INTRODUCING ...

CO-OPERATIVE LEARNING

Workshop Material

Teacher Development Conference

University of Johannesburg

March 2008

1. INTRODUCTION

Educational improvement does not only pertain to learners in school, but also to the educator who needs to be better equipped to deal with diverse learner needs in the classroom.

Research indicates that co-operative learning proves to be an effective approach to accommodate learners from diverse backgrounds as well as having the latent potential for improving the academic, social, affective and cognitive development of the learner (see 17).

Co-operative learning is not only of importance at school, but also for society as a whole. Schniedewind and Davidson (1987:1) refers to this importance as follows: *"…if we are to survive as human beings and transform a world of inequality, international conflict and potential nuclear disaster, young people must develop co-operative skills and values more fully than their elders have."*

2. HISTORICAL BACKGROUND

Co-operative learning is based on the philosophy of John Dewey (1916) and his belief in promoting democracy in schools in order to develop good citizenship.

The contemporary co-operative learning movement dates back to as early as the 1900's with Kurt Koffka, Kurt Levin and Martin Deutsch. Intensive research regarding the application of co-operative learning started in 1970 when the establishment of interpersonal relationships between diverse ethnic groups became the focus of attention. Presently, the two most quoted approaches are those of Robert Slavin (1983) and David and Roger Johnson (1987).

It is evident that organising learners to work in groups is not a new practice. Around the world this has been, and still is an important element in education. Research indicates the effective use of co-operative learning in England, Japan, Canada, Australia, Israel, Germany, The Netherlands, Nigeria and America.

Approaches with regard to co-operative learning may however differ. The United States of America favours a more structured approach, while Europe and Israel favour a more unstructured approach, which focuses on discussions and group projects.

3. THE DIFFERENCES BETWEEN THE TRADITIONAL AND THE CO-OPERATIVE TEACHING AND LEARNING APPROACH

Co-operative learning provides a new paradigm for teaching and learning. Knowledge can be discovered and constructed by learners. Learners also get the opportunity to develop new talents and skills.

TRADITIONAL	CO-OPERATIVE
My personal aim is important	The general and personal aim is important
I work alone and study alone	I work and study alone as well as with others
I work and live to my own advantage	I work and live to my own as well as to the advantage of others
I find my own information and ideas	Trusting others and sharing information is important
My own needs are important	My own needs as well as those of others are important
I experience positive feelings when I succeed	I experience positive feelings when everybody is successful
I am responsible for myself	I am responsible for myself and others
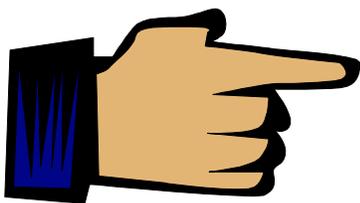
4.   WHAT IS CO-OPERATIVE LEARNING?

Co-operative learning is more than normal group work. In this regard Schniedewind and Davidson (1987:30-31) refer to the following:

- Co-operative learning is not a once off project, but encompasses different academic tasks.
- Co-operative learning does not allow certain learners to do more than others. The workload has to be divided equally, and each group member is responsible for a section of the work.
- Co-operative learning does not refer to gifted learners assisting slow learners the whole time.
- Co-operative learning is not a way out for an educator who does not feel like teaching.
- Co-operative learning refers to:
  1. Individual responsibility for obtaining information.
  2. Positive interdependence of group members.
  3. A better understanding of information, as it needs to be explained to others.
  4. The development of interpersonal skills.
  5. The ability to analyse group dynamics.
 6. The development of learner activity and involvement.

5. THE MOST IMPORTANT CO-OPERATIVE LEARNING METHODS/MODELS

There are four major approaches, each with its own method/methods.

