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Cooperative learning Strategies principles and Techniques

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ملخص:

تهدف هذه الدراسة إلى التعرف على مصادر استخدام علاقات التعلم التعاوني بين الطلاب الذين يدرسون أي موضوع في الفصل .هذا قد يساعد المعلمين من أي موضوع في أي مستوى، سواء كان ذلك اللغات الأجنبية والرياضيات أو العلوم الاجتماعية. الأداة الرئيسية التي من خلالها الباحث يجمع البيانات هو استبيان لمعرفة كيفية استخدام المعلمين نصائح لتعليم التعلم التعاوني، لذلك يجب على المدرسين اتباع النصائح لجعل التعلم نشط والمشاركة المستاوية في الفصول الدراسية.

Abstract

This study aims to investigate the sources of using cooperative learning relationships between learners studying any subject in a class .This study may help teachers of any subject at any level, whether that be foreign Languages, math's or social studies . The main tool through which the researcher collected data is questionnaire to find out how teachers use the tips of teaching cooperative learning, so teachers must follow these tips to make active learning, equal participation in the classrooms

Introduction

Cooperative learning is a teaching technique that bring students together to learn in small ,heterogeneous groups ,students work independently without Constant and direct supervision from the teacher. Cooperative learning is a type of structured peer interaction emphasizing human relationships ,collaboration between peers, active learning , academic achievement ,equal participation, and equal status of students in the classroom. It can be used to teach any subject matter , whether that be foreign languages ,math, social studies or others.

Group work enables students to move readily from receiving knowledge to generating knowledge. Though discussions students are able to personalize this knowledge and scaffold their thinking processes and understanding. Cooperative learning is a powerful teaching strategy that is more than just a- passing fad. A research has shown that when implemented properly students in cooperative learning classrooms outperform their peers in the traditional classroom. The key is knowing how to implement the strategies to foster interaction while making sure that students are held accountable.

This pedagogical approach aims to use cooperative learning (CL) in Libyan classrooms, to how students work together, respect each other's opinions, share with each other before they make any decisions. It also enables students to give suggestions and proposals.

Hypothesis

In allowing the students to work together and the teacher as a facilitator:

- CL can raise academic achievement.
- CL can increase equal participation.
- CL can bring active learning into the (EFL) English as a foreign language class.

The Problem

The main problem is how we apply the cooperative learning in Libyan EFL classes.

The methodology of the study

The subject of the study will include 5th and 9th grades in Some schools in El haraba area and Bader area. Questionnaires will be given to the teachers based on using cooperative learning as a new technique in the new syllabus of maths and science in Libya. I may have to ask questions about group work; class discussions; brainstorming… etc to see if some of the strategies of CL are already in use.

Definitions of Cooperative Learning

Introduction

Cooperative learning can be defined as a learner centered instructional process in which small, intentionally selected groups of three or five students work interdependently on a well-defined learning task.

First here are some definitions of cooperative learning (CL) (also known as collaborative learning).

1) "The instructional use of small groups so that students work together to maximize their own and each other's learning". (Johnson& Johnson, 1993: 9).

2) Principles and techniques for helping students work together more effectively (Jacob, power & Lon, 2002: 1).

3) High ability students learn new strategies by teaching other students in the group. (Slavin, 1991).

4) "Low and medium ability students benefit from observing strategies of high ability students. (Slavin, 1991).

In his well-known book about cooperative learning,(Slavin, 1995:60) listed over 90 experimental studies about cooperative learning. He concluded that the reason cooperative learning succeeds as an educational methodology is its use of convergent tasks; group goals based on the individual responsibility of all group members leads to increased learning achievement, regardless of subject or proficiency level of student involved (See Figure 1).

{… is it possible to create conditions to positive achievement outcomes by directly teaching students structured methods of working together with each other (especially in pairs) or teaching them learning strategies closely related to the instructional objectives (especially for reading comprehension skills). (Slavin, 1995:45.)

