tried to structure group processing by assigning the task of listing at least three members action that helped the group to be successful.

II) DEVELOPMENTAL PHASE

Since it is an instructional model the investigator in consultation with the supervising teacher decided to develop a model based on the fundamental elements of instructional models. The fundamental elements are (Joyce and Weil,1996):

a) Focus of the model
b) Syntax
c) Social system
d) Support system
e) Principles of reaction
f) Application of the model and
g) Instructional and nurturant effect

In the developmental phase, the investigator prepared an instructional model based on cooperative learning principle backed on the fundamental elements of the model.

The Instructional Model based on Cooperative Learning Principles

Powerful learners have expanded repertoires of strategies for acquiring education. Models of teaching are designed to impart these strategies while helping students develop as persons, increase their capacity to think clearly and wisely and build social skills and commitment. Teaching is the process of building communities of learners who use their skills to educate themselves.

Focus of the Model

The focus of the model was to enhance social intelligence. Therefore, the model was based on cooperative learning principles. The combination of social support and the increase in cognitive complexity caused by the social interaction have mild but rapid effects on the learning of content and skills. In addition, partnership in learning provides a pleasant laboratory which develops social skills and empathy for others. Students feel good in cooperative settings and positive feeling toward self and others.

This model explicitly builds cooperation skills by assigning roles to team members and establishing norms for conflict resolution. Here, knowledge is continuously constructed and reconstructed by individuals and groups. Children learn to take risks and to contribute for a common good. They become able to see points of view of others than their own. Social interaction improves a communication skill that has become a necessity to function in society. To work successfully in a cooperative learning team, however students must also master interpersonal skills needed for the group to accomplish its task. By implementing this model, students can develop the skill of leadership, decision making, trust building, communication, relationship know-how which leads to the development of social intelligence.

Syntax of the Model

This model has six phases. The teacher-pupil activities in each phase are given below.

Phase I: Laying Foundation

Teacher is laying foundation of a concept or bit of information in young minds by presenting it in an attractive way to the whole class. The presentation can be a story, an autobiography, diary notes or pictures which are suitable for the content. After the presentation by the teacher, the whole class will be divided into small groups of four or five students. They will be given a learning material with relevant facts along with some questions.

Phase II: Assigning Roles

Students themselves assign roles in the group as Proctors- who provides leadership and direction for the group and have to assure that each member in the group is learned the matter well, Investigators- who finds out major facts, dates and cause and effect of the matter presented, Question setters- who set additional questions for other groups and a Spokesman- who presents major findings of the group. The role and assigned duties of each member is given in the Table 2.1

Table 2.1
Assigned roles and duties of group members

Role	Duties
Proctor	Reads out the material, make sure that all group members learned the matter and provides leadership
Investigator	Find out major facts, answer to the given question and help the spokesman to answer the questions
Question setter	Set additional questions for other groups
Spokesman	Present major findings and answer to the questions of proctors

Phase III: Putting Heads Together

The proctor will read out the material to the co-members. Everybody engages in their own duties and refines their ideas through discussion. They discuss the major facts and findings, the additional questions to be answered and the matter to be presented in class.

Phase IV: Presentation of Findings

The spokesman of the group presents the major findings of the group and answer to the questions given along with the subject matter.

Phase V: Appraisal of Outcome

The proctors can ask additional questions to other groups. Any one from the group can answer.

Phase VI: Reflective Thinking

Students recall how they reached the solution. They identify the role of each member and list out at least two contributions of group members that led their group to success.

The teacher – pupil activities in each phase is given in the Table 2.2

Table 2.2
Syntax of the Developed Model

Phase I **Laying Foundation**	Phase II **Assigning Roles**
• Teacher presents the content in an attractive way • Form groups of four or five • Distributes learning material	• Assign roles as proctors, investigators, question setters and spokesman • Proctors are the leaders of the group • Discuss the responsibility of each one in groups

Phase III **Putting Heads Together**	Phase IV **Presentation of findings**
• Read out the material • Investigators find out the major facts • Discuss the questions to be answered under the leadership of question setters • Refine idea through discussion • Decide about the content to be presented	• Spokesman presents the major findings • Answer the questions given along with material • Relevant factors if left any can be added to the spokesman of another group • Extra points will be given to that group
Phase V **Appraisal of Outcome**	Phase VI **Reflective Thinking**
• Teacher assess according to the presentation • The proctors of each group ask questions to other group • Anyone from the group can answer to this question • Proctors can choose the member to answer his question. Scores changes according to chance	• Recall how they reached the solution • Identify the role of each member • Discuss the points that led them to success • One group presents their reflection

Social System

The social system is democratic and cooperative. The task demands significant interaction among group members. The task can be accomplished only by having group members go off and work on their own. The activities of the group emerge with a minimal amount of external structure provided by the teacher. They practice small group cooperation skills such as asking and answering questions, ensuring that everyone participates actively and is being treated with respect.