TEAM LEARNING	EXPERT GROUPS	JOINT TASK COMPLETION	JOINT RESEARCH
CIRC, STAD, TGT, TAI	Jigsaw	Learning Together	Group Investigation

1. **GROUP INVESTIGATION:**

- Heterogeneous groups of 4-6 members are formed.
- Educator provides an introduction relating to a specific topic.
- Learners can suggest possible related topics for research.
- The whole class chooses one topic.
- Learners determine how the research will be done (where to find information and who will do what). The educator may give guidelines.
- The topic is divided into sub-topics. Each group member receives a sub-topic.
- Each group member is responsible to find information for his/her topic and has to report back at a scheduled time.
- The group prepares one research report and receives a mark for the group effort.
- Suitable for outside the classroom.
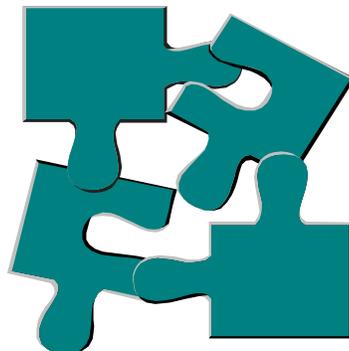
2. JIGSAW:

- Heterogeneous groups (home groups) of 4-6 members are formed.
- All groups receive the same learning task.
- The task is divided. Each group member receives a different section of the work, which he/she has to master and explain to the rest of the group, OR learners of groups having the same section of work form new groups (expert groups) and together they discuss and master the particular section of the work.
- When all the expert groups have finished, everybody returns to their original home group and reports back on his/her section of the work to the whole group.
- Quizzes can be held in which teams can earn marks for their group efforts.
- Individual assessment can also be done by writing class tests on the work mastered in the group.

3. LEARNING TOGETHER:

- Heterogeneous groups of 4-6 members are formed.
- Learners work together to complete a task.
- Each group member is responsible for a section of the work – to master it and to explain it to the rest of the group until everybody understands.

Learners may ask for assistance from the educator if they experience problems.

- A report back session is held with the whole class.
- Learners are assessed individually.

4. STUDENT TEAMS ACHIEVEMENT DIVISIONS (STAD):

- Heterogeneous groups of 4-6 members are formed.
- Team members study learning material until everybody understands (Learning Together).
- A report back session is held with the whole class.
- Each member is assessed individually.
- Individual marks in a group are totaled and an average is determined. This is allocated to the group as a whole. In this way groups compete against each other.
- The individual performance of group members also serves as a basis for new group divisions. After individual assessment, groups are reshuffled into various achievement divisions. For example, the first six top achievers in the class will be part of a new group 1; the next six will be part of a new group 2 and so on. After each individual assessment learners have the opportunity to move to a higher or lower division. Learners are now competing with others at his/her level in his/her division and not with the whole class.

Although co-operative learning focuses on working together, competition still remains a very important part of living in society, and can therefore not be

ignored in the classroom. This method provides the opportunity to address this issue.

5. TEAM ASSISTED INDIVIDUALISATION (TAI):

- This method is based on individual instruction.
- Learners are placed in groups based on their performance in placement tests.
- Groups work on different work divisions at their own pace.
- Team members assist each other to complete and master their specific section.
- Learners are assessed individually, and based on their performance they are retained in the particular division or moved to a next work division.

6. TEAMS-GAMES-TOURNAMENT (TGT):

- Heterogeneous groups of 4-6 members are formed.
- Games are played in which group members compete as individuals against the members of his/her group.
- The winner in each group earns 6 marks for his/her group; the runner-up earns 4 marks and so on.
- The same principle is applied as for STAD. The winners from all the teams form a new group, those who were second, form a second group and so on. Low performers have a chance to compete against low performers and high performers against high performers. Everybody has an equal opportunity

for success, at his/her level. Team members compete as individuals during the games and not as a group.

7. CO-OPERATIVE INTEGRATED READING AND COMPOSITION (CIRC):

- This method is used to promote language skills, reading and writing.
- Learners are divided into groups working on different levels.
- The educator works with one group at a time while the others are involved in activities such as reading, identifying ideas in stories, predicting the conclusions of stories, making summaries of stories, learning new vocabulary etc.
- Each group is assessed on the activity they were engaged in.

6. ADDITIONAL CO-OPERATIVE LEARNING TECHNIQUES

TECHNIQUE	APPLICATION
- **Simulations and role play**	Each group member assumes the role of a character and plays that role in addressing an issue. E.g. Deciding on an anti-smoking law. (Roles: doctor, smoker, tobacco merchant, politician and cigarette factory worker).
- **Brainstorming**	Learners generate different ideas to solve problems or to discuss an appropriate topic.