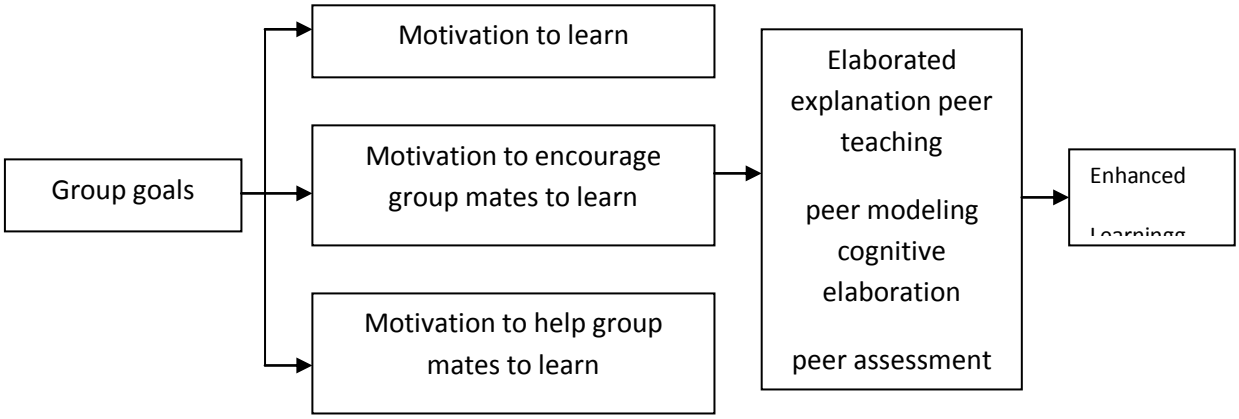


Figure 1. Factors influencing learning games

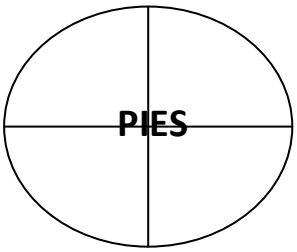
Cooperative learning has been defined as "small groups of learners working together as a team to solve a problem, complete a task, or accomplish a common goal" (Artz & Newman, 1990: 448).

Kagan (1989) provided an excellent definition of cooperative learning by looking at general structures which can be applied to any situation. His definition provides an umbrella for the work of cooperative learning specialist. He states that: "The structural approach to cooperative learning is based on the creation, analysis and systematic applications of structures, or content-free ways of organizing social interaction in the classroom".

In cooperative learning students work with their peers to accomplish a shared or a common goal. The common goal is reached through interdependence among all group members rather than working alone. Each member is responsible for the outcomes of the shared goal

The Basic Principles of CL PIES

According to Kagan cooperative learning (2004:1_5),there are four basic principles symbolized by the acronym PIES.



The acronym PIES helps us remember the four basic principles:

1- Positive interdependence
2- Individual Accountability
3- Equal participation
4- Simultaneous interaction

When these basic principles are in place, cooperative learning consistently produces academic gains, improves race relations, develops social skills, educates for character, promotes self esteem, enhances class climate, and fosters leadership and teamwork skills. When the four basic principles are not implemented, gains are not guaranteed.

The set of four basic principle, PIES are unique to Kagan cooperative learning. Most approaches to cooperative learning recognize positive interdependence and individual accountability as basic principles, but each approach distinguishes different additional principles.

Spence Kagan developed the principles of Equal participation and simultaneous interaction to helps us ensure both equal and maximum engagement.

Applying PIES helps us understand why some instructional strategies successfully produce cooperation and achievement whereas others fail.

The PIES Critical Questions:

P Positive interdependence.

Question 1. Positive correlation: Are students on the same side?

Question 2. Interdependence: Does the task require working together?

I Individual Accountability

Question 3. Is individual, public performance required?

E Equal participation

Question 4. Is participation approximately equal?

S Simultaneous interaction

Question 5. What percent of students are overtly interacting at onc

Positive Interdependence.

The positive interdependence is the most well, established principle in the study of cooperation. When positive interdependence is in place, individuals are almost certain to cooperate. In the absence of positive interdependence, they may or may not

cooperate. What do we mean by positive interdependence? Positive interdependence refers to two distinct conditions that promote cooperation:

1) A positive correlation of outcomes
2) Interdependence

Positive Correlation

The word positive in the term "positive interdependence" refers to "a positive correlation among outcomes". A positive correlation occurs when outcomes go up or down together, when they are positively linked.