Principles of Reaction

Here teacher must be a consultant and must be supporting. Teacher should take the role of a friendly critic. Teacher may ask questions that lead to clarity of the task. Intervention by the instructor should be minimal.

Support System

The support system must be extensive and responsive to the needs of the students. Teacher can use any additional material such as pictures, newspapers, videos and journals. But that system should be suitable for the mental age, thinking capability and reasoning power of the student. That should also be mentally challenging for the students.

Application of the Model

This model can be used at any grade level and for any subject. If students have not had an opportunity to experience the kind of social interaction, decision making and independent inquiry called for in this model, it may take some time before they function at a high level. Cooperative learning approaches and certain tutorial approaches are also desirable because they cause students to work together in pro-social interactions that foster progress towards affective outcomes in addition to achievement outcome.

Successful work in groups typically feature positive interdependence of group members on one another, face to face interaction of group members, individual accountability for mastering assigned material and instruction of the students in how to interact effectively during small group activities. Johnson and Johnson (1974) found that peer tutoring appears positive as well and the heterogeneous teams appear to be more productive.

Instructional and Nurturant Effect

The direct or the instructional effects of the model are knowledge creation, disciplined inquiry and group work skills.

The nurturant or indirect effects are social competency, positive interdependence and social communication.

III) IMPLEMENTATION PHASE

In the implementation phase, the model developed was implemented to 30 seventh standard students. The respective teachers were invited to observe the classes. The results along with feedback of teachers and students revealed the effectiveness of the model. Thus, the model was finalized.

IV) EVALUATION PHASE

The model was evaluated at each phase of its development. After completing the model, it was evaluated using an evaluation performa. The Performa was developed using the following criteria:

a) *structure:* - represents the organisation of classroom activities
b) *design: -* refers to the relevance of teacher-pupil activities in classroom transactions in terms of objectives
c) *clarity: -* represents the transparency of presentation of the stages of the model
d) *Attractiveness: -*refers to the level of satisfaction of teachers and motivation of students
e) *Participation: -* refers the contribution and engagement of students in teaching learning process
f) *Reliability: -*refers to the internal consistency of the content

The investigator prepared 31 items based on the above features. On consultation with experts and supervising teacher, some items were modified and some were rejected. So, the final evaluation proforma consisted of 27 items based on the above-mentioned criteria. The evaluation proforma along with the model developed and five lesson transcripts based on the model were given to 20 teacher educators and 10 upper primary school teachers. The number of items in the various components of the evaluation proforma is given in Table 2.3.

Table 2.3
Number of items in the evaluation proforma

Component	Sl. No. of items	No. of items
Structure	1,2,9,19,21,23	6
Design	3,4,10,25,27	5
Clarity	11,12,20,22,24	5
Attractiveness	8,15,26	3
Participation	7,14,16,18,	4
Reliability	5,6,13,17	4

Administration of Evaluation Proforma

The investigator personally consulted a total of 30 persons including teacher educators and primary school teachers. The evaluation Performa was given along with the developed model and lesson transcripts based on that model. Adequate time was given to filling up the proforma. The responses were collected and analysed.

Scoring and analysis of Evaluation Proforma

The respondents were asked to rate each statement in the proforma on a five-point scale as strongly agree, agree, undecided, disagree and strongly disagree. The frequencies of different category of response for each statement were found and analysed using percentage analysis. The value of each item is given in the Table 2.4

Table 2.4
Expert rating of items in Evaluation Proforma of Model

Components	Serial No.	Expert Rating in percentage				
		Strongly disagree	Disagree	Undecided	Agree	Strongly agree
Structure	1	0.00	0.00	0.00	16.66	83.33
	2	0.00	0.00	0.00	3.33	96.67
	9	0.00	0.00	0.00	6.67	93.33
	19	0.00	0.00	0.00	6.67	93.33
	21	0.00	0.00	0.00	3.33	96.67
	23	0.00	0.00	0.00	3.33	96.67
Design	3	0.00	0.00	0.00	16.67	83.33
	4	0.00	0.00	0.00	6.67	93.33
	10	0.00	0.00	6.67	10.00	83.33
	25	0.00	0.00	0.00	6.67	93.33
	27	0.00	0.00	3.33	6.67	90.00
Clarity	11	0.00	0.00	0.00	26.67	73.33
	12	0.00	0.00	3.33	6.67	90.00
	20	0.00	0.00	0.00	16.66	83.33
	22	0.00	0.00	3.33	10.00	86.67
	24	0.00	0.00	0.00	6.67	93.33
Attractiveness	8	0.00	0.00	0.00	20.00	80.00
	15	0.00	0.00	0.00	13.33	86.67
	26	0.00	0.00	0.00	6.67	93.33
Participation	7	0.00	0.00	3.33	6.67	90.00
	14	0.00	0.00	0.00	23.33	76.67
	16	0.00	0.00	3.33	6.67	90.00
	18	0.00	0.00	0.00	16.66	83.33
Reliability	5	0.00	0.00	0.00	16.66	83.33
	6	0.00	0.00	10.00	20.00	70.00
	13	0.00	0.00	0.00	16.66	83.33
	17	0.00	0.00	0.00	16.68	83.33

Administration of developed model

The lesson transcripts designed on the basis of developed model was implemented to 165 students of experimental group. The experimental group included 55 sixth standard and 110 seventh standard students. Each standard was treated with 30 lesson transcripts.