▪ **Fishbowls**	One group sits in a circle facing each other to discuss an issue related to a topic. The rest of the class sits in an outer circle, taking notes and watching. Different groups get a chance to sit in the middle and to discuss different issues. All groups receive a task based on the discussion, which has to be completed. Each group submits a final report for assessment.
▪ **Round Table (written) or Round Robin (oral)**	Groups use a single pen and a piece of paper to answer a question/s. Each group member writes down one sentence/fact before passing the pen and paper on to the next member, who writes the next line/fact and passes it on. Learners may pass an answer. Groups are assessed for their group effort.
▪ **Buddy system**	Learners are assigned a partner to discuss issues with. Partners discuss questions or check one another's work or share ideas.
▪ **Train questions**	Groups sit in lines, one member behind the other. The educator or other groups pose questions (oral or written). The first member answers or passes it on to the next person. If the question/questions is/are unanswered when it reaches the end of the line, the group loses marks.
▪ **Telstar techniques**	Each group elects a spokesperson to debate an issue. All spokespersons sit in an inner circle to debate. Members of the groups may pass notes, suggestions or

|	
	ideas on to the spokesperson from the outside of the circle.
▪ **Numbered-Heads -Together**	Numbers are allocated to group members. The educator asks questions. Group members decide on a correct answer. The educator calls a certain number to provide the correct answer.
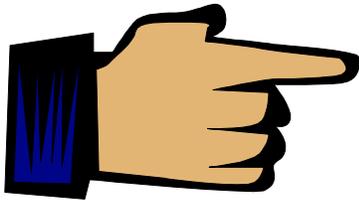
7. IMPORTANT ELEMENTS FOR SUCCESSFUL IMPLEMENTATION OF CO-OPERATIVE LEARNING

David and Roger Johnson as quoted by Holubec (1992:182-183) identified the following five elements distinguishing co-operative learning from normal group work. These elements are the following:

- **POSITIVE INTERDEPENDENCE:** learners have to feel that they need each other to complete a task, that they are responsible for one another's learning and that they benefit by learning from one another.
- **INDIVIDUAL RESPONSIBILITY:** each group member has to fulfil a specific role.
- **FACE-FACE-INTERACTION:** each group member has to contribute and take part in the group activity.

- **SOCIAL AND SMALL GROUP SKILLS:** learners have to be equipped with the skills to work effectively with others: learn to listen to others, learn how to do summaries, learn how to evaluate, learn how to praise others, learn how to handle conflict and learn how to reflect on, and assess group work.

- **REFLECTING:** learners have to reflect and give feedback on the success of their own contributions as well as on the contribution of the group as a whole.
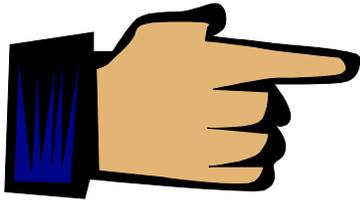
8. IMPLEMENTING CO-OPERATIVE LEARNING

David and Roger Johnson (1984:26-40) indicate the following steps for success:

SUCCESS

- Specify content, outcomes and assessment criteria beforehand.
- Determine conducive groups (preferably not more than six members).
- Determine heterogeneous groups (ability, gender, ethnicity, interests, learning styles etc.).
- Providing appropriate resource material for group activities.
- Allocate and explain roles to group members.
- Explain the task and indicate a time frame for task completion.

- Specify and explain the social skills needed for each activity.

- Monitor problems and provide support and assistance.

- Provide time for reflection by group members.

- Round off each activity with a summary and conclusion.

- Provide time for feedback so that learners can check and rectify their efforts. Indicate how to improve group work and point out the strengths of the groups.

- Assess learners' work. Allow learners to assess one another.

- Assess group functioning by observing the activity against pre-determined criteria.

- Intervene if groups experience problems.