When there is a positive correlation among outcomes participants almost certainly worked together. They cooperate, help each other, and encourage each other. In class, if I know your success will somehow benefit me, naturally I hope you will do well and I will encourage, help, and tutor you. When there is a positive correlation among outcomes, we sense we are on the same side and encourage each other's success; our gain is again for me; my gain is again for you. It is the feeling we have when we are both working toward a common goal, building something together

Interdependence.

The second condition of positive interdependence is interdependence. The word interdependence refers to how the task is structured. If a task is structured. So no one of us do it alone, but we can do it by working together, then we are interdependent

Degrees of interdependence:

There are three degrees of interdependence.

- Weak interdependence

The contribution of each team member may contribute to the success of the team.

- Intermediate Interdependence

The contribution of each team member does contribute to the success of the team. But a team member could succeed on his/her own.

- Strong Interdependence

The contribution of each team member is necessary for the success of the team. The task is impossible without help – it requires working together.

Structures Create Positive Interdependence

Many structures create positive interdependence by establishing shared goals. Structures usually have a shared team goal so students cooperate for mutual benefit, for example, in Jot Thoughts, a team brainstorming structure, the team's goal is to generate as many creative ideas as possible in a limited time. As each teammate comes up with a creative idea, it is a boon to the team.

* Together * Achieves

T.E.A.M.

* Everyone * More

Individual Accountability

Including individual accountability contributes to academic gains in cooperative learning. Methods which provide a group grade or a group product without making each member accountable for his or her contribution, do not consistently produce achievement gains (Salvin, 1983).

Individual accountability can take different forms, depending on the content and cooperative learning method. One form is reward accountability. For example, if each student takes an individual test and a team grade is formed by summing or averaging the individual quiz scores of team members, there will be reward accountability if each student knows the contribution of his/her teammates to the team score. A second form of individual accountability is task accountability which occurs if each student is made accountable to the group for her/his portion of a project.

Equal Participation

Participation is an integral part of the learning process. Students learn by interacting with the content and with fellow students. Participation is an essential ingredient for student success; equal participation is an essential ingredient for the success of *all* students. If we do not structure for equal participation, it will not occur magically: without structure, volunteer participation in heterogeneous teams gravitates toward unequal participation.;

Simultaneous Interaction

The last PIES principle focuses not on the equality of active engagement, but rather the absolute amount of engagement per student. We ask: *What percent are engaged at once?* Engagement can take the form of interaction (as when all students are in pairs interacting) or it can take the form of individual action (as when all students are writing at once). To evaluate cooperative learning we focus on simultaneous interaction, but we consider other forms of simultaneous engagement to be important as well. (Note: When assessing percent of engagement we focus on overt actions—forms of engagement we can see or hear. When the teacher is talking, we hope all students are listening and thinking, but we cannot tell from observing them, so we do not count that as overt engagement.

Benefits of Cooperative Learning

Cooperative learning is a teaching technique that brings students together to learn in small, heterogeneous groups.

In these groups, students work independently without constant and direct supervision from the teacher. Assignments are structured so that everyone contributes, challenges as well as rewards are shared. Brainstorming, lively discussion and collaboration are the hallmarks of the cooperative learning classroom

Cooperative learning serves the heterogeneous classroom.

With group work, everyone has the chance to participate, and everyone has a role to play.

Cooperative learning provides an excellent vehicle for students of differing ability levels to work together in a positive way. Challenged students can interat,

successfully with average and advanced students and in so doing can learn that they too have something to offer.

Cooperative learning models real scientific experience in which scientists work together, not in isolation, to solve difficult problems, with cooperative learning, the classroom becomes a fertile environment for ideas and novel solutions.

Benefits of Collaborative Learning

1. Develops higher level thinking skills.
2. Builds self esteem in students.
3. Creates an environment of active, involved, exploratory learning.
4. Uses a team approach to problem solving while maintaining individual accountability.
5. Encourages student responsibility for learning.
6. Involves students in developing curriculum and class procedures.
7. Stimulates critical thinking and helps students clarify ideas through discussion and debate.
8. Enhances self management skills.
9. Establishes an atmosphere of cooperation and helping schoolwide.
10. Students develop responsibility for each other.
11. Creates a stronger social support system.
12. Creates a more positive attitude towards teachers, principals and other school personnel by students and creates a more positive attitude by teachers towards their students.
13. Promotes innovation in teaching and classroom techniques.
14. CL activities promote social and academic relationships well beyond the classroom and individual course.
15. CL processes create environments where students can practice building leadership skills.