2.2 RATIONALE OF THE MODEL DEVELOPED BASED ON COOPERATIVE LEARNING

The sketch of theoretical overview helped the investigator to have a perspective of instructional model and cooperative learning principles. Based on this theoretical foundation, the investigator prepared a model based on cooperative learning principles. The rationale of preparing and designing each phase of the model are given below.

Rationale for the model

The core of teaching process is the arrangement of environments within which the students can interact and study how to learn (Dewey, 1933). Teaching model engages the students in cognitive and social tasks and teaches them how to use them productively.

One of the major objectives of every classroom teaching is to enhance the academic and social progress of all the students. Teachers use many strategies to achieve this goal. However, Daniel Goleman suggests that focussing solely on academic development is not enough because inappropriate behaviour of some students may act as a hindrance. Unless emotional growth and social skilling take place, students pass from teacher to teacher, ill-equipped to deal with their problematic behaviour. Goleman defines emotional intelligence as knowing one's feelings and using them to make good decisions in life and being motivated and effectively overcoming setbacks in working towards goals. Emotional intelligence includes empathy, knowing feeling of others', emotions management in relation to others and being able to persuade and to lead others. Gardner described this intelligence as inter personal intelligence or social intelligence.

The developers of social models believe that a central role of education is to prepare citizens to generate integrative democratic behaviour, both to enhance personal and social life and to ensure a productive democratic social order (Joyce and Weil, 2004). When structured effectively cooperative small group activities not only produce peer support and encouragement for learning, but may result in the development of higher quality strategies for understanding and responding to tasks than students develop when working alone (Skon, Johnson & Johnson, 1981).

Many studies support the notion of cooperation among students develops interpersonal intelligence also referred as social intelligence. Students should practise the skills that will be required of them as adults. It is impossible to predict all of the competencies that should be emphasized so that children are well prepared for their future. However, by examining the changing conditions in the society, projection for knowledge explosion and shift in lifestyles, some crucial lessons can be identified. There is general agreement that functioning as a team member warrants greater attention. Working alone is a long-standing tradition that is beginning to fade in favour of students working together in groups (Johnson, Johnson, & Holubec,1999; Kagan, 2001). In this context, teachers are expected to arrange teamwork activities that can facilitate the development of interpersonal Intelligence (Gardner, 1983).

Syntax of the model

Syntax describes the model's structure and includes the sequence of steps involved in the organisation of the model. It includes the major components and phases of unfolding or the sequencing of steps and describes how the model progress.
This model was developed to enhance the social intelligence among students. Therefore, each phase was designed in such a manner to achieve this.

Phase I Laying Foundation

This model begins by confronting the students with a stimulating situation or an orientation. The disequilibrium that arises in young minds acts as the motivating factor. For elementary students, illustrations are helpful in organising data, manipulating information and outlining the limits of a problem and to reach its possible solutions. Constructivist approach also supports presenting a problematic situation to solve rather than giving data or information.

Phase II Assigning Roles

The teacher pupil reactions in this phase are based on the principles of positive interdependence. Here the students establish mutual goals, share their recourses and assign roles. Positive interdependence has numerous effects on individuals' motivation and productivity not the least of which is to highlight the fact that the efforts of all group members are needed for the group's success. When group members perceive their potential contribution to the group as being unique, they increase their efforts (Harkins & Petty, 1982). When goal, task, resources and role interdependence are clearly understood, individuals realise that their efforts are required in order for the group to succeed and that their contributions are often unique.

A series of research studies were conducted to clarify the impact of positive interdependence on achievement. Positive interdependence does more than simply motivate individuals to try harder, it facilitates the development of new insights and discoveries through promotive interaction (Gabbert, Johnson & Johnson, 1986). Members of cooperative groups use higher level of reasoning strategies more frequently than do individuals working individualistically or competitively (Johnson & Johnson 1981). The combination of goal and resource interdependence increased achievement than goal interdependence alone or individualistic efforts (Ortiz, Johnson & Johnson, 1996). The more complex the procedures involved in interdependence, the longer it will take group members to reach their full levels of productivity (Ortiz, Johnson & Johnson, 1996).