- Reward groups for success.
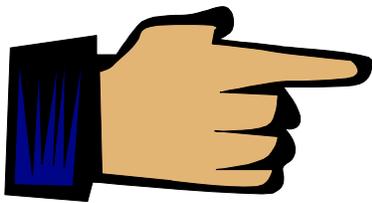
9. THE TASK RESPONSIBILITY OF GROUPS

Woolridge (1993:49) and Adams and Hamm (1994:59-64) indicate the following aspects as being important for effective co-operation.

- Groups should start working immediately.
- No digressions should be allowed. Groups are to remain focused on the task.
- All group members are responsible for completing the task. All group members should ask and answer questions.

- Work should be completed within the given time frame; therefore instructions pertaining to the task have to be followed precisely.

- Group members need to learn how to encourage and motivate one another and how to alleviate tension if it should exist.

- Group members also need to learn how to show appreciation towards one another and try and avoid unnecessary conflict. It is important that they learn how to criticise ideas and not people.
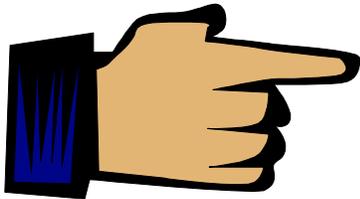
10. THE ROLE OF THE EDUCATOR

According to Schniedewind and Davidson (1987:126-128), Nastasi and Clements (1991:126-128), Ford (1991:45-63), Detmer (1992:22-23), Holubec (1992:182-183) Woolridge (1993:49) and Goor and Schwenn (1993:10-11) the task of the educator during co-operative learning activities can be summarised as follows:

*A Quick Note*

It is very important that time should be divided to achieve a balance between the following three outcomes:
- 20%: co-operative outcomes (working in groups to achieve a goal – acquiring social skills)
- 70% : individualistic outcomes: (each learner to acquire specific knowledge, skills, values and attitudes related to the task).
- 10% : competitive outcomes: assessment: quizzes, tests.

Educators have to answer to the following questions:

- **What are the content, outcomes and mastering criteria for the lesson?**
- **What will individuals/groups be responsible for?**
- **Is the activity designed to form consensus, generate new ideas or share information?**
- **What will the size of the group be and how will learners be assigned?**
- **What roles will the learners play?**
- **How will the monitoring and assessing of the activity take place?**
- **Do I have extra activities for groups or gifted learners who finish before the others?**
- **Have I planned time for reflection and a report back/feedback session?**
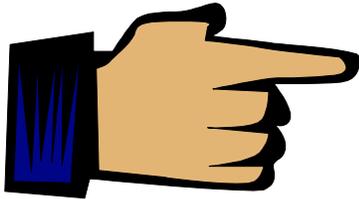
LEARNER

The educator should assign roles to learners. The choice should be based on the academic and social competency of the learner.   Roles should fit the uniqueness of each learner.
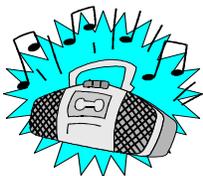
QUIET CAPTAINS: remind group members to keep noise levels down

TIME KEEPERS: keep group on schedule in order to complete the task in time

CHEERLEADERS: give encouragement

EQUALISERS: make sure all group members contribute

RECORDERS: write down significant information to be presented

MANAGERS: indicate to the educator if the group cannot proceed

TASKMASTERS: indicate to group members what they are responsible for and announce the start of a new section or question.

PRESENTERS: they report to the rest of the class.

Apart from these roles, all group members are responsible for supplying ideas and information in order to complete the given task. The following unproductive roles should not be approved: aggressor, opposer, comedian, acknowledgement seeker, victim and Mr. Know All.
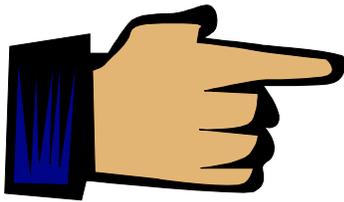
## 12. CHARACTERISTICS OF A CO-OPERATIVE LEARNING ACTIVITY

The following elements should always be present:

- **THE INITIATION PHASE: learners to introduce themselves to one another, formulate group norms and receive the learning task, outcomes and assessment criteria.**
- **THE EXPLORATION PHASE: becoming acquainted with the new roles and learning to get to know each other.**
- **THE TRANSITION PHASE: decisions are made in groups of how to approach the activity. This is the phase in which the potential of learners become visible. Confrontations may occur and pressure put upon passive members.**
- **THE WORKING PHASE: learning activities take place in order to achieve the outcomes. Assessment of group work by the educator takes place.**
- **THE END PHASE: report back sessions take place. Mistakes are rectified. The educator gives feedback.**
  Reflection takes place by group members: group assessment, peer assessment and self-assessment.