Techniques:-

For English as a foreign language (E FL) instructors, a main concern of using cooperative learning techniques is whether the techniques will work with students of varying language proficiencies in large class size .

There are many different cooperative learning techniques, however all of them have certain elements as established by(Johnson and Holubee (1991). These elements are necessary to insure that when students do work cooperatively: first, the members of a group must perceive that they are part of a team and that they all have a common goal; second, group members must realize that the Problem they are to solve is a group problem and that the success or failure of the group; third, to accomplish the group's goal, all students must talk with one another to engage in discussion of all

problems. It must be clear to all that each members individual work has a direction effect on the group's success.

More than 100 cooperative learning techniques have been developed (see Jacobs, and loh, 2002; Kagan, 1994; and the Websites in the appendices to learn more of these) .

1. Circle of Speakers

a) In groups of 2-4, students take turns to speak. Several such Rotating turns can be taken.

b) students listen`as their partner(s)speak and perhaps take notes, ask questions, or give feedback.

c) The teacher randomly chooses some students and asks them to tell the class what their partner(s) said.

d) This technique can also be done with students taking turns to write, or they can write and speak at each turn.

2. Write- Pair- Switch

a) Each student works alone to write answers.

b) In pairs, students share answers.

c) Students switch partners and share their former partner's ideas with their new partner.

3 Question- and- Answer pairs

a) Ss work alone to write one or more question.

b) They write answers to their questions on a separate sheet of Paper .

c) Ss exchange questions but not answers.

d) After Ss have answered their partner's questions, they compare answers

3.1.4 Think, Pair, Share

The think, pair, share strategy is a cooperative learning technique that encourages individual participation and is applicable across all grade levels and class sizes. Students think through questions using three distinct steps:

1. Think: Students think independently about the question that has been posed, forming ideas of their own.
2. Pair: Students are grouped in pairs to discuss their thoughts. This step allows students to articulate their ideas and to consider those of others.
3. Share: Student pairs share their ideas with a larger group, such as the whole class. Often, students are more comfortable presenting ideas to a group with the support of a partner.

Think Pair Share is a cognitive rehearsal structure that can be used to help students:

- recall events

- make a summary
- stimulate thinking
- share responses, feelings and ideas

Think Pair Share

The teacher sets a problem or asks for a response to the reading.

The students think alone for a specified time.

The students form pairs to discuss the problem or give responses.

Some responses may be shared with the class.

Placemat and Round Robin

This activity is designed to allow for each individual's thinking, perspective and voice to be heard, recognised and explored.

1. Form participants into groups of four.
2. Allocate one piece of A3 or butcher's paper to each group.
3. Ask each group to draw the diagram on the paper.
4. The outer spaces are for each participant to write their thoughts about the topic.
5. Conduct a Round Robin so that each participant can share their views.
6. The circle in the middle of the paper is to note down (by the nominated scribe) the common points made by each participant.
7. Each group then reports the common points to the whole group.

Round Robin

Students give their opinions verbally around the circle or group. All members contribute equally

Numbered Heads Together

Numbered Heads Together is a cooperative learning strategy that holds each student accountable for learning the material. Students are placed in groups and each person is given a number (from one to the maximum number in each group). The teacher poses a question and students "put their heads together" to figure out the answer. The teacher calls a specific number to respond as spokesperson for the group. By having students work together in a group, this strategy ensures that each member knows the answer to problems or questions asked by the teacher. Because no one knows which number will be called, all team members must be prepare

Mind map

A mind map is a diagram used to represent words, ideas, tasks, or other items linked to and arranged around a central key word or idea. Mind maps are used to generate, visualize, structure, and classify ideas, and as an aid to studying and organizing information, solving problems, making decisions, and writing.

The elements of a given mind map are arranged intuitively according to the importance of the concepts, and are classified into groupings, branches, or areas, with the goal of representing semantic or other connections between portions of information. Mind maps may also aid recall of existing memories.

