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Implementation of cooperative learning in the Center for Community Service and Continuing Education at Kuwait University

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The purpose of this study is to review the success of implementation of cooperative learning in various courses delivered at the Center for Community Service and Continuing Education at Kuwait University. According to recent research in the field of social cognition, learning situations which make use of the social context often achieve superior results over individualistic experiences. Interviews with 200 university teachers conducted for the last two years showed their experience and opinions about the effects of cooperative learning in their classrooms on the achievement of content knowledge, retention and students' attitudes toward it. The results of this study revealed that about 75% of the teachers believed that cooperative learning had been successfully implemented. The present analysis offers a series of positive findings and recommendations to improve further the educational standard of the Centre in Kuwait University.

Introduction

Cooperative learning is an adopted instructional strategy which promotes student learning and academic achievement across the curriculum. It has been used successfully to promote learning achievement in cooperative writing, problem-solving in technological studies and comprehension in reading. It promotes socialisation and positive interaction making students consistently more cooperative and helpful.

Several specific cooperative learning experiences were introduced into one of two sections of a language learning course. For the five topics in which these techniques were utilised, student comprehension was compared with that of students in the second section of the same course which did not apply this methodology. Higher scores were earned by the students who utilised cooperative techniques when studying all five of the topics. Both practically and statistically higher results were obtained in three of the five topics by those who were exposed to cooperative methods.

The present study therefore aims to determine whether the relationship between cooperative learning orientation and achievement remained in new methodology courses in which groups were to fulfil main course requirements. Recent educational research has been conducted regardless of some facts, such as: the overwhelming majority of graduate students in colleges of education are required to enrol in at least one research methodology course as a necessary component of their degree programs; the majority of students find these courses the most difficult in their programs of study; and recently, there has been an increase in the number of research methodology instructors who use cooperative learning techniques in their classes (Onwuegbuzie & DaRos 1999).

Improving learning is a consistent goal in teaching professionals. Research suggests that learning styles play an important role in new

methodology classes. Thus, graduate students who prefer to learn in cooperative learning groups in most cases perform better than do their peers in more individualistic orientations (Onwuegbuzie 2001).

The educational technology is a process shifting from instruction to learning and construction. Cooperative learning is among these process technologies. Several times the Ministry of Education has vowed to introduce an innovative program that would raise the educational standard in the State of Kuwait. Efforts have been concentrated in three main directions:

- improving classroom management style of learning in small, nuclear groups
- working towards obtaining a better social and physical environment
- introducing new, and upgrading previous, educational facilities in classrooms.

So far, this study has been the first to evaluate the results and effectiveness of cooperative learning in the Center for Community Service and Continuing Education.

Research literature on cooperative learning

Johnson and Johnson (2005; 2001; 2000; 1994; 1989) and Slavin (2001; 1995; 1988; 1980) have extensively published and reviewed the literature on cooperative learning. Blosser (1992: 6) comments on their contributions, also quoting Brandt (1987), saying that:

> They identify a variety of outcomes of cooperative learning. Achievement increases for all ability levels (high, medium, low); higher-level thinking processes can result; a deeper level of understanding is possible; critical thinking is promoted; more positive peer relationships result; students exhibit better social skills and provide more social support for their peers; and a higher level of self-esteem can result (Brandt, 1987: 17).

She also points out that teachers can teach their students how to be part of a productive group and manage conflict, and teachers themselves can learn those social skills and use them with their colleagues.

Johnson and Johnson (1989) define the basic elements of cooperative learning as: positive interdependence, face-to-face promotive interaction, individual accountability, interpersonal and small group stills, and group processing. Individual accountability is the key to insuring that all group members are in fact strengthened in learning cooperatively. It stems from highly structured, cooperative learning activities which ensure that every student participates equitably and meets the learning objectives. Johnson and Johnson point out that the following learning outcomes can be promoted by cooperative learning:

- increased retention
- more frequent higher-level reasoning, deeper-level understanding and critical thinking
- greater achievement motivation and intrinsic motivation to learn
- greater ability to view situations from other perspectives
- more positive, accepting and supportive relationships with peers regardless of ethnic, sex, class or handicap differences
- greater social support
- more positive attitudes toward professors
- more positive attitudes toward subject areas, learning and college
- greater psychological health, adjustment and well-being
- more positive self-esteem based on basic self-acceptance
- greater social competencies.

In their study, Johnson and Johnson (2000) integrate cooperative learning with competitive and individualistic learning by providing guidelines for managing critical issues, assessing competencies and involvement, and resolving conflicts. They clearly defined each type of learning, pointed out the advantages and disadvantages of each, and

analysed the conditions under which each should be used. Their book is helpful for pre-service and in-service teachers who are interested in cooperative learning methods.