Holubec (1992:181-183) suggests the following for learners who are not well acquainted with the co-operative learning approach:

- Initially, keep co-operative activities as short and as regularly as possible.

- Do a lot of guiding work with the learners before they are left completely on their own. Work in groups, but deal with each question and answer in the learning activity separately. Gradually one can move to a situation where they do all the questions on their own and then report back.

- Do not allocate marks at the beginning. Let learners check their work themselves. Later on, when they are used to working together, group marks can be allocated.
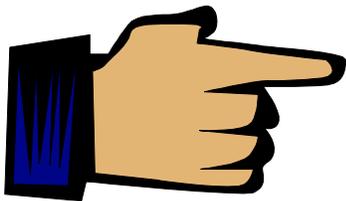

13. ASSESSING CO-OPERATIVE LEARNING ACTIVITIES

Co-operative learning activities can be assessed in two ways:

- **INFORMAL:** observation takes place by means of checklists and pre-determined criteria. The educator and the group members can do this. Learners can assist in determining the assessment criteria. Self-assessment is also an example of informal assessment.

- **FORMAL:** the focus should be on assessing cognitive learning as well as the application of skills. This involves allocating marks and can be done as follows:

  1. Allocating a group mark for a group project.
  2. Individual marks of group members are totaled and the average calculated, this is allocated as a group mark. All group members receive the same mark.
  3. Work is done in groups but individuals write tests/exams and obtain their individual results.
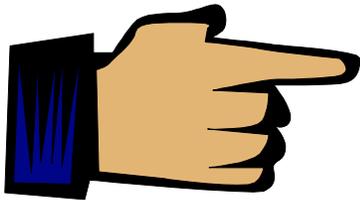
14. CRITERIA FOR ASSESSMENT

…………**Assessment criteria should reflect task-related as well as social and small group skills.**

When conducting informal assessment the educator needs a set of pre-determined criteria. Adams and Hamm (1994:120-121), Ford (1991:45-63) and Harmin (1994:154) suggest the following:

- Accuracy of task completion.
- Co-operation with others.
- Presentation of information.
- Completeness.

- Evidence of critical and creative thinking.

- Active involvement.

- Proper time management.

- Work tempo constant, or are there signs of relaxation?

- Listening to one another.

15. GROUP COMPOSITION

15.1 GROUP SIZE:

According to Nastasi and Clements (1991:120), Holubec (1992:181) and Harmin (1994:11) it is advisable to start with a small group and expand gradually. Two learners in a group secure that both will participate. When groups are too big they become noisy, which in turn impacts negatively on concentration. Big groups can also lead to passive participation. Research conducted by Janicki and Swing (1981) has proved that a group size of 4 members has been more conducive to learning than bigger groups

15.2 DETERMINING GROUP MEMBERS:

Group members should be appointed by the educator to avoid friends forming groups. Poirier (1970:31) is of the opinion that heterogeneous groups are more preferable than homogeneous groups. Different abilities, gender, ethnic groups, learning styles and interests should be accommodated in groups. Diversity enables learners to make contact with a wider variety of perspectives and interpretations

of knowledge. Gifted learners are also not at a disadvantage. Research conducted by Johnson and Johnson (1985:104-124) indicate that gifted learners are more active in heterogeneous than homogeneous groups. Heterogeneous groupings can also improve attitudes amongst and relationships between group members.

15.3 TYPES OF CO-OPERATIVE GROUPS:

Three types of co-operative groupings can be distinguished:

- **FORMAL:** these groups work together for a few weeks to complete a task
- **INFORMAL:** these groups meet on a short, temporary basis.
- **BASIS:** these groups are long term learning groups with stable membership.