Mind map guidelines

Mind map of mind map guidelines In his books on Mind Maps author Tony Buzan suggests using the following guidelines for creating Mind Maps:

1. Start in the center with an image of the topic, using at least 3 colors.
2. Use images, symbols, codes, and dimensions throughout your Mind Map.
3. Select key words and print using upper or lower case letters.
4. Each word/image is best alone and sitting on its own line.
5. The lines should be connected, starting from the central image. The central lines are thicker, organic and flowing, becoming thinner as they radiate out from the centre.
6. Make the lines the same length as the word/image they support.
7. Use multiple colors throughout the Mind Map, for visual stimulation and also to encode or group.
8. Develop your own personal style of Mind Mapping.
9. Use emphasis and show associations in your Mind Map.
10. Keep the Mind Map clear by using radial hierarchy, numerical order or outlines to embrace your branches

Role of the teacher

The role of the teacher is very important in cooperative learning. To have an effective cooperative learning group teachers must know their students well. Grouping of students can be a difficult process and must be decided with care. Teachers must consider the different learning skills, cultural background, personalities, and even gender when arranging cooperative groups. Much time is devoted to prepare the lesson for cooperative learning. However, teachers fade in the background and become a coach, facilitat, or and sometimes a spectator after the lesson is implemented. Teachers who set up a good cooperative lesson teach children to teach themselves and each other.

Students learn from their peers and become less dependent on the teacher for help.

Organization of the classroom

One of the goal of cooperative learning is to teach students initiative and self-reliance. Teachers want to see students seek out their peers for assistance rather than them. Materials should then be made available so students do not need to search for them or ask the teacher for help. Students also work more effectively in well organized classrooms rather than one that is clutter. Students are expected to be organized. However, if the physical environment is not the same, the example for the students is not consistent.

Group size

With traditional teaching methodologies students sit in pre-arranged rows. Class size may be as large as 30 students or more. Cooperative learning works best when group size is smaller. The ideal cooperative learning classroom has about 15 to 20 students. Students are usually grouped in clusters of 3 to 5. The larger the group size the more difficult it is to organize tasks, manage different skills, and reach a consensus. Because the ideal class size is hard to obtain there will be groups with more members than others.

Group spacing

Within each group students should be properly spaced to maintain eye-to-eye contact, share materials without bumping elbows, and communicate without disturbing other groups. Students working in cooperative groups do not always sit in one place. They usually move around the room to gather information. Barriers should be minimized to facilitate movement. Different groups should be spaced far enough to avoid conflict, provide enough room for the teacher to aid students and to monitor group action and behavior.

Comfort

Uncomfortable furniture distracts students from focusing on their work. Today, students sit in hard desks that do not always fit them. Students in the middle school are still growing and vary in size. Much of the day students sit in chairs and are expected to stay quiet. Students move from class to class approximately every hour. This leaves fitting each student with a individually sized space as a very unlikely option.

Safety

The learning environment should not be dangerous for the students. Students should be able to maneuver around the classroom without harmful effects. The arrangement of the classroom furniture should be done to avoid the destructive impulses of children.

Conclusion

Cooperative learning is a structured peer interaction emphasizing human relationship collaboration between peers, active learning, academic achievement, in the classroom. It can be used to teach any subject matter, whether that be foreign languages, math, social studies. Cooperative learning is an instructional approach that has been shown to promote a variety of positive cognitive, affective, and social outcomes. The intent of CL is to enhance academic achieve- mint by providing students with increasing opportunities for discussion, learning from each other, and by allowing students to divide up tasks in ways that tap into their academic strengths. According to Dr. Spencer Kagan there are some advantages and disadvantages of CL. Starting with academic achievement has been increased among those who have used CL. CL also builds an ethic relation among students creating mutual understanding between them. CL also increasing one one's self-steam, social skills and study skills. It teaches students build social relationships. Moving towards the disadvantages of CL, the first thing we come across is the student having a lack of social skills would not know how to work in groups and this could result in task. Another disadvantage is the group grades, what if only one student is working in a group and all the others are

just enjoying the grades due to his hard work. However, using CL may be difficult at first. It requires some initial thought and some long term vision to succeed. Often students may not be familiar with or skilled at working together. Fortunately, the CL literature allows us to learn from the trail and error and effective practices of educators who have come before us.

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