Likewise, Johnson and Johnson (2005) point out the use of cooperative learning to promote a culturally plural society within school. They discuss the following topics: the nature of each type of interdependence and the values implicit in each, the types of cooperative learning, the basic elements for effective cooperation, research on the use of cooperative learning and its positive influence on diversity, and the implications of research on cooperation for diversity. They (2005: 16) indicated that:

> Cooperative learning promotes greater efforts to achieve, more positive relationships, and greater psychological health than do competitive and individualistic learning. These outcomes indicate that when cooperative learning is used the majority of the school day, diversity among students can be a potential source of creativity and productivity.

Johnson, Johnson and Smith (1998; 1991) also point out the use of active learning strategies through cooperation in the classroom. They (1991) show how college faculty can facilitate students in actively creating their knowledge rather than passively listening to the professor's. Their monograph is about "structuring learning situations cooperatively at the college level so that students work together to achieve shared goals".

The concept of cooperative learning is also introduced by Slavin (2001; 1995; 1988; 1980), who offers a practical, down-to-earth approach to cooperative learning and provides practice methods for groups. He (1988: 9) developed a method called Students Teams-Achievement Divisions (STAD) which involves competition among groups. In this method, students are grouped heterogeneously by ability, gender, race and ethnicity. They learn materials in teams and take quizzes as individuals. Individual scores contribute to a group score. Slavin considers this method appropriate for a variety of subjects.

Onwuegbuzie (2001) tried to determine whether the relationship between peer orientation and achievement remained in research methodology courses in which cooperative learning groups were formed to undertake major course requirements. He found that graduate students who preferred to learn in cooperative learning groups tend to obtain lower levels of performance in research methodology courses in which all assignments are undertaken and graded individually than their counterparts who have more individualistic orientations. He also found that peer orientation explains as much as 27.4% of the variance in achievement among graduate students.

In another study, Jacobs, Power and Loh (2002) provide ideas and resources that can be used by teachers who want to improve their classroom and promote community building. They demonstrate how classroom teachers can use cooperative learning techniques for lesson planning and class management. The studies in their book are based on experience and in-depth research.

In a cooperative learning classroom, students are placed in small groups and work together under the teacher's guidance to attain group goals that cannot be obtained by working alone or competitively. In such a classroom environment, students discuss, help each other learn and encourage personal achievements in other members in the group. Thus, the way in which lessons are organised can influence students' interactions with others, knowledge, and attitudes (Carson 1990, Johnson & Johnson 1989). Cooperative learning has the advantage of using this method in different subjects and levels, starting from elementary school to university.

However, this kind of pedagogical approach requires very experienced and well-trained teachers who know how and when to assign learning objectives to students and how to monitor each learner within each small group.

Furthermore, the cooperative learning approach makes subjects more interesting and promotes effective learning. Also, it improves intergroup relations, self-esteem, attitude toward class and the advantage of working in a team (Johnson & Johnson 1989; Slavin 2001). As the result of some studies, university students demonstrate greater academic achievement over a long term through the use of cooperative learning than through other traditional teaching methods. The major advantage of cooperative learning is that it refers to small group instruction that comprises five elements: clear, positive interdependence among students; group self-evaluation; interpersonal behaviours that promote each member's learning; individual accountability; and frequent use of small-group social skills.

Cooperative learning is one of the most favoured and successful practices in education. Its basic principle is 'students work together to accomplish shared learning goals'. It results in positive effects on students' achievement and retention of information (Johnson & Johnson, 1990; Slavin, 1991; Cavalier, Klein & Cavalier, 1995). On the one hand, a number of studies have shown considerable increase in learning skills' development and confidence resulting from properly implemented active and cooperative methods. On the other hand, Foote (1997) found that, in a Kansas Community College study of cooperative sociology and psychology courses, there were no significant differences between grades of 50 students in cooperative courses and those of 100 students in traditional classes.

Putnam (2001) concluded that in 232 studies comparing cooperative learning with other methods, 40% showed no significant differences between cooperative learning and other methods, 50% showed a significant difference in favour of cooperative learning and 10% in favour of individualised instruction.

Many other research studies have been conducted on cooperative learning, its techniques and use. Among these studies are: Aronson

(2000), Aronson & Patnoe(1997), Aronson *et al*. (1997; 1978), Cohen (1994), Cohen & Laton (1997), Deveon (2004), Goodsell *et al*. (1992), Lie (2005), Purdom & Kromrey (1995), Sharon (1980) and Wallace (1995). Totten and Sills (1990) briefly identify and describe ten publications they consider to be seminal works that offer readers a comprehensive discussion of cooperative learning.

Methodology

According to Harvard Education Research the methodology of cooperative learning focuses on four major models. The models differ in how much structure is provided, what kinds of rewards are offered, methods of holding students individually accountable, and the use of group competition.