15.4 BUILDING A QUALITY GROUP:

When groups have been determined, the educator should pay attention to the building of team spirit. Team spirit can only exist if the following is evident:

- Strong group cohesiveness.
- Understanding roles and responsibilities.
- Commitment.
- Understanding the activity.
- Acceptance of others.
- Acquiring the necessary co-operative and social skills.
- Not only **DOING** something but **LEARNING** as well.
- Determining group rules, a group name and a motto.

Groups formulate their own rules and each group member is reminded of these rules at the beginning of an activity.

Examples of rules are the following:

- Everybody works until the activity is completed.

- Respecting everybody's contribution.

- Ask for educator assistance if no progress is made.
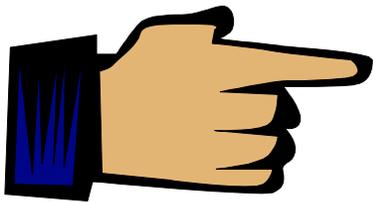
16. SOCIAL AND SMALL GROUP SKILLS

WHAT SOCIAL SKILLS MUST WE HELP LEARNERS DEVELOP IN CONJUNCTION WITH THEIR KNOWLEDGE BASE?
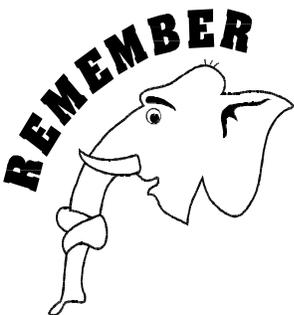
> **WE ARE NOT BORN KNOWING INSTINCTIVELY HOW TO INTERACT EFFECTIVELY WITH OTHERS**

The following social skills are the keys to a group's productivity:

- Learning to work with others.

- Listening to others: giving attention, asking clarifying questions and paraphrasing speakers' viewpoints.

- How to make summaries.

- Learn how to evaluate.

- Learn how to praise others.

- Learn how to handle conflict.

- Learn how to reflect on group work.

- Allowing all members to participate.

17. ADVANTAGES OF CO-OPERATIVE LEARNING

Research focusing on the impact of co-operative learning on teaching and learning indicate the following advantages:

- Academic improvement: because comprehension and the ability to analyse, interpret and evaluate improve.

- Prejudice diminishes, because working in heterogeneous groups teaches learners how to work and get along with each other.

- Excessive competition and aggression is reduced, because apart from a personal goal, the common goal also becomes important.

- Improvement in social interaction and communication skills.

- Construction of knowledge is promoted.

- Cognitive growth is facilitated: "…..cognitive development occurs when children co-ordinate their thoughts with those of their peers." (Nastasi and Clements, 1991:116.) Johnson, Johnson and Stanne (1986:382) also emphasises the cognitive advantage by stating the following: " Learning contexts in which students are encouraged to work together and seek concurrence are more effective for facilitating learning and cognitive

growth than those in which competition or individualistic learning is encouraged."

- Co-operative problem-solving environments encourage involvement in cognitive conflict and solving of problems provides the opportunity for promoting motivation and facilitates cognitive growth (Nastasi and Clements, 1991:120), Bearison (1982:199-221).

- Much more than subject content and content related skills are taught. Learners acquire certain social skills as well.
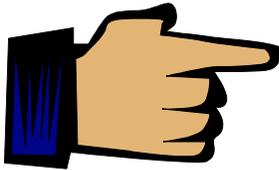
18. DISADVANTAGES OF CO-OPERATIVE LEARNING

Disadvantages mainly center around the gifted child. Some of these disadvantages are:

- Teaching is restricted to the curriculum material. There is little opportunity to stimulate the gifted child.

- Work tempo has to fit in with the group. This inhibits the gifted child to work faster.

- Arrogance amongst gifted learners can be promoted, as well as loss of confidence in their peers who do not progress as fast as they do.

- Gifted learners may be inclined to take over the group, rather than to share the leadership.

- Gifted learners may become frustrated and bored if group members do not contribute, or if work has to be repeated which they have already mastered.

- Gifted learners may not be happy if time for their own individual learning is taken for co-operative activities with other learners who are not co-operative.

- Gifted learners may find it difficult to understand why others do not grasp as quickly as they do.

Other disadvantages refer to the following:

- Co-operative learning can become time-consuming.

- Pressure on learners to prepare well and not disappoint their group members may become too intense.

- Misconceptions regarding academic content can occur.

- Learners may view the end product or social interaction as more important than the academic outcome.

IMPORTANT!

> **Bearing these disadvantages in mind Good and Brophy (1997:284) advise that co-operative learning should not replace traditional teaching completely, but should be varied with co-operative learning. Team members can never replace the educator as transmitter of knowledae.**
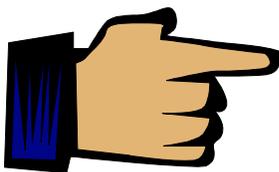
19. POTENTIAL PROBLEMS AND SOLUTIONS WITH THE IMPLEMENTATION OF CO-OPERATIVE LEARNING

Help! **1. How do I get my learners used to this new way of work?**

- Keep activities short with clear guidelines.

- Stick to times.

- Be firm: learners should know that if a particular task is not completed, they cannot progress to the next task.

- It is important to remember that learners need time to become acquainted to this way of working. Do not get discouraged if they find it difficult.

Help! **2. How do I handle heterogeneous groups?**

- Be open with learners about how they differ from one another, because according to that, they are placed in groups.

- Assist learners to realise that each one of them can contribute to the activity in his/her own way.

- Try to group learners with serious learning problems with those who will be supportive helpers.

Help! **3. How do I handle gifted learners?**

- Provide them with more challenging work.

- Allocate more responsibilities to these learners.

- Give them additional unknown work related to the given topic, which they have to explain to the rest of the group.

Help! **4. How do I help learners to assist others?**

- Provide the opportunity for learners to fulfil different roles and social skills.

Help! **5. How do I help learners to share leadership?**

- Each group member has to fulfil a specific role and in that area he/she is the leader.

- Learners are not allowed to dominate in a group. A strategy to avoid this: provide each group member with ten tokens at the start of an activity. Every time he/she speaks in the group a token is handed to the equaliser. If all ten tokens are handed in, he/she may not speak anymore. This will prevent that only some group members speak. At the end of the activity it is checked to see how many tokens each group member has left. Those who have too may tokens left should be encouraged to speak more.

Help! **6. How do I avoid learners calling each other names?**

- Stress the importance of respect and trust.

- Use role names during activities: learners should address one another by these names.

Help! **7. How do I handle interpersonal problems amongst learners?**

- Create a place in the classroom where learners who have problems can go and discuss it with one another. Interpersonal problems should never be dealt with in a group. If necessary the educator must intervene.

Help! **8.   How do I handle new learners joining a group for the first time?**

- First determine the strengths of the learner before he/she is placed in a group.
- Let other group members acquire the skill of how to make new learners feel at home.

Help! **9.   How do I control the noise level?**

- Noise is very often a sign indicating that active learning is taking place.
- Explain to the educators next door to you, what you are doing. Ask them to inform you if your class is too noisy.
- Make use of signs in the classroom to indicate to learners if it becomes too noisy.
- Remember: one of the group members should always be responsible for controlling the noise in the group.

20.   CONCLUSION

There are no quick fixes for success. To find the correct method requires a lot of experimenting and changing of the given co-operative teaching methods.

If co-operative learning is only viewed as an instrument to improve academic progress and social interaction, it will remain another educational change, which might improve learning and make it more enjoyable, but learners will still leave school incapable of fulfilling a role in the competitive society. Co-operative learning should not only address academic needs, but should also integrate cognitive and affective aspects.

Co-operative learning can secure that schools play an important role in a democratic nation by providing learners with the opportunity to experience democracy in the classroom. If learners have experienced democratic power sharing in a classroom, they will be more capable of handling democracy in other social situations. Co-operation is not only part of the classroom situation, but also an important part of the world outside the classroom. Dhand (1991:83) refers to the following: *"…..it could pave the way for expanded co-operation in global, economic, social, political, ecological and humanitarian issues. Indeed, it may be added that co-operative learning has the potential to transform not only our schools and communities, but also ultimately our spaceship earth."*

Considering the fact that co-operative learning can turn schools into more humanitarian educational environments, one can accept that there is not much to lose. However, there is a lot more to gain, and to lose this will be sad.