Phase III Putting Heads Together

This phase is based on the principle of face-to-face interaction and individual and group accountability. Two levels of accountability are structured in this phase. The group is accountable for achieving its goal and each member is also accountable for contributing their share of the work. Individual accountability exists when the performance of each group member is assessed and the results are given back to the group and the member in order to ascertain who needs more assistance, support and encouragement in learning. In this phase students learn together so that they can subsequently gain greater individual competency.

Individual accountability involves being responsible for completing ones share of work and facilitating the work of other group members and minimally hindering their efforts. Members will reduce their contributions to goal achievement when the group works on task where it is difficult to identify members' contributions when there is an increased likelihood of redundant.

In cooperative learning, students master the content to be learned depends not only on their entry level achievement but also on the nature of their experience in the group. Giving explanation to group members is positively correlates with achievement (Bennet & Cass, 1988).

Phase IV Presentation of findings

This phase is based on the principle of positive interdependency and individual accountability. The whole group is responsible for the matter being presented. But the spokesman who presents the idea should have certain skills for the better presentation. He is the only one who represents a group.

Students benefit psychologically from cooperative learning. Cooperative learning creates a safe, nurturing environment for students because solutions come from group rather than from the individual. Errors in conclusion and thought processes are corrected within the group before they are presented to the students (Johnson, 1989). Demanding students to verbalise their ideas to the group help them to develop more clear concepts and the thought process becomes fully embedded in the students' memory. Vygotsky supports this concept in his research on egocentric speech by claiming that verbalisation plays a significant role in task solution (Bershon, 1992).

Phase V Appraisal of the Outcome

This phase is based on the principle of personal accountability and social skills. Personal accountability is a key variable mediating the effectiveness of cooperation. It is a sense of contributing one's own effort to accomplish the group's goal. Placing socially unskilled students in a learning group and telling them to cooperate will obviously not be successful. Students who learn cooperatively tend to be more highly motivated to learn because of increased self-esteem, the pro-academic attitude of group mates, appropriate attributions for success and failure and greater on-task behaviour. Cooperative learning students are more likely than other students to use the cooperative behaviour they were taught when they worked with new classmates (Johnson & Johnson,1994, Slavin,1995).

Students are more effective interpersonally as a result of working cooperatively than when they work alone, competitively or individualistically. Students with cooperative experiences are more able to take the perspective of others are more positive about taking part in controversy, have better developed interaction skills and have a more positive expectation about working with positive expectation about working with other than students from competitive or individualistic settings (Johnson & Johnson,1999). There are several advantages for cooperative learning from the aspect of assessment. It provides instant feedback to the students that act as a reinforcement to them.

Phase VI: Reflective Thinking

This phase is backed by the principle of group processing. Effective group work is influenced by the periodical reflections on how well they are functioning and plan how to improve their work process. Group processing may be defined as reflective on a group session to describe what actions were helpful and not helpful and make decisions about what actions to continue or change. The purpose of group processing is to clarify and improve the effectiveness of members in contributing to the joint efforts to achieve the group' goals.

Group processing with individual feedback is more effective than what group processing with whole group feedback in increasing student's achievement motivation, actual achievement, uniformity of achievement among group members, positive relationship among group members, self-esteem and positive attitude towards the subject area (Johnson and Johnson 1999).

Cooperative learning approaches may be more feasible and valuable in certain classes than in other. So far, these methods have been used more frequently in classes of grade IV through IX. They may be less relevant or more difficult to implement for teachers working with primary grade students or upper secondary grade students. The methods that emphasise group discussion and investigation, structured controversy, differentiated roles and responsibilities or development of a group product may be more appropriate for social studies and for assignments that focus on higher level cognitive objectives (Good and Brophy, 1991).

The following table shows the principles of cooperative learning incorporated to each phase of the model developed by the investigator.

Table 2.5
Cooperative Learning Principles incorporated to each phase of the Model

Phases	Major activities	Cooperative Learning Principles
Phase I	Teacher presents a topic to the students	Face –to- face interaction
Phase II	Assign role, establish mutual goals and share resources	Positive interdependence
Phase III	Pool ideas, help each other to learn, discuss and refine ideas, finds a solution preparing matter to be presented	Face –to- face interaction Individual and small group work skills
Phase IV	Presentation of ideas, explains and elaborate and try to strengthen the thoughts	Individual and group accountability
Phase V	Assessment of outcome, verify misconceptions, helps the spokesman to answer, collaborative effort	Positive interdependence Individual and group accountability

| Phase VI | Identify the role of each member that leads to success | Group accountability |

CONCLUSION

The conceptualisation of these terms helped investigator to prepare a model based on cooperative learning principles to enhance social intelligence. Most of the theories of social intelligence reveals that it is acquired at the age of five (O'Sullivan et al., 1994) and it is possible to train and develop social intelligence among children.

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