Student Team Learning (STL) was developed at John Hopkins University and is the focus of a large number of studies. Its emphasis is on team goals and success. Students are rewarded on improving their own performances, and team scores are important motivators. This method includes four separate programs (John Hopkins University Research Center, 2000)

Learning Together (LT) is a method developed by David Johnson and Roger Johnson at the Research Center of University of Minnesota. Students work in four- or five-member, heterogeneous groups on a group assignment sheet. A single product is submitted, and the group receives rewards together. Thus, the emphasis falls on team-building activities and regular discussions within groups (University of Minnesota Research Center 2000).

In an attempt to address educational dilemmas, Elliot Aronson and colleagues developed and implemented the jigsaw classroom technique at the University of California at Santa Cruz. Students are assigned to six-member teams to work on segmented academic material. Each team member reads an assigned section, and then

members from different teams who have studied the same sections meet in "expert groups" to discuss their sections. Then students return to their own teams and take turns teaching their teammates about their section. Jigsaw ∏ is a modification designed at John Hopkins University in which all students read a common narrative but individuals meet and become 'expert' on assigned topics. This method was primarily used in social studies where learning from text is important.

When properly carried out, the jigsaw classroom technique can transform competitive classrooms in which many students are struggling into cooperative classrooms in which the same students show dramatic academic and social improvements. As a result, students begin to form cross-ethnic friendships and discard ethnic and cultural stereotypes. In addition, jigsaw classrooms decrease absenteeism and improve education in a multi-cultural world. Studies have consistently revealed enhanced academic performance, elimination of prejudice and improved social relations (Aronson *et al*. 1977; Perkins & Saris 2001).

Shortly after Aronson and colleagues began to document the power of the jigsaw classroom, Robert Slavin, Elizabeth Cohen and others began to document the power of other kinds of cooperative learning programs (Cohen & Lotan 1997; Hurley *et al*. 2001). Thus this technique appears to be gaining in popularity.

In view of the above theoretical and practical research, the following study was carried out. All 2002 instructors at the Center for Community Service and Continuing Education at Kuwait University were interviewed to express their findings and knowledge about the implementation of cooperative learning in their sections. The interview focused on four main issues:

- How do instructors perceive the idea of cooperative learning and its advantages?
- Do instructors apply the method of cooperative learning in their classrooms, and with what tools?
- How was cooperative learning tuition method introduced to the instructors?
- Was the implementation of cooperative learning in Kuwait University successful, and if not, why?

The validity of the study results has been acknowledged by two faculty members and three experienced lecturers from Kuwait University.

Findings

The results of the interviews with the 200 instructors are summarised below.

First issue

Instructors' perceptions of what is cooperative learning were: 47% defined it as placing students into groups; 35% described it as delivered to groups of three to five students who develop interpersonal skills; and 18% found that it encouraged reasoning, responsibility and creativity. The instructors stated that cooperative learning exhibits the following advantages (Table 1).

Table 1: Instructors' perceptions of the advantages of the cooperative learning teaching strategy

Percent	Number of teachers	Advantages of cooperative learning teaching strategy
80	160	Stimulating students' team work and collaboration
71	142	Inciting students' interest
65	130	Encouraging constructive competition among students
65	130	Enabling implementation of discipline and self-control
63	126	Encouraging critical reasoning
55	110	Promoting students' independence
53	106	Tapping creativity
48	96	Incorporating shy students in the team
47	94	Intensifying socialising
46	92	Positive interdependence among students
45	90	Activating group discussions
44	88	Promoting individual accountability
40	80	Advancing interpersonal behaviour
35	70	Highlighting self-evaluation

Of the total number of instructors, 14 refrained from citing any advantages. Instead, they suggested several *disadvantages* of cooperative learning as follows:

- it needs some changes in the classroom environment
- it requires specific technical skills and knowledge (in some specialised courses)

- sometimes it distracts the student's attention from focusing on the core subject
- often instructors rely on the most active students to lead

Generally, when asked about the differences between cooperative learning and traditional tuition, most of the instructors opted in favour of cooperative learning highlighting the following – that it:

- stimulates student independence and self-reliability reducing direct instruction
- encourages use of 'high-tech' facilities
- unravels and promotes leadership skills
- encourages greater creativity in problem-solving
- uplifts personal satisfaction in achievers and involves more students in the team
- breaks the ice more easily between the students and the teacher
- is more demanding for the teacher in terms of effort, knowledge and experience

The following are the requirements the instructors need to fulfil in order to implement the methodology of cooperative learning (see Table 2).