Once more, the role of the school and the role of the teacher has to be examined, not only with the purpose to achieve a more equitable and co-operative society but also to measure up to the needs of the learners.

In South Africa, in the midst of the implementation of a new curriculum, Curriculum 2005, the time is ripe to implement this new learning model. Let us seize this opportunity and not fling it to the winds.

BIBLIOGRAPHY:

ADAMS, D. & HAMM, M. 1994. New designs for Teaching and Learning. San Francisco:Jossey Bass Publishers.

BEARISON, D.J. 1982. New directions in studies of social interaction and cognitive growth. (*In* SERAFICA, F.C., *ed.* Social-cognitive development in context. New York:Guilford Press. p. 199-221.)

DETMER, S. 1992. Co-operative Learning. Figuring Averages. *Learning,* 1992:20 (7):22-23, March.

DEWEY, S.J. 1916. Democracy and Education. New York:Macmillan.

DHAND, H. 1991. Selected Co-operative Learning Strategies in the Global Context. *Canadian Social Studies,* 26 (2): 78-83.

FORD, E. 1991. Criteria for Developing an Observation Scheme for Co-operative Language Learning. *Canadian Modern Language Review,* 48(1): 45-63, Oct.

GAWE, N. 2007. Cooperative learning. (*In* Jacobs, M., Vakalisa, N & Gawe, N., *eds.* 2007. Teaching-learning dynamics: A participative approach for OBE. 3rd ed. Sandton: Heinemann. p. 208-227.)

GOOD, T.L. & BROPHY, J.E. 1997. Looking in Classrooms. New York:Longman. P. 270-293.

GOOR, M.B. & SCHWENN, J.O. 1993. Accommodating Diversity and Disability with Co-operative Learning. *Intervention in School and Clinic,* 29(1): 6-16.

GUNTHER, M.A., ESTES, T.H. & SCHWAB, J. 2004. Instruction a models approach. Boston : Allyn & Bacon.

HARMIN, M. 1994. Inspiring Active Learning. A handbook for Teachers. Alexandria:VA:ASCD (Association for Supervision and Curriculum Development.)

HOLUBEC, E.J. 1992. How do you get there from here? Getting started with co-operative learning. *Contemporary Education,* 63(2): 181-184, Spring.

JOHNSON, D.W. & JOHNSON, R.T. 1984. Circles of Learning, co-operation in the classroom. Alexandria,VA : Association for Supervision and Curriculum Development.

JOHNSON, D.W. & JOHNSON, R.T. 1987. Learning together and alone. 2nd ed. Englewood Cliffs, New York:Prentice Hall.

JOHNSON, R.J., JOHNSON, D.W. & STANNE, M.B. 1986, Comparison of computer-assisted co-operative competitive and individualistic learning. *American Educational Research Journal,* 23:382-390.

JOHNSON, D.W., JOHNSON, R.T. & STANNE, M.B. 2000. Cooperative Learning Methods:A Meta Analysis. http://www.co-operation.org/pages/cl-methods.html

NASTASI, B.K. & CLEMENTS, D.H. 1991. Research on Co-operative Learning:Implications for practice. *School Psychology Review,* 20(1) 110-131.

POIRIER, G.A. 1970. Students as partners in team learning. California:Center of Team Learning.

SAPON-SHEVIN, M. & SCHNIEDEWIND, N. 1992. If co-operative learning is the answer, what are the questions? *Journal of Education,* 174(2): 11-37.

SCHNIEDEWIND,N. & DAVIDSON, E. 1987. Co-operative Learning, Co-operative Lives. A sourcebook of Learning Activities for building a Peaceful World. Iowa:W.M.C. Brown Company Publishers Dubuque.

SLAVIN, R.E. 1983. Co-operative Learning. New York:Longman.

SLAVIN, R.E. 1987. Co-operative Learning and the Co-operative school. *Educational Leadership,* 45:7-13.

WOOLRIDGE, V. 1993. Co-operative Learning Warm-Ups. *Instructor:* 49, Mar