Table 2: Instructors' views on the skills and knowledge required for the implementation of cooperative learning

Percent	Number of teachers	Skills and knowledge required for the implementation of cooperative learning
91	182	Creativity in designing worksheets, learning aids and presenting information
90	180	State of the art knowledge of the subject-matter
89	178	Excellent orchestrating and guiding skills
86	172	Promoting socialising through discourses and exchange of ideas
82	164	Ability to manage 'fair play' relationships among students, encouraging more effort and rewarding achievers
78	156	Patience and ability to listen and judge correctly
71	142	Ability to maintain discipline and encourage student participation
59	118	Understanding cooperative learning and its proper implementation

Second issue

The extent of implementation of cooperative learning in the instructors' classrooms was given as: 160 instructors (80%) had constantly implemented it throughout the academic year, and 15 instructors (30%) had implemented it for one or two semesters. Twenty one instructors (10%) were not implementing it in their classroom work.

In designing the class activities in cooperative learning, teachers applied different work styles. The first approach was to organise students into small groups and then deliver instruction conventionally to the whole class; the second was to give instruction to the whole class first and then place the students into groups so they could consolidate the knowledge with joint efforts together; and the third approach was to group the students at the beginning, appoint a leader in each group, and have each group fulfil tasks assigned by the instructor. Thus, the students cooperated to find information, while the teacher's role became a supervisor.

Third issue

This issue examines the ways in which teachers were introduced to the method of cooperative learning. Here are some instructors' opinions on the knowledge, skills and sources necessary to implement successfully cooperative learning. From the interviews, the majority of teachers pointed out that they relied on their personal experience within the course of cooperative learning throughout the academic year. The educational authorities did little or nothing in this respect, with the result that teachers in many subjects practise cooperative learning with limited training. Seventy percent suggested that more teacher training and upgrading workshops should be organised in cooperative learning methodology. Highly experienced local and visiting foreign teachers should deliver lectures and exchange experience with regard to updated information and teaching methods. Competent, practice-oriented, model lessons should be presented in variety of subjects so that different instructors, each in their own field, could gain ready access to the newest trends in world educational practice.

Fourth issue

The fourth issue related to the degree of success of the implementation of cooperative learning. The majority of instructors (75%) said that cooperative learning was successfully implemented in the academic courses run in the Center for Community Service and Continuing Education at Kuwait University. Almost one-quarter claimed that it had limited success, while 16 instructors said that it was a failure. The factors that were seen to contribute to its successful implementation are given in Table 3.

Table 3: Factors contributing to the success of cooperative learning implementation

Percent	Number of teachers	Factors contributing to successful implementation
100	200	Regular size classes
100	200	Experienced and knowledgeable instructors
80	160	Specially adapted courses/curricula to suit cooperative learning
75	150	High-tech classroom facilities and adequate environment
74	148	Students' positive attitude and motivation toward cooperative learning

Assessment, evaluation and reporting student learning

Cooperative learning groups present important opportunities and benefits for instruction, assessment, evaluation and reporting. Through cooperative learning groups, instructors can promote students' levels of critical thinking and reasoning. Also, it promotes self and peer assessment alongside teachers' judgements.

There are two levels of assessment – individual and group. In cooperative learning, assessment and evaluation practices constitute an integrated whole by implementing procedures before, during and after instruction. In this way, first, the student has the possibility to learn from these assessment experiences, and second, there is almost no possibility of teacher bias affecting the assessment procedure.

Discussion and suggestions

The views of 200 university instructors involved in this research were examined to determine their understanding about cooperative learning as a methodology, and how and to what extent they had achieved success in its implementation in the classroom.

The findings reveal that these instructors have understood the advantages of cooperative learning and the positive effects from its implementation in comparison with traditional teaching practice. Indeed, the ability to work with others within a group and to develop interpersonal skills may be justification for using cooperative learning strategies.

Yet, the literature suggests there is a need for additional research in cooperative learning strategies to be conducted in some subject areas. Studies in which cooperative learning strategies are used for a semester or for a whole academic year should be conducted to determine if students' achievements are increased with additional experience in using cooperative learning. Future research should also focus on comparisons between different models of cooperative learning, as well as comparisons with other approaches.

This research supports the view that cooperative learning experiences promote positive attitudes toward the instructional experience, and provide opportunities for students to develop skills in group interactions and in working with others that are needed in today's world.

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RESEARCH REPORT

Universities are funny places!

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Universities are funny places. They have a strong sense of hierarchy and rank. They have an amazing disparity in salary levels and status between staff, are class conscious, and are run by a large bureaucracy that oils and keeps the machinery going. They operate as educational institutions and yet also are entrepreneurial, marketing themselves in a competitive search for students and research resources. Most are in the public education sector but a few are private; they are closely scrutinised by governments and have to perform and make account of themselves to government authorities yet offer little accountability to the lower echelons of their workforce by the managerialist-